WEBVTT

NOTE duration:"01:42:00"

NOTE recognizability:0.833

NOTE language:en-us

NOTE Confidence: 0.691941887142857

00:00:00.000 --> 00:00:04.080 The Yale Smilow Cancer Center CME

NOTE Confidence: 0.691941887142857

00:00:04.080 --> 00:00:07.160 event on head and neck cancer.

NOTE Confidence: 0.691941887142857

00:00:07.160 --> 00:00:09.337 We are really happy to have you

NOTE Confidence: 0.691941887142857

00:00:09.337 --> 00:00:12.596 all join us and we're very happy to

NOTE Confidence: 0.691941887142857

00:00:12.596 --> 00:00:14.396 have these illustrious speakers.

NOTE Confidence: 0.691941887142857

00:00:14.400 --> 00:00:16.794 It's an interesting topic that I

NOTE Confidence: 0.691941887142857

00:00:16.794 --> 00:00:19.859 think I hope you find interesting.

NOTE Confidence: 0.691941887142857

00:00:19.860 --> 00:00:20.670 I mean, you're logging in,

NOTE Confidence: 0.691941887142857

00:00:20.670 --> 00:00:22.540 you saw the program, so,

NOTE Confidence: 0.691941887142857

00:00:22.540 --> 00:00:25.540 you know, obviously you do.

NOTE Confidence: 0.691941887142857

00:00:25.540 --> 00:00:28.540 This is interesting because our

NOTE Confidence: 0.691941887142857

00:00:28.540 --> 00:00:31.076 speakers in talking about redefining.

NOTE Confidence: 0.691941887142857

00:00:31.076 --> 00:00:33.980 Resectability and head and neck cancer.

NOTE Confidence: 0.691941887142857

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00:00:33.980 --> 00:00:35.744 None of them are actually had an

NOTE Confidence: 0.691941887142857

00:00:35.744 --> 00:00:36.979 extra cancer surgeons, interestingly.

NOTE Confidence: 0.691941887142857

00:00:36.979 --> 00:00:39.853 But I think that's just speaks

NOTE Confidence: 0.691941887142857

00:00:39.853 --> 00:00:42.601 to the importance of having a

NOTE Confidence: 0.691941887142857

00:00:42.601 --> 00:00:45.061 multidisciplinary team in some of our

NOTE Confidence: 0.691941887142857

00:00:45.061 --> 00:00:48.216 most challenging head neck cancer cases.

NOTE Confidence: 0.691941887142857

00:00:48.220 --> 00:00:52.534 So we have 4 speakers today and our

NOTE Confidence: 0.691941887142857

00:00:52.534 --> 00:00:56.536 first talk is by Doctor Mandell.

NOTE Confidence: 0.691941887142857

00:00:56.540 --> 00:00:58.988 He is a professor of neurosurgery,

NOTE Confidence: 0.691941887142857

00:00:58.990 --> 00:01:00.730 executive vice chair and

NOTE Confidence: 0.691941887142857

00:01:00.730 --> 00:01:02.470 the director of Yales.

NOTE Confidence: 0.691941887142857

00:01:02.470 --> 00:01:05.005 Spine oncology program.

NOTE Confidence: 0.691941887142857

00:01:05.005 --> 00:01:07.540 Spine tumor program.

NOTE Confidence: 0.691941887142857

00:01:07.540 --> 00:01:09.479 He's going to be speaking to us

NOTE Confidence: 0.691941887142857

00:01:09.479 --> 00:01:10.804 about the surgical management

NOTE Confidence: 0.691941887142857

00:01:10.804 --> 00:01:12.892 of head and neck spine tumors.

NOTE Confidence: 0.691941887142857

00:01:12.900 --> 00:01:14.556 We often look at these types of tumors.

NOTE Confidence: 0.691941887142857

00:01:14.560 --> 00:01:15.988 We look at their imaging and we

NOTE Confidence: 0.691941887142857

00:01:15.988 --> 00:01:17.178 kind of shriek and we wonder

NOTE Confidence: 0.691941887142857

00:01:17.178 --> 00:01:18.600 what to do as head next to it.

NOTE Confidence: 0.691941887142857

00:01:18.600 --> 00:01:20.166 And even some of the, you know, the,

NOTE Confidence: 0.691941887142857

00:01:20.166 --> 00:01:21.498 the advanced head next turn would

NOTE Confidence: 0.691941887142857

00:01:21.498 --> 00:01:23.038 do some of the craziest surgery.

NOTE Confidence: 0.691941887142857

00:01:23.040 --> 00:01:25.196 But when it starts involving the spine,

NOTE Confidence: 0.691941887142857

00:01:25.200 --> 00:01:27.225 we often start thinking about

NOTE Confidence: 0.691941887142857

00:01:27.225 --> 00:01:28.440 unresectable ability palliative.

NOTE Confidence: 0.691941887142857

00:01:28.440 --> 00:01:30.804 But we're going to hear doctor

NOTE Confidence: 0.691941887142857

00:01:30.804 --> 00:01:32.380 Mandell's perspective on this.

NOTE Confidence: 0.691941887142857

00:01:32.380 --> 00:01:32.920 Thank you,

NOTE Confidence: 0.691941887142857

00:01:32.920 --> 00:01:33.460 doctor Mendel.

NOTE Confidence: 0.845324316

00:01:34.440 --> 00:01:37.940 Thank you, guys. So thank you sell

NOTE Confidence: 0.845324316

00:01:37.940 --> 00:01:41.640 for inviting me to to give this talk.

NOTE Confidence: 0.845324316

00:01:41.640 --> 00:01:43.943 I've asked to talk about the surgical

NOTE Confidence: 0.845324316

00:01:43.943 --> 00:01:46.169 management of head and explaine tumors.

NOTE Confidence: 0.845324316

00:01:46.170 --> 00:01:48.654 So Justin, I wanted to start with a couple

NOTE Confidence: 0.845324316

00:01:48.654 --> 00:01:51.436 of generic slides in a sense that spine

NOTE Confidence: 0.845324316

00:01:51.436 --> 00:01:54.293 tumors involving all cancer types and can

NOTE Confidence: 0.845324316

00:01:54.293 --> 00:01:56.468 be aggressive and debilitating causing

NOTE Confidence: 0.845324316

00:01:56.468 --> 00:01:58.820 significant amount of pain and rapid

NOTE Confidence: 0.845324316

00:01:58.820 --> 00:02:00.348 development of neurological problems.

NOTE Confidence: 0.845324316

00:02:00.350 --> 00:02:02.380 So especially when it comes to the

NOTE Confidence: 0.845324316

00:02:02.380 --> 00:02:04.522 neck cervical problems, patient can

NOTE Confidence: 0.845324316

00:02:04.522 --> 00:02:07.066 progress to paraparesis paralysis,

NOTE Confidence: 0.845324316

00:02:07.070 --> 00:02:08.570 typically it can affect arms,

NOTE Confidence: 0.845324316

00:02:08.570 --> 00:02:10.114 legs, bowel, bladder fraction,

NOTE Confidence: 0.845324316

00:02:10.114 --> 00:02:12.044 increase all kind of problems.

NOTE Confidence: 0.845324316

00:02:12.050 --> 00:02:13.964 And so the uniqueness of spine

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NOTE Confidence: 0.845324316

00:02:13.964 --> 00:02:16.090 oncology is that we're dealing with.

NOTE Confidence: 0.845324316

00:02:16.090 --> 00:02:18.234 All type of cancers and a lot of

NOTE Confidence: 0.845324316

00:02:18.234 --> 00:02:20.059 these cancers ended up in the neck.

NOTE Confidence: 0.845324316

00:02:20.060 --> 00:02:22.492 So some of that wanted to start with

NOTE Confidence: 0.845324316

00:02:22.492 --> 00:02:24.570 these crazy slide at once I put

NOTE Confidence: 0.845324316

00:02:24.570 --> 00:02:26.352 together and that is operative decision

NOTE Confidence: 0.845324316

00:02:26.352 --> 00:02:28.960 of algorithm of how to manage a lot

NOTE Confidence: 0.845324316

00:02:29.025 --> 00:02:31.017 of these problems as so mentioned

NOTE Confidence: 0.845324316

00:02:31.020 --> 00:02:32.676 you start seeing these lesions in

NOTE Confidence: 0.845324316

00:02:32.676 --> 00:02:34.520 the neck like what are you going

NOTE Confidence: 0.845324316

00:02:34.520 --> 00:02:36.386 to do and all of these things that

NOTE Confidence: 0.845324316

00:02:36.386 --> 00:02:38.294 you see here and maybe not a lot of

NOTE Confidence: 0.845324316

00:02:38.300 --> 00:02:41.474 science into what we do makes the the

NOTE Confidence: 0.845324316

00:02:41.474 --> 00:02:43.064 decision making it very difficult

NOTE Confidence: 0.845324316

00:02:43.064 --> 00:02:45.127 and not just that there's actually

NOTE Confidence: 0.845324316

00:02:45.127 --> 00:02:47.173 a paper that published that the.

NOTE Confidence: 0.845324316

00:02:47.180 --> 00:02:49.916 Impact of weekend hospital admissions on

NOTE Confidence: 0.845324316

00:02:49.916 --> 00:02:52.520 the timing of intervention and outcome

NOTE Confidence: 0.845324316

00:02:52.520 --> 00:02:55.005 after surgery shows that if we get.

NOTE Confidence: 0.845324316

00:02:55.010 --> 00:02:58.349 Called for tumour cases on a Friday,

NOTE Confidence: 0.845324316

00:02:58.350 --> 00:02:59.256 Saturday or Sunday.

NOTE Confidence: 0.845324316

00:02:59.256 --> 00:03:01.068 Sometimes we don't do the same

NOTE Confidence: 0.845324316

00:03:01.068 --> 00:03:02.986 thing if we get called on a Monday,

NOTE Confidence: 0.845324316

00:03:02.990 --> 00:03:05.780 Tuesday or Wednesday.

NOTE Confidence: 0.845324316

00:03:05.780 --> 00:03:06.390 So anyway,

NOTE Confidence: 0.845324316

00:03:06.390 --> 00:03:08.220 what's the uniqueness about this patient

NOTE Confidence: 0.845324316

00:03:08.220 --> 00:03:09.420 population? You all know about this.

NOTE Confidence: 0.845324316

00:03:09.420 --> 00:03:11.079 I'm gonna go these streets very quickly.

NOTE Confidence: 0.845324316

00:03:11.080 --> 00:03:12.952 These are sick patients.

NOTE Confidence: 0.845324316

00:03:12.952 --> 00:03:15.760 There's a long list of issues,

NOTE Confidence: 0.845324316

00:03:15.760 --> 00:03:17.720 including specifically to the spine,

NOTE Confidence: 0.845324316

00:03:17.720 --> 00:03:20.340 unlikely fusion, poor bone quality,

NOTE Confidence: 0.845324316

00:03:20.340 --> 00:03:23.196 hardware failure, and then timing of surgery.

NOTE Confidence: 0.845324316

00:03:23.200 --> 00:03:25.376 When is the right time to do surgery?

NOTE Confidence: 0.845324316

00:03:25.380 --> 00:03:26.532 These are all things that are

NOTE Confidence: 0.845324316

00:03:26.532 --> 00:03:27.560 going to go very fast.

NOTE Confidence: 0.845324316

00:03:27.560 --> 00:03:29.530 But these patients are immunocompromised

NOTE Confidence: 0.845324316

00:03:29.530 --> 00:03:31.500 because of decreased white cells.

NOTE Confidence: 0.845324316

00:03:31.500 --> 00:03:33.276 There's issues with infected

NOTE Confidence: 0.845324316

00:03:33.276 --> 00:03:34.608 vertebroplasty is now.

NOTE Confidence: 0.845324316

00:03:34.610 --> 00:03:37.368 Their nutritional status is not that great.

NOTE Confidence: 0.845324316

00:03:37.370 --> 00:03:38.405 They have problems with the

NOTE Confidence: 0.845324316

00:03:38.405 --> 00:03:39.870 fact that they are on steroids,

NOTE Confidence: 0.845324316

00:03:39.870 --> 00:03:42.390 which leads to all kind of, you know,

NOTE Confidence: 0.845324316

00:03:42.390 --> 00:03:44.790 side effects associated with that.

NOTE Confidence: 0.845324316

00:03:44.790 --> 00:03:48.759 A lot of these patients are coagulopathic.

NOTE Confidence: 0.845324316

00:03:48.760 --> 00:03:51.238 And from our point of view,

NOTE Confidence: 0.845324316

00:03:51.240 --> 00:03:51.514 uh,

NOTE Confidence: 0.845324316

00:03:51.514 --> 00:03:53.432 a lot of these cases require a

NOTE Confidence: 0.845324316

00:03:53.432 --> 00:03:54.997 plastic closure secondary to the

NOTE Confidence: 0.845324316

00:03:54.997 --> 00:03:56.905 fact that these patients may have

NOTE Confidence: 0.845324316

00:03:56.905 --> 00:03:58.660 already previously been radiated.

NOTE Confidence: 0.845324316

00:03:58.660 --> 00:04:00.316 They may need flaps,

NOTE Confidence: 0.845324316

00:04:00.316 --> 00:04:03.400 they may need the vascularized bone grafts.

NOTE Confidence: 0.845324316

00:04:03.400 --> 00:04:05.295 Sometimes these wounds are big

NOTE Confidence: 0.845324316

00:04:05.295 --> 00:04:07.840 issues for us in spine surgery.

NOTE Confidence: 0.845324316

00:04:07.840 --> 00:04:11.016 This is a patient who had a sarcoma

NOTE Confidence: 0.845324316

00:04:11.020 --> 00:04:13.820 involving the posterior neck muscles

NOTE Confidence: 0.845324316

00:04:13.820 --> 00:04:16.160 that's been resected locally three or

NOTE Confidence: 0.845324316

00:04:16.160 --> 00:04:18.840 four or five times and ultimately.

NOTE Confidence: 0.845324316

00:04:18.840 --> 00:04:19.326 Uh,

NOTE Confidence: 0.845324316

00:04:19.326 --> 00:04:22.242 this cancer have invaded all the

NOTE Confidence: 0.845324316

00:04:22.242 --> 00:04:24.540 power musculature off the neck.

NOTE Confidence: 0.845324316

00:04:24.540 --> 00:04:26.238 The spine itself was not involved,

NOTE Confidence: 0.845324316

00:04:26.240 --> 00:04:28.298 but all the muscle itself were

NOTE Confidence: 0.845324316

00:04:28.298 --> 00:04:30.357 involved with the tumor and we

NOTE Confidence: 0.845324316

00:04:30.357 --> 00:04:31.585 ended up resecting it.

NOTE Confidence: 0.845324316

00:04:31.590 --> 00:04:33.072 And this is the kind of

NOTE Confidence: 0.845324316

00:04:33.072 --> 00:04:34.060 hardware that we ended

NOTE Confidence: 0.840470364423077

00:04:34.115 --> 00:04:36.077 up needing to put there because

NOTE Confidence: 0.840470364423077

00:04:36.077 --> 00:04:37.385 all the posterior musculature

NOTE Confidence: 0.840470364423077

00:04:37.445 --> 00:04:39.107 has been removed from the neck.

NOTE Confidence: 0.840470364423077

00:04:39.110 --> 00:04:40.482 So clearly, you know,

NOTE Confidence: 0.840470364423077

00:04:40.482 --> 00:04:43.707 this is some of the stuff that we can do,

NOTE Confidence: 0.840470364423077

00:04:43.710 --> 00:04:45.733 but we need our colleagues to be

NOTE Confidence: 0.840470364423077

00:04:45.733 --> 00:04:47.722 able to close this and actually

NOTE Confidence: 0.840470364423077

00:04:47.722 --> 00:04:49.487 publish the paper with the.

NOTE Confidence: 0.840470364423077

00:04:49.490 --> 00:04:50.238 Plastic colleagues,

NOTE Confidence: 0.840470364423077

00:04:50.238 --> 00:04:53.230 Ian Valeria is right now the head of

NOTE Confidence: 0.840470364423077

00:04:53.298 --> 00:04:55.701 plastic at the at the at the MGH that

NOTE Confidence: 0.840470364423077

00:04:55.701 --> 00:04:58.672 it is a multidisciplinary approach for

NOTE Confidence: 0.840470364423077

00:04:58.672 --> 00:05:00.780 complex oncological spine coverage.

NOTE Confidence: 0.840470364423077

00:05:00.780 --> 00:05:03.896 A lot of these cases require really a big

NOTE Confidence: 0.840470364423077

00:05:03.896 --> 00:05:05.856 consultation with our plastic colleagues.

NOTE Confidence: 0.840470364423077

00:05:05.860 --> 00:05:08.476 So when it comes to to spine tumors,

NOTE Confidence: 0.840470364423077

00:05:08.480 --> 00:05:10.418 the two kinds that we're talking

NOTE Confidence: 0.840470364423077

00:05:10.418 --> 00:05:12.105 about are the metastatic spine

NOTE Confidence: 0.840470364423077

00:05:12.105 --> 00:05:14.097 tumors and the primary bone tumors.

NOTE Confidence: 0.840470364423077

00:05:14.100 --> 00:05:16.900 They are very distinct different

NOTE Confidence: 0.840470364423077

00:05:16.900 --> 00:05:18.020 surgical plans.

NOTE Confidence: 0.840470364423077

00:05:18.020 --> 00:05:20.274 If it's primary tumors then really we're

NOTE Confidence: 0.840470364423077

00:05:20.274 --> 00:05:22.469 trying to cure the patient of cancer

NOTE Confidence: 0.840470364423077

00:05:22.469 --> 00:05:24.639 by removing the cancer or at least

10

NOTE Confidence: 0.840470364423077

00:05:24.639 --> 00:05:27.096 the long term survival if it's metastatic,

NOTE Confidence: 0.840470364423077

00:05:27.100 --> 00:05:28.700 the plan is palliation.

NOTE Confidence: 0.840470364423077

00:05:28.700 --> 00:05:30.300 Adjuvant therapy for primary

NOTE Confidence: 0.840470364423077

00:05:30.300 --> 00:05:32.700 is very limited for metastatic.

NOTE Confidence: 0.840470364423077

00:05:32.700 --> 00:05:34.656 There is some adjuvant therapy available

NOTE Confidence: 0.840470364423077

00:05:34.656 --> 00:05:37.437 and then when it comes to the surgical

NOTE Confidence: 0.840470364423077

00:05:37.437 --> 00:05:39.212 technique for primary bone tumors,

NOTE Confidence: 0.840470364423077

00:05:39.220 --> 00:05:40.648 we're really trying to figure out

NOTE Confidence: 0.840470364423077

00:05:40.648 --> 00:05:42.809 a way not to get into the tumor

NOTE Confidence: 0.840470364423077

00:05:42.809 --> 00:05:44.249 itself so we minimize spillage.

NOTE Confidence: 0.840470364423077

00:05:44.250 --> 00:05:45.222 And potential recurrence.

NOTE Confidence: 0.840470364423077

00:05:45.222 --> 00:05:47.166 So we need to clean margins

NOTE Confidence: 0.840470364423077

00:05:47.166 --> 00:05:48.679 around it versus metastatic,

NOTE Confidence: 0.840470364423077

00:05:48.680 --> 00:05:50.395 which is really most of

NOTE Confidence: 0.840470364423077

00:05:50.395 --> 00:05:51.424 the time intralesional.

NOTE Confidence: 0.840470364423077

00:05:51.430 --> 00:05:55.686 Even though this is not a neck case,

NOTE Confidence: 0.840470364423077

00:05:55.690 --> 00:05:58.917 I wanted to present it just for.

NOTE Confidence: 0.840470364423077

00:05:58.920 --> 00:05:59.829 Explaining this principle,

NOTE Confidence: 0.840470364423077

00:05:59.829 --> 00:06:02.656 this is a 51 year old who comes in

NOTE Confidence: 0.840470364423077

00:06:02.656 --> 00:06:04.582 with one week of progressive foot

NOTE Confidence: 0.840470364423077

00:06:04.582 --> 00:06:06.800 weakness and bound bladder dysfunction.

NOTE Confidence: 0.840470364423077

00:06:06.800 --> 00:06:09.906 And you can see right here that there is a a,

NOTE Confidence: 0.840470364423077

00:06:09.906 --> 00:06:12.102 a lesion in the sacrum that's

NOTE Confidence: 0.840470364423077

00:06:12.102 --> 00:06:14.300 filling up the sacral canal.

NOTE Confidence: 0.840470364423077

00:06:14.300 --> 00:06:16.071 The question is whether to take these

NOTE Confidence: 0.840470364423077

00:06:16.071 --> 00:06:17.975 guys to surgery because there's bound

NOTE Confidence: 0.840470364423077

00:06:17.975 --> 00:06:19.795 bladder incontinence and foot weakness.

NOTE Confidence: 0.840470364423077

00:06:19.800 --> 00:06:22.005 This patient was take it for an

NOTE Confidence: 0.840470364423077

00:06:22.005 --> 00:06:23.562 emergent decompression of the nerve

NOTE Confidence: 0.840470364423077

00:06:23.562 --> 00:06:25.576 roots and you can see a few more cuts,

NOTE Confidence: 0.840470364423077

00:06:25.580 --> 00:06:27.000 but the intraoperative biopsy

NOTE Confidence: 0.840470364423077

00:06:27.000 --> 00:06:28.775 came back as cancer sarcoma,

NOTE Confidence: 0.840470364423077

00:06:28.780 --> 00:06:30.820 which is a primary bone.

NOTE Confidence: 0.840470364423077

00:06:30.820 --> 00:06:33.226 These primary bone tumors require unblocker

NOTE Confidence: 0.840470364423077

00:06:33.226 --> 00:06:36.300 section and not any traditional resection.

NOTE Confidence: 0.840470364423077

00:06:36.300 --> 00:06:38.160 Where you're getting into the tumor,

NOTE Confidence: 0.840470364423077

00:06:38.160 --> 00:06:39.448 it's over this, this.

NOTE Confidence: 0.840470364423077

00:06:39.448 --> 00:06:40.736 There's no clean margins.

NOTE Confidence: 0.840470364423077

00:06:40.740 --> 00:06:42.660 This tumor is going to recur.

NOTE Confidence: 0.840470364423077

00:06:42.660 --> 00:06:44.320 The clearly the patient symptoms

NOTE Confidence: 0.840470364423077

00:06:44.320 --> 00:06:45.980 got better after the decompression.

NOTE Confidence: 0.840470364423077

00:06:45.980 --> 00:06:46.726 The bowel,

NOTE Confidence: 0.840470364423077

00:06:46.726 --> 00:06:48.218 bladder symptoms got better,

NOTE Confidence: 0.840470364423077

00:06:48.220 --> 00:06:50.080 the food weakness got better,

NOTE Confidence: 0.840470364423077

00:06:50.080 --> 00:06:52.551 but the patient ended up coming back

NOTE Confidence: 0.840470364423077

00:06:52.551 --> 00:06:54.937 complaining of some boldness and he says

NOTE Confidence: 0.840470364423077

00:06:54.937 --> 00:06:57.399 the school is sticking out of my back.

NOTE Confidence: 0.840470364423077

00:06:57.400 --> 00:06:58.640 Can you revise it?

NOTE Confidence: 0.840470364423077

00:06:58.640 --> 00:07:00.500 And this is how he presented.

NOTE Confidence: 0.840470364423077

00:07:00.500 --> 00:07:01.622 And you can see this little

NOTE Confidence: 0.840470364423077

00:07:01.622 --> 00:07:02.928 bump in the back of his back.

NOTE Confidence: 0.840470364423077

00:07:02.930 --> 00:07:05.042 There was a year after his surgery and

NOTE Confidence: 0.840470364423077

00:07:05.042 --> 00:07:06.837 that bumped you can see in the red.

NOTE Confidence: 0.840470364423077

00:07:06.840 --> 00:07:09.584 You know was not as cool poking up.

NOTE Confidence: 0.840470364423077

00:07:09.590 --> 00:07:13.094 This is a recurrence of tumor for an

NOTE Confidence: 0.840470364423077

00:07:13.094 --> 00:07:14.750 unfortunate intralesional resection.

NOTE Confidence: 0.840470364423077

00:07:14.750 --> 00:07:16.829 The transferring rendering

NOTE Confidence: 0.840470364423077

00:07:16.829 --> 00:07:18.908 having cancer forever.

NOTE Confidence: 0.840470364423077

00:07:18.910 --> 00:07:20.170 The only chance that he had

NOTE Confidence: 0.840470364423077

00:07:20.170 --> 00:07:21.430 was with his first surgery.

NOTE Confidence: 0.840470364423077

00:07:21.430 --> 00:07:24.419 He also had a broken rod that

NOTE Confidence: 0.840470364423077

00:07:24.419 --> 00:07:26.673 ultimately require removing this bump

NOTE Confidence: 0.840470364423077

00:07:26.673 --> 00:07:29.367 Unblocker section of this little mass,

NOTE Confidence: 0.88869646375

00:07:29.370 --> 00:07:31.730 knowing that it's not going to be curative,

NOTE Confidence: 0.88869646375

00:07:31.730 --> 00:07:34.061 and then devising is construct and then

NOTE Confidence: 0.88869646375

00:07:34.061 --> 00:07:36.740 doing a huge flap to be able to close

NOTE Confidence: 0.88869646375

00:07:36.740 --> 00:07:38.969 this one in order to clean this up.

NOTE Confidence: 0.88869646375

00:07:38.970 --> 00:07:41.437 So I call it Bo, the triple W,

NOTE Confidence: 0.88869646375

00:07:41.437 --> 00:07:43.171 the wrong operation on the wrong

NOTE Confidence: 0.88869646375

00:07:43.171 --> 00:07:44.647 patient by the wrong surgeon.

NOTE Confidence: 0.88869646375

00:07:44.650 --> 00:07:46.046 Sometimes you gotta know

NOTE Confidence: 0.88869646375

00:07:46.046 --> 00:07:48.140 what it is you you doing.

NOTE Confidence: 0.88869646375

00:07:48.140 --> 00:07:49.694 And from our point of view

NOTE Confidence: 0.88869646375

00:07:49.694 --> 00:07:50.730 is no surgeons sometimes,

NOTE Confidence: 0.88869646375

00:07:50.730 --> 00:07:53.285 sometimes we put such a huge emphasis

NOTE Confidence: 0.88869646375

00:07:53.285 --> 00:07:55.294 on the neurological aspect, they've

NOTE Confidence: 0.88869646375

00:07:55.294 --> 00:07:57.658 bowel bladder incontinence or foot weakness.

NOTE Confidence: 0.88869646375

00:07:57.660 --> 00:07:59.721 But a lot of these cases you got to

NOTE Confidence: 0.88869646375

00:07:59.721 --> 00:08:01.628 think about is an oncologist first.

NOTE Confidence: 0.88869646375

00:08:01.630 --> 00:08:03.374 When it comes to knowing whether you dealing

NOTE Confidence: 0.88869646375

00:08:03.374 --> 00:08:05.090 with the primary tumor or made a study,

NOTE Confidence: 0.88869646375

00:08:05.090 --> 00:08:06.430 you gotta know the biopsy,

NOTE Confidence: 0.88869646375

00:08:06.430 --> 00:08:08.817 you gotta know what the results are.

NOTE Confidence: 0.88869646375

00:08:08.820 --> 00:08:11.158 This always will allow you to establish

NOTE Confidence: 0.88869646375

00:08:11.158 --> 00:08:13.679 whether you're dealing with the primary bone

NOTE Confidence: 0.88869646375

00:08:13.679 --> 00:08:15.504 tumor versus versus metastatic disease.

NOTE Confidence: 0.88869646375

00:08:15.510 --> 00:08:17.118 This is a patient with a

NOTE Confidence: 0.88869646375

00:08:17.118 --> 00:08:18.190 codoma quote UN quote.

NOTE Confidence: 0.88869646375

00:08:18.190 --> 00:08:20.404 It was read they didn't wanna do a biopsy,

NOTE Confidence: 0.88869646375

00:08:20.410 --> 00:08:22.588 but this it turns out to be an ependymoma

NOTE Confidence: 0.88869646375

00:08:22.588 --> 00:08:24.750 which was a completely different scenario.

NOTE Confidence: 0.88869646375

00:08:24.750 --> 00:08:27.004 So how do you do these biopsies?

NOTE Confidence: 0.88869646375

00:08:27.010 --> 00:08:29.188 You can see right here in the neck a

NOTE Confidence: 0.88869646375

00:08:29.188 --> 00:08:30.959 very large cervical with suspicious

NOTE Confidence: 0.88869646375

00:08:30.959 --> 00:08:33.588 of the cervical called DOMA and in

NOTE Confidence: 0.88869646375

00:08:33.588 --> 00:08:35.784 the sacrum and other large suspicious

NOTE Confidence: 0.88869646375

00:08:35.784 --> 00:08:36.882 of cervical chordoma.

NOTE Confidence: 0.88869646375

00:08:36.890 --> 00:08:39.730 You do not want to do a biopsy to the mouth.

NOTE Confidence: 0.88869646375

00:08:39.730 --> 00:08:41.746 The the biopsy person are going

NOTE Confidence: 0.88869646375

00:08:41.746 --> 00:08:44.345 to look through the path of least

NOTE Confidence: 0.88869646375

00:08:44.345 --> 00:08:45.925 resistance and the shortest.

NOTE Confidence: 0.88869646375

00:08:45.930 --> 00:08:46.171 Path,

NOTE Confidence: 0.88869646375

00:08:46.171 --> 00:08:48.340 they obviously would like to go to the mouth.

NOTE Confidence: 0.88869646375

00:08:48.340 --> 00:08:49.318 It's right there.

NOTE Confidence: 0.88869646375

00:08:49.318 --> 00:08:51.274 And if you suspect that it's

NOTE Confidence: 0.88869646375

00:08:51.274 --> 00:08:52.959 a primary bone tumor,

NOTE Confidence: 0.88869646375

00:08:52.960 --> 00:08:54.794 don't go through the mouth because we

NOTE Confidence: 0.88869646375

00:08:54.794 --> 00:08:56.820 can't resect it in an unblocked fashion.

NOTE Confidence: 0.88869646375

17

00:08:56.820 --> 00:08:58.640 That track is going to be contaminated,

NOTE Confidence: 0.88869646375

00:08:58.640 --> 00:09:00.626 so either go from the back.

NOTE Confidence: 0.88869646375

00:09:00.630 --> 00:09:03.126 Uh, and stay very close to the midline.

NOTE Confidence: 0.88869646375

00:09:03.130 --> 00:09:05.066 Here is what we do when we mark

NOTE Confidence: 0.88869646375

00:09:05.066 --> 00:09:05.550 these incision,

NOTE Confidence: 0.88869646375

00:09:05.550 --> 00:09:08.203 these biopsy tracks we can get around

NOTE Confidence: 0.88869646375

00:09:08.203 --> 00:09:10.408 include the track with the specimen

NOTE Confidence: 0.88869646375

00:09:10.408 --> 00:09:13.189 is a couple of examples on the sake

NOTE Confidence: 0.88869646375

00:09:13.189 --> 00:09:15.547 of chordomas where the track site

NOTE Confidence: 0.88869646375

00:09:15.547 --> 00:09:17.418 is included within the resection

NOTE Confidence: 0.88869646375

00:09:17.418 --> 00:09:19.826 itself and then the track and the

NOTE Confidence: 0.88869646375

00:09:19.826 --> 00:09:21.960 sacrum here came out in one piece.

NOTE Confidence: 0.88869646375

00:09:21.960 --> 00:09:23.535 Stay away from having putting

NOTE Confidence: 0.88869646375

00:09:23.535 --> 00:09:25.110 those needles very far away.

NOTE Confidence: 0.88869646375

00:09:25.110 --> 00:09:27.000 Make sure that you're either posterior

NOTE Confidence: 0.88869646375

00:09:27.000 --> 00:09:29.159 or very close to the midline so

NOTE Confidence: 0.88869646375

00:09:29.159 --> 00:09:30.839 that you can reset the track.

NOTE Confidence: 0.88869646375

00:09:30.840 --> 00:09:31.956 With the biopsy.

NOTE Confidence: 0.88869646375

00:09:31.956 --> 00:09:34.188 So again these are the primary

NOTE Confidence: 0.88869646375

00:09:34.188 --> 00:09:36.218 versus the metastatic disease.

NOTE Confidence: 0.88869646375

00:09:36.220 --> 00:09:38.348 Always think when it comes to surgery

NOTE Confidence: 0.88869646375

00:09:38.348 --> 00:09:40.335 whether this is an unblocker section

NOTE Confidence: 0.88869646375

00:09:40.335 --> 00:09:42.701 for primary bone tumors when the tumor

NOTE Confidence: 0.88869646375

00:09:42.710 --> 00:09:45.140 borders are not violated or whether

NOTE Confidence: 0.88869646375

00:09:45.140 --> 00:09:46.760 you do intralesional resection.

NOTE Confidence: 0.88869646375

00:09:46.760 --> 00:09:49.344 Metastatic lesions are typically

NOTE Confidence: 0.88869646375

00:09:49.344 --> 00:09:50.636 intralesional resections.

NOTE Confidence: 0.88869646375

00:09:50.640 --> 00:09:53.120 It's a very prominent disease

NOTE Confidence: 0.88869646375

00:09:53.120 --> 00:09:54.764 1.2 millions a year,

NOTE Confidence: 0.88869646375

00:09:54.764 --> 00:09:56.819 about half death per year.

NOTE Confidence: 0.88869646375

00:09:56.820 --> 00:09:58.500 It's a major cause of death

NOTE Confidence: 0.88869646375

00:09:58.500 --> 00:10:00.060 complication due to metastatic disease,

NOTE Confidence: 0.88869646375

00:10:00.060 --> 00:10:01.824 and the skeletal system is the

NOTE Confidence: 0.88869646375

00:10:01.824 --> 00:10:03.000 third most common site.

NOTE Confidence: 0.88869646375

00:10:03.000 --> 00:10:04.872 The spine is the most common

NOTE Confidence: 0.88869646375

00:10:04.872 --> 00:10:06.120 sight of skeletal Mets,

NOTE Confidence: 0.88869646375

00:10:06.120 --> 00:10:08.352 and as many as 90% of cancer patient

NOTE Confidence: 0.88869646375

00:10:08.352 --> 00:10:10.620 will have spinal metastases and up to

NOTE Confidence: 0.823938815523809

00:10:10.682 --> 00:10:12.824 30 of those will have neck pain

NOTE Confidence: 0.823938815523809

00:10:12.824 --> 00:10:14.220 or some neurological issues.

NOTE Confidence: 0.823938815523809

00:10:14.220 --> 00:10:16.380 So here's a case that the Charles actually

NOTE Confidence: 0.823938815523809

00:10:16.380 --> 00:10:18.498 is very familiar with and I thought,

NOTE Confidence: 0.823938815523809

00:10:18.500 --> 00:10:20.378 well, this might as well presented.

NOTE Confidence: 0.823938815523809

00:10:20.380 --> 00:10:22.468 This is a 67 year old lady who has.

NOTE Confidence: 0.823938815523809

00:10:22.470 --> 00:10:24.648 How would cancer start having significant

NOTE Confidence: 0.823938815523809

00:10:24.648 --> 00:10:27.298 amount of neck pain and radicular pain?

NOTE Confidence: 0.823938815523809

00:10:27.300 --> 00:10:29.316 And you can see right here on the

NOTE Confidence: 0.823938815523809

00:10:29.316 --> 00:10:31.203 X-rays that there is a pathologic

NOTE Confidence: 0.823938815523809

00:10:31.203 --> 00:10:32.853 fracture of the cervical spine.

NOTE Confidence: 0.823938815523809

00:10:32.860 --> 00:10:35.317 She's unable to move her neck well,

NOTE Confidence: 0.823938815523809

00:10:35.320 --> 00:10:36.968 she's already having radiculopathy,

NOTE Confidence: 0.823938815523809

00:10:36.968 --> 00:10:39.440 and this is clearly a metastatic

NOTE Confidence: 0.823938815523809

00:10:39.507 --> 00:10:41.567 disease related to thyroid cancer.

NOTE Confidence: 0.823938815523809

00:10:41.570 --> 00:10:42.970 Yeah, what are you gonna do about it?

NOTE Confidence: 0.823938815523809

00:10:42.970 --> 00:10:44.780 We obviously not going for

NOTE Confidence: 0.823938815523809

00:10:44.780 --> 00:10:46.228 a curative disease here,

NOTE Confidence: 0.823938815523809

00:10:46.230 --> 00:10:49.164 but pain is an indication for

NOTE Confidence: 0.823938815523809

00:10:49.164 --> 00:10:51.697 surgery and neurological issues many

NOTE Confidence: 0.823938815523809

00:10:51.697 --> 00:10:54.167 times is indication for surgery.

NOTE Confidence: 0.823938815523809

00:10:54.170 --> 00:10:55.310 You can see the MRI,

NOTE Confidence: 0.823938815523809

00:10:55.310 --> 00:10:57.158 there is code compression.

NOTE Confidence: 0.823938815523809

00:10:57.158 --> 00:10:59.468 The body is involved with

NOTE Confidence: 0.823938815523809

00:10:59.468 --> 00:11:01.326 tumor proven as thyroid cancer.

NOTE Confidence: 0.823938815523809

00:11:01.326 --> 00:11:03.420 The the the the the spinal

NOTE Confidence: 0.823938815523809

00:11:03.493 --> 00:11:04.768 cord is compressed.

NOTE Confidence: 0.823938815523809

00:11:04.770 --> 00:11:06.660 She's at risk of losing function and

NOTE Confidence: 0.823938815523809

00:11:06.660 --> 00:11:08.428 already have a lot of neck pain.

NOTE Confidence: 0.823938815523809

00:11:08.430 --> 00:11:10.390 You can see on this on the axial

NOTE Confidence: 0.823938815523809

00:11:10.390 --> 00:11:12.170 view that the vertebral artery.

NOTE Confidence: 0.823938815523809

00:11:12.170 --> 00:11:13.310 Is involved with tumor.

NOTE Confidence: 0.823938815523809

00:11:13.310 --> 00:11:16.139 This is not gonna be a curative disease.

NOTE Confidence: 0.823938815523809

00:11:16.140 --> 00:11:16.630 And again,

NOTE Confidence: 0.823938815523809

00:11:16.630 --> 00:11:18.590 you can see there's a little bit of

NOTE Confidence: 0.823938815523809

00:11:18.649 --> 00:11:20.379 tumor poking behind the vertebral

NOTE Confidence: 0.823938815523809

00:11:20.379 --> 00:11:22.483 body above the vertebral artery is

NOTE Confidence: 0.823938815523809

00:11:22.483 --> 00:11:24.038 clearly engulfed by these tumor.

NOTE Confidence: 0.823938815523809

00:11:24.040 --> 00:11:26.380 The CT scan shows pathologic fracture.

NOTE Confidence: 0.823938815523809

00:11:26.380 --> 00:11:27.840 This patient has significant

NOTE Confidence: 0.823938815523809

00:11:27.840 --> 00:11:28.935 mechanical neck pain.

NOTE Confidence: 0.823938815523809

00:11:28.940 --> 00:11:31.076 Is this spine stable or unstable?

NOTE Confidence: 0.823938815523809

00:11:31.080 --> 00:11:33.352 You can see right here that we have

NOTE Confidence: 0.823938815523809

00:11:33.352 --> 00:11:35.122 many ways of figuring out basis

NOTE Confidence: 0.823938815523809

00:11:35.122 --> 00:11:37.468 on all kind of you know tables of

NOTE Confidence: 0.823938815523809

00:11:37.468 --> 00:11:39.280 deciding whether this is a stable

NOTE Confidence: 0.823938815523809

00:11:39.346 --> 00:11:41.266 neck or whether there's a chance

NOTE Confidence: 0.823938815523809

00:11:41.266 --> 00:11:43.130 that this can continue to break.

NOTE Confidence: 0.823938815523809

00:11:43.130 --> 00:11:44.670 And then with thyroid cancer,

NOTE Confidence: 0.823938815523809

00:11:44.670 --> 00:11:46.385 these are highly vascular tumors

NOTE Confidence: 0.823938815523809

00:11:46.385 --> 00:11:48.936 and you can see right here on

NOTE Confidence: 0.823938815523809

00:11:48.936 --> 00:11:50.846 the angiogram that Charles did

NOTE Confidence: 0.823938815523809

00:11:50.846 --> 00:11:52.629 how vascularized this tumor is,

NOTE Confidence: 0.823938815523809

00:11:52.630 --> 00:11:54.720 which makes these surgeries somewhat

NOTE Confidence: 0.823938815523809

00:11:54.720 --> 00:11:58.750 risky to be able to go in and go after these.

NOTE Confidence: 0.823938815523809

00:11:58.750 --> 00:11:59.380 Christmas light,

NOTE Confidence: 0.823938815523809

00:11:59.380 --> 00:12:01.585 the appearance of of her what we

NOTE Confidence: 0.823938815523809

00:12:01.585 --> 00:12:04.083 call a puff of smoke where there is

NOTE Confidence: 0.823938815523809

00:12:04.083 --> 00:12:05.700 significant chance of bleeding as

NOTE Confidence: 0.823938815523809

00:12:05.700 --> 00:12:07.947 you're going in there because this is

NOTE Confidence: 0.823938815523809

00:12:07.947 --> 00:12:10.220 going to be an intralesional resection.

NOTE Confidence: 0.823938815523809

00:12:10.220 --> 00:12:12.299 So what we do here is there

NOTE Confidence: 0.823938815523809

00:12:12.299 --> 00:12:14.069 is an indication for surgery.

NOTE Confidence: 0.823938815523809

00:12:14.070 --> 00:12:16.107 We can help with the neck pain,

NOTE Confidence: 0.823938815523809

00:12:16.110 --> 00:12:17.868 we can decompress the spinal canal

NOTE Confidence: 0.823938815523809

00:12:17.868 --> 00:12:20.253 and this is the kind of construct that

NOTE Confidence: 0.823938815523809

00:12:20.253 --> 00:12:22.570 we do where we replace the vertebra.

NOTE Confidence: 0.823938815523809

00:12:22.570 --> 00:12:24.166 We have nice sets of retractors.

NOTE Confidence: 0.823938815523809

00:12:24.170 --> 00:12:26.645 Now it's Milo that we just got last month.

NOTE Confidence: 0.823938815523809

00:12:26.650 --> 00:12:28.204 We can put these retractors to

NOTE Confidence: 0.823938815523809

00:12:28.204 --> 00:12:29.470 be able to help us.

NOTE Confidence: 0.823938815523809

00:12:29.470 --> 00:12:31.094 This is intraoperative pictures.

NOTE Confidence: 0.823938815523809

00:12:31.094 --> 00:12:33.124 You can see these beautiful

NOTE Confidence: 0.823938815523809

00:12:33.124 --> 00:12:34.789 retractors that are table mount.

NOTE Confidence: 0.823938815523809

00:12:34.790 --> 00:12:36.810 You can see the plate.

NOTE Confidence: 0.823938815523809

00:12:36.810 --> 00:12:38.077 And this is what it looks like

NOTE Confidence: 0.823938815523809

00:12:38.077 --> 00:12:38.620 after the surgery.

NOTE Confidence: 0.823938815523809

00:12:38.620 --> 00:12:40.748 And you can see there's a nice cage

NOTE Confidence: 0.823938815523809

00:12:40.748 --> 00:12:42.510 that replace the broken vertebrae.

NOTE Confidence: 0.823938815523809

00:12:42.510 --> 00:12:44.586 There's a nice plate that's sitting

NOTE Confidence: 0.823938815523809

00:12:44.586 --> 00:12:46.909 across of it and that patient,

NOTE Confidence: 0.823938815523809

00:12:46.910 --> 00:12:48.632 you can see the CT scan with

NOTE Confidence: 0.823938815523809

00:12:48.632 --> 00:12:49.124 the reconstruction.

NOTE Confidence: 0.823938815523809

00:12:49.130 --> 00:12:50.336 There's complete replacement

NOTE Confidence: 0.823938815523809

00:12:50.336 --> 00:12:51.944 of these vertebral body.

NOTE Confidence: 0.823938815523809

00:12:51.950 --> 00:12:53.750 This patient neck pain completely

NOTE Confidence: 0.823938815523809

00:12:53.750 --> 00:12:55.550 resolved immediately after this surgery.

NOTE Confidence: 0.836801264761905

00:12:55.550 --> 00:12:57.097 This patient doesn't need to wear a

NOTE Confidence: 0.836801264761905

00:12:57.097 --> 00:12:58.898 collar for the rest of her life and

NOTE Confidence: 0.836801264761905

00:12:58.898 --> 00:13:00.430 the neck pain has completely resolved.

NOTE Confidence: 0.836801264761905

00:13:00.430 --> 00:13:02.698 The fear of paralysis is gone.

NOTE Confidence: 0.836801264761905

00:13:02.700 --> 00:13:04.671 And here is what the MRI looks like with

NOTE Confidence: 0.836801264761905

00:13:04.671 --> 00:13:06.314 the spinal cord now decompressed and

NOTE Confidence: 0.836801264761905

00:13:06.314 --> 00:13:08.393 then we follow it with a new program

NOTE Confidence: 0.836801264761905

00:13:08.393 --> 00:13:10.808 that we have here in our smile where we

NOTE Confidence: 0.836801264761905

00:13:10.808 --> 00:13:13.003 do stereotactic radiosurgery for the

NOTE Confidence: 0.836801264761905

00:13:13.003 --> 00:13:15.215 residual tumor around the vertebral

NOTE Confidence: 0.836801264761905

00:13:15.215 --> 00:13:18.120 artery to kill whatever tumors left behind.

NOTE Confidence: 0.836801264761905

00:13:18.120 --> 00:13:20.703 We can mark exactly we go at the level

NOTE Confidence: 0.836801264761905

00:13:20.703 --> 00:13:23.805 above and the level below and Lily keel

NOTE Confidence: 0.836801264761905

00:13:23.805 --> 00:13:26.159 whatever microscopic cells that left behind.

NOTE Confidence: 0.836801264761905

00:13:26.160 --> 00:13:27.696 And you know in this particular

00:13:27.696 --> 00:13:29.320 case there were three levels that

00:13:29.320 --> 00:13:30.700 radio surgery that was done.

00:13:30.700 --> 00:13:32.600 This is not conventional radiation.

00:13:32.600 --> 00:13:32.965 Patient.

00:13:32.965 --> 00:13:35.885 So the risk to the esophagus the the

00:13:35.885 --> 00:13:38.329 vocal cords is significantly less.

00:13:38.330 --> 00:13:40.265 This is a paper that we can do even

00:13:40.265 --> 00:13:42.214 up to three or more contiguous that

00:13:42.214 --> 00:13:44.727 your bodies is a paper from the James

00:13:44.727 --> 00:13:46.737 Cancer Hospital with all the radiation

00:13:46.740 --> 00:13:49.169 oncologist he just came out in the

00:13:49.169 --> 00:13:51.326 last few months and here is another

00:13:51.326 --> 00:13:53.770 case 55 year old and you can see

00:13:53.770 --> 00:13:55.864 right here there's a T1 pathologic

00:13:55.864 --> 00:13:58.273 fractures we may call you guys to help

00:13:58.273 --> 00:14:01.930 us with access to get down to low.

NOTE Confidence: 0.836801264761905

00:14:01.930 --> 00:14:04.695 A T1C7 sometimes T2 vertebrae where

NOTE Confidence: 0.836801264761905

00:14:04.695 --> 00:14:06.820 we wanna do vertebra ectomy.

NOTE Confidence: 0.836801264761905

00:14:06.820 --> 00:14:08.420 Unfortunately these tends to be

NOTE Confidence: 0.836801264761905

00:14:08.420 --> 00:14:10.519 behind the sternum and if you guys

NOTE Confidence: 0.836801264761905

00:14:10.519 --> 00:14:12.610 cannot get us to be able to do the

NOTE Confidence: 0.836801264761905

00:14:12.610 --> 00:14:14.577 work then sometimes this is what it

NOTE Confidence: 0.836801264761905

00:14:14.577 --> 00:14:17.230 take where we plan on going from.

NOTE Confidence: 0.836801264761905

00:14:17.230 --> 00:14:17.758 You know,

NOTE Confidence: 0.836801264761905

00:14:17.758 --> 00:14:19.870 through a typical NT approach to the neck.

NOTE Confidence: 0.836801264761905

00:14:19.870 --> 00:14:21.998 But if it looks like we are unable

NOTE Confidence: 0.836801264761905

00:14:21.998 --> 00:14:23.310 to get down to T1,

NOTE Confidence: 0.836801264761905

00:14:23.310 --> 00:14:25.026 then sometimes we need our thoracic

NOTE Confidence: 0.836801264761905

00:14:25.026 --> 00:14:27.142 surgeon to do, to split the sternal,

NOTE Confidence: 0.836801264761905

00:14:27.142 --> 00:14:28.707 in essence to get down,

NOTE Confidence: 0.836801264761905

00:14:28.710 --> 00:14:31.170 to be able to get to do the vertebra ectomy.

NOTE Confidence: 0.836801264761905

00:14:31.170 --> 00:14:34.056 And this is the illustration of

NOTE Confidence: 0.836801264761905

00:14:34.056 --> 00:14:35.980 what it actually means.

NOTE Confidence: 0.836801264761905

00:14:35.980 --> 00:14:37.744 So for us to be able to put this,

NOTE Confidence: 0.836801264761905

00:14:37.750 --> 00:14:40.270 the screws, to put the plate,

NOTE Confidence: 0.836801264761905

00:14:40.270 --> 00:14:41.540 to do all the reconstruction,

NOTE Confidence: 0.836801264761905

00:14:41.540 --> 00:14:43.304 the break is a philic vein can

NOTE Confidence: 0.836801264761905

00:14:43.304 --> 00:14:45.294 be sometimes in our vein, in our,

NOTE Confidence: 0.836801264761905

00:14:45.294 --> 00:14:47.736 in our way, and and that's why.

NOTE Confidence: 0.836801264761905

00:14:47.736 --> 00:14:49.860 Some of these illustrations show why

NOTE Confidence: 0.836801264761905

00:14:49.924 --> 00:14:52.452 sometimes we need you guys to help us

NOTE Confidence: 0.836801264761905

00:14:52.452 --> 00:14:54.468 with getting us the accesses, the,

NOTE Confidence: 0.836801264761905

00:14:54.468 --> 00:14:57.240 the accessibility to be able to do this work.

NOTE Confidence: 0.836801264761905

00:14:57.240 --> 00:14:59.298 And sometimes on these low thoracic,

NOTE Confidence: 0.836801264761905

00:14:59.300 --> 00:14:59.742 upper,

NOTE Confidence: 0.836801264761905

00:14:59.742 --> 00:15:02.394 lower cervical region with short neck,

NOTE Confidence: 0.836801264761905

00:15:02.400 --> 00:15:04.535 those veins can be in our way.

NOTE Confidence: 0.836801264761905

00:15:04.540 --> 00:15:06.178 The manubrium you can see right here,

NOTE Confidence: 0.836801264761905

00:15:06.180 --> 00:15:07.794 sometimes it's completely in the way

NOTE Confidence: 0.836801264761905

00:15:07.794 --> 00:15:09.733 and we have to split the manubrium

NOTE Confidence: 0.836801264761905

00:15:09.733 --> 00:15:11.616 in order to get the down there.

NOTE Confidence: 0.836801264761905

00:15:11.620 --> 00:15:13.692 And this is what it looks like

NOTE Confidence: 0.836801264761905

00:15:13.692 --> 00:15:14.580 after the reconstruction.

NOTE Confidence: 0.836801264761905

00:15:14.580 --> 00:15:16.285 Sometimes we have fractures like

NOTE Confidence: 0.836801264761905

00:15:16.285 --> 00:15:17.990 this case particularly where there

NOTE Confidence: 0.836801264761905

00:15:18.044 --> 00:15:18.908 was an advantage.

NOTE Confidence: 0.836801264761905

00:15:18.910 --> 00:15:20.772 Fracture from a thyroid met and in

NOTE Confidence: 0.836801264761905

00:15:20.772 --> 00:15:22.857 this case what I ended up doing is

NOTE Confidence: 0.836801264761905

00:15:22.857 --> 00:15:24.409 we did a cement injection through

NOTE Confidence: 0.836801264761905

00:15:24.409 --> 00:15:25.769 the back of the mouth.

NOTE Confidence: 0.836801264761905

00:15:25.770 --> 00:15:27.884 You can see right here this has

NOTE Confidence: 0.836801264761905

00:15:27.884 --> 00:15:29.745 been published or with my ENT

NOTE Confidence: 0.836801264761905

00:15:29.745 --> 00:15:31.817 colleagues you see on the left side.

NOTE Confidence: 0.870426595384615

00:15:31.820 --> 00:15:33.950 You guys use this cloud retractors

NOTE Confidence: 0.870426595384615

00:15:33.950 --> 00:15:36.140 moving the tongue out of the way,

NOTE Confidence: 0.870426595384615

00:15:36.140 --> 00:15:38.124 moving the ugly out of the way and

NOTE Confidence: 0.870426595384615

00:15:38.124 --> 00:15:40.292 we can drive the needle right into

NOTE Confidence: 0.870426595384615

00:15:40.292 --> 00:15:42.319 the C2 vertebral body and injects

NOTE Confidence: 0.870426595384615

00:15:42.319 --> 00:15:44.461 cement right into the C2 vertebra

NOTE Confidence: 0.870426595384615

00:15:44.461 --> 00:15:46.584 to stabilize that broken vertebrae

NOTE Confidence: 0.870426595384615

00:15:46.584 --> 00:15:48.672 saving an exhibitor cervical

NOTE Confidence: 0.870426595384615

00:15:48.672 --> 00:15:51.190 fixation for something like that.

NOTE Confidence: 0.870426595384615

00:15:51.190 --> 00:15:55.607 And we ended up using both the

NOTE Confidence: 0.870426595384615

00:15:55.607 --> 00:15:57.500 stereotactic radiosurgery and

NOTE Confidence: 0.870426595384615

00:15:57.500 --> 00:15:59.440 stereotactic CT imaging guidance with

NOTE Confidence: 0.870426595384615

00:15:59.440 --> 00:16:01.780 fluoroscopy to get these cases going.

NOTE Confidence: 0.870426595384615

00:16:01.780 --> 00:16:02.976 So this was a technical note.

NOTE Confidence: 0.870426595384615

00:16:02.976 --> 00:16:04.421 How it's getting done.

NOTE Confidence: 0.870426595384615

00:16:04.421 --> 00:16:06.406 There are many percutaneous techniques

NOTE Confidence: 0.870426595384615

00:16:06.406 --> 00:16:09.095 that there is a common thing to do for

NOTE Confidence: 0.870426595384615

00:16:09.095 --> 00:16:11.245 fractures and now we start looking at

NOTE Confidence: 0.870426595384615

00:16:11.245 --> 00:16:13.870 actually doing it for cervical fractures,

NOTE Confidence: 0.870426595384615

00:16:13.870 --> 00:16:15.643 other things that we deal with in the neck.

NOTE Confidence: 0.870426595384615

00:16:15.650 --> 00:16:18.764 This is an intradural lesion and

NOTE Confidence: 0.870426595384615

00:16:18.764 --> 00:16:20.288 this is a severe intradural lesion.

NOTE Confidence: 0.870426595384615

00:16:20.290 --> 00:16:22.506 You can see the code is being squashed.

NOTE Confidence: 0.870426595384615

00:16:22.510 --> 00:16:24.491 This turned out to be a chloroma

NOTE Confidence: 0.870426595384615

00:16:24.491 --> 00:16:26.536 that after you can see the Peskin

NOTE Confidence: 0.870426595384615

00:16:26.536 --> 00:16:28.626 was very active and we ended up

NOTE Confidence: 0.870426595384615

00:16:28.626 --> 00:16:30.588 without the biopsy radiating it in,

NOTE Confidence: 0.870426595384615

00:16:30.590 --> 00:16:32.654 the tumor melted away and this

NOTE Confidence: 0.870426595384615

00:16:32.654 --> 00:16:34.410 is kind of like the.

NOTE Confidence: 0.870426595384615

00:16:34.410 --> 00:16:36.090 Aspect of metastatic disease that we

NOTE Confidence: 0.870426595384615

00:16:36.090 --> 00:16:38.408 own on all of these fractures look and

NOTE Confidence: 0.870426595384615

00:16:38.408 --> 00:16:40.816 see whether we can help at least with

NOTE Confidence: 0.870426595384615

00:16:40.816 --> 00:16:43.035 the pain and decompress the spinal cord.

NOTE Confidence: 0.870426595384615

00:16:43.040 --> 00:16:44.846 Primary tumor is really the key when

NOTE Confidence: 0.870426595384615

00:16:44.846 --> 00:16:47.079 it comes to a lot of work with the Ant

NOTE Confidence: 0.870426595384615

00:16:47.080 --> 00:16:49.047 or ENT colleagues when it comes to

NOTE Confidence: 0.870426595384615

00:16:49.047 --> 00:16:51.237 really our goal is to cure the patient.

NOTE Confidence: 0.870426595384615

00:16:51.240 --> 00:16:52.997 These are the tumors we talking about.

NOTE Confidence: 0.870426595384615

00:16:53.000 --> 00:16:54.980 They could domas the condo sarcomas

NOTE Confidence: 0.870426595384615

00:16:54.980 --> 00:16:56.300 are the main ones.

NOTE Confidence: 0.870426595384615

00:16:56.300 --> 00:16:58.064 These require unblock resection

NOTE Confidence: 0.870426595384615

00:16:58.064 --> 00:17:00.710 unblocker section means that you we

NOTE Confidence: 0.870426595384615

00:17:00.778 --> 00:17:03.042 have to find a way where we don't

NOTE Confidence: 0.870426595384615

00:17:03.042 --> 00:17:05.190 we remove the tumor in one piece.

NOTE Confidence: 0.870426595384615

00:17:05.190 --> 00:17:08.414 You don't get into the tumor in order

NOTE Confidence: 0.870426595384615

00:17:08.414 --> 00:17:10.780 to not have clean margins around it.

NOTE Confidence: 0.870426595384615

00:17:10.780 --> 00:17:13.076 Here is a case of a cervical

NOTE Confidence: 0.870426595384615

00:17:13.076 --> 00:17:13.732 Congress sarcoma.

NOTE Confidence: 0.870426595384615

00:17:13.740 --> 00:17:15.356 You can see the tumor in the neck,

NOTE Confidence: 0.870426595384615

00:17:15.360 --> 00:17:17.556 it's wrapped around the vertebral artery.

NOTE Confidence: 0.870426595384615

00:17:17.560 --> 00:17:19.480 And couple of cases here,

NOTE Confidence: 0.870426595384615

00:17:19.480 --> 00:17:21.440 you can see the tumor in blue.

NOTE Confidence: 0.870426595384615

00:17:21.440 --> 00:17:22.744 There's one vertebral artery

NOTE Confidence: 0.870426595384615

00:17:22.744 --> 00:17:24.374 that's completely in case with

NOTE Confidence: 0.870426595384615

00:17:24.374 --> 00:17:25.619 this Congress sarcoma.

NOTE Confidence: 0.870426595384615

00:17:25.620 --> 00:17:27.797 And here is the tumor right here.

NOTE Confidence: 0.870426595384615

00:17:27.800 --> 00:17:29.494 This is definitely something we can do,

NOTE Confidence: 0.870426595384615

00:17:29.500 --> 00:17:30.580 an unblocker section.

NOTE Confidence: 0.870426595384615

00:17:30.580 --> 00:17:33.494 And so the way we approach doing these

NOTE Confidence: 0.870426595384615

00:17:33.494 --> 00:17:35.769 is we start in the back actually.

NOTE Confidence: 0.870426595384615

00:17:35.770 --> 00:17:39.270 To stabilize things and separate the tumor

NOTE Confidence: 0.870426595384615

00:17:39.270 --> 00:17:42.873 away from the spinal cord, that's the key.

NOTE Confidence: 0.870426595384615

00:17:42.873 --> 00:17:44.739 We put our hardware in there.

NOTE Confidence: 0.870426595384615

00:17:44.740 --> 00:17:46.954 We, you can see right here the spinal cord

NOTE Confidence: 0.870426595384615

00:17:46.954 --> 00:17:49.234 and the bottom and the tumor in the neck.

NOTE Confidence: 0.870426595384615

00:17:49.240 --> 00:17:51.840 We can expose it from the back end.

NOTE Confidence: 0.870426595384615

00:17:51.840 --> 00:17:53.648 We can put our huddle in the back.

NOTE Confidence: 0.870426595384615

00:17:53.650 --> 00:17:55.096 We have to like get some

NOTE Confidence: 0.870426595384615

00:17:55.096 --> 00:17:56.669 nerve roots and not only that,

NOTE Confidence: 0.870426595384615

00:17:56.670 --> 00:17:58.014 you can see the nerve roots right here.

NOTE Confidence: 0.870426595384615

00:17:58.020 --> 00:18:00.588 The C3C4 and C2 nerve roots

NOTE Confidence: 0.870426595384615

00:18:00.588 --> 00:18:02.300 are being ligated away.

NOTE Confidence: 0.870426595384615

00:18:02.300 --> 00:18:04.379 To be able to release these tumor.

NOTE Confidence: 0.870426595384615

00:18:04.380 --> 00:18:05.643 We can also.

NOTE Confidence: 0.870426595384615

00:18:05.643 --> 00:18:07.327 Sacrifice the vertebral artery.

NOTE Confidence: 0.870426595384615

00:18:07.330 --> 00:18:08.726 Get underneath the vertebral

NOTE Confidence: 0.870426595384615

00:18:08.726 --> 00:18:10.471 artery and sacrifice the vertebral

NOTE Confidence: 0.870426595384615

00:18:10.471 --> 00:18:11.670 artery above and below.

NOTE Confidence: 0.870426595384615

00:18:11.670 --> 00:18:12.160 In fact,

NOTE Confidence: 0.870426595384615

00:18:12.160 --> 00:18:14.602 we put a coil on the top and then

NOTE Confidence: 0.870426595384615

00:18:14.602 --> 00:18:16.647 ligated in the vertebral artery,

NOTE Confidence: 0.932002701428571

00:18:16.650 --> 00:18:18.708 so we have no issues with bleeding.

NOTE Confidence: 0.932002701428571

00:18:18.710 --> 00:18:21.950 And once this is the the the tumor in the

NOTE Confidence: 0.932002701428571

00:18:22.035 --> 00:18:25.248 neck is separated from the spinal cord

NOTE Confidence: 0.932002701428571

00:18:25.248 --> 00:18:28.129 and instrumented we go from the front.

NOTE Confidence: 0.932002701428571

00:18:28.130 --> 00:18:30.410 This lady particular didn't have a long neck,

NOTE Confidence: 0.932002701428571

00:18:30.410 --> 00:18:33.026 but with my ENT colleagues you can see

NOTE Confidence: 0.932002701428571

00:18:33.026 --> 00:18:35.746 right here we can dissect The Karate Kid.

NOTE Confidence: 0.932002701428571

00:18:35.750 --> 00:18:38.277 You know, the. They are all the

NOTE Confidence: 0.932002701428571

00:18:38.277 --> 00:18:40.478 venous structures to get down there.

NOTE Confidence: 0.932002701428571

00:18:40.480 --> 00:18:42.058 You can see that once everything

NOTE Confidence: 0.932002701428571

00:18:42.058 --> 00:18:43.440 is moved to the side,

NOTE Confidence: 0.932002701428571

00:18:43.440 --> 00:18:46.184 we can cut through the front of the

NOTE Confidence: 0.932002701428571

00:18:46.184 --> 00:18:48.358 three vertebras and actually removed.

NOTE Confidence: 0.932002701428571

00:18:48.360 --> 00:18:49.812 You can see the three vertebrae

NOTE Confidence: 0.932002701428571

00:18:49.812 --> 00:18:50.780 with the pathologic fracture.

NOTE Confidence: 0.932002701428571

00:18:50.780 --> 00:18:52.778 All have been removed in one

NOTE Confidence: 0.932002701428571

00:18:52.778 --> 00:18:54.110 piece with clean margins.

NOTE Confidence: 0.932002701428571

00:18:54.110 --> 00:18:55.346 And once it's out,

NOTE Confidence: 0.932002701428571

00:18:55.346 --> 00:18:57.820 you can see through the opening the dura,

NOTE Confidence: 0.932002701428571

00:18:57.820 --> 00:19:00.333 you can see in fact the posterior

NOTE Confidence: 0.932002701428571

00:19:00.333 --> 00:19:01.960 rod from the front.

NOTE Confidence: 0.932002701428571

00:19:01.960 --> 00:19:03.330 And then after it's done,

NOTE Confidence: 0.932002701428571

00:19:03.330 --> 00:19:05.400 we can put a cage in with a plate and

NOTE Confidence: 0.932002701428571

00:19:05.461 --> 00:19:07.517 that's what it looks like at the end

NOTE Confidence: 0.932002701428571

00:19:07.517 --> 00:19:09.608 where the reconstruction is complete.

NOTE Confidence: 0.932002701428571

00:19:09.610 --> 00:19:12.688 And the tumor has been removed.

NOTE Confidence: 0.932002701428571

00:19:12.690 --> 00:19:14.646 This is a much more complicated

00:19:14.646 --> 00:19:15.950 case on another codoma.

00:19:15.950 --> 00:19:18.308 You can see the extent of this codoma tumor.

00:19:18.310 --> 00:19:19.606 Again, we start in the back.

00:19:19.610 --> 00:19:21.962 The idea is separating it away

00:19:21.962 --> 00:19:24.350 and we start from the back.

00:19:24.350 --> 00:19:26.150 We ligating the nerve roots.

00:19:26.150 --> 00:19:29.164 You can see right here the 3234 and

00:19:29.164 --> 00:19:31.966 five actually has been sacrificed here.

00:19:31.970 --> 00:19:33.951 You can see the Tibaldi has been

00:19:33.951 --> 00:19:35.415 skeletonized on the other side

00:19:35.415 --> 00:19:37.089 with the nerve roots above it.

00:19:37.090 --> 00:19:38.620 We then typically put a silastic

00:19:38.620 --> 00:19:40.689 sheath so we can see the difference.

00:19:40.690 --> 00:19:41.762 Between the spoiler code,

00:19:41.762 --> 00:19:43.370 when we come from the front,

00:19:43.370 --> 00:19:47.506 we put a long construct from the back.

00:19:47.510 --> 00:19:49.526 This is what it looks like from the back.

00:19:49.530 --> 00:19:51.567 We do between the front and the

00:19:51.567 --> 00:19:53.400 back and angiogram to make sure

00:19:53.400 --> 00:19:55.188 there's no spasms to the vessels.

00:19:55.190 --> 00:19:56.910 And then with you guys,

00:19:56.910 --> 00:19:58.716 this is a trans mandibular approach,

00:19:58.720 --> 00:20:00.729 which you can go through the mandible,

00:20:00.730 --> 00:20:01.990 get to the back of the neck,

00:20:01.990 --> 00:20:04.974 mobilize the vessel, you can see the tumor.

00:20:04.980 --> 00:20:06.966 And through a transmittable approach you

00:20:06.966 --> 00:20:09.357 can see the vertebral artery on one side.

00:20:09.360 --> 00:20:10.908 That's how it looks like when

00:20:10.908 --> 00:20:11.940 the tumor is out.

00:20:11.940 --> 00:20:14.532 This is a very big tumor and you can

00:20:14.532 --> 00:20:17.012 see then we can sneak underneath a

NOTE Confidence: 0.932002701428571

00:20:17.012 --> 00:20:19.505 cage with the cage actually engaging

NOTE Confidence: 0.932002701428571

00:20:19.505 --> 00:20:22.754 the C1 and C1 arch and that top school

NOTE Confidence: 0.932002701428571

00:20:22.754 --> 00:20:25.125 is actually going to the NTSC one

NOTE Confidence: 0.932002701428571

00:20:25.125 --> 00:20:27.999 arch and into the tip of the odontoid.

NOTE Confidence: 0.932002701428571

00:20:28.000 --> 00:20:29.650 This is the visualization of what

NOTE Confidence: 0.932002701428571

00:20:29.650 --> 00:20:31.635 it looks like and you can see

NOTE Confidence: 0.932002701428571

00:20:31.635 --> 00:20:33.015 the nervous has been ligated,

NOTE Confidence: 0.932002701428571

00:20:33.020 --> 00:20:35.600 the tumor is out and that's.

NOTE Confidence: 0.932002701428571

00:20:35.600 --> 00:20:37.030 The the way the construct,

NOTE Confidence: 0.932002701428571

00:20:37.030 --> 00:20:38.542 look at the end of this in order

NOTE Confidence: 0.932002701428571

00:20:38.542 --> 00:20:40.190 to try and do an alpaca section,

NOTE Confidence: 0.932002701428571

00:20:40.190 --> 00:20:41.902 and you can see on the top left

NOTE Confidence: 0.932002701428571

00:20:41.902 --> 00:20:43.281 hand picture how the screw and

NOTE Confidence: 0.932002701428571

00:20:43.281 --> 00:20:44.908 the top goes to the anterior arch

NOTE Confidence: 0.932002701428571

00:20:44.908 --> 00:20:46.525 and into the tip of the odontoid.

NOTE Confidence: 0.932002701428571

00:20:46.530 --> 00:20:48.510 And that's what it looks like at the end.

NOTE Confidence: 0.932002701428571

00:20:48.510 --> 00:20:52.008 So yeah, these are complex cases.

NOTE Confidence: 0.932002701428571

00:20:52.010 --> 00:20:52.548 And again,

NOTE Confidence: 0.932002701428571

00:20:52.548 --> 00:20:54.700 I just wanted to get briefly to the

NOTE Confidence: 0.858561577857143

00:20:54.762 --> 00:20:56.050 extent of these cases.

NOTE Confidence: 0.858561577857143

00:20:56.050 --> 00:20:58.810 A lot of those may require vascularized bone.

NOTE Confidence: 0.858561577857143

00:20:58.810 --> 00:21:00.826 It can be used also in the neck.

NOTE Confidence: 0.858561577857143

00:21:00.830 --> 00:21:02.300 This is vascularized bone that

NOTE Confidence: 0.858561577857143

00:21:02.300 --> 00:21:03.770 we use for sacral lesions.

NOTE Confidence: 0.858561577857143

00:21:03.770 --> 00:21:06.094 These are cases that are very complicated.

NOTE Confidence: 0.858561577857143

00:21:06.100 --> 00:21:07.510 What we actually use the leg,

NOTE Confidence: 0.858561577857143

00:21:07.510 --> 00:21:09.939 the femur and the tibia to close,

NOTE Confidence: 0.858561577857143

00:21:09.940 --> 00:21:10.776 for example,

NOTE Confidence: 0.858561577857143

00:21:10.776 --> 00:21:13.702 a pelvic rings we have described these

NOTE Confidence: 0.858561577857143

00:21:13.702 --> 00:21:15.760 cases is an autologous bone graft,

NOTE Confidence: 0.858561577857143

00:21:15.760 --> 00:21:17.368 vascularized bone graft.

NOTE Confidence: 0.858561577857143

00:21:17.368 --> 00:21:19.888 This works amazing and you can see

NOTE Confidence: 0.858561577857143

00:21:19.888 --> 00:21:21.855 right here how you can see right here

NOTE Confidence: 0.858561577857143

00:21:21.855 --> 00:21:24.023 female with a vessel attached to it and

NOTE Confidence: 0.858561577857143

00:21:24.081 --> 00:21:25.897 a tibia with a vessel attached to it

NOTE Confidence: 0.858561577857143

00:21:25.897 --> 00:21:28.898 to be able to close this pelvic rings.

NOTE Confidence: 0.858561577857143

00:21:28.900 --> 00:21:30.040 This is what it looks like

NOTE Confidence: 0.858561577857143

00:21:30.040 --> 00:21:31.280 at the end of the case.

NOTE Confidence: 0.858561577857143

00:21:31.280 --> 00:21:32.042 This is a.

NOTE Confidence: 0.858561577857143

00:21:32.042 --> 00:21:34.147 This was cases that have been described by

NOTE Confidence: 0.858561577857143

00:21:34.147 --> 00:21:36.315 my plastic colleagues about how they do this.

NOTE Confidence: 0.858561577857143

00:21:36.320 --> 00:21:37.160 Quotation of flaps,

NOTE Confidence: 0.858561577857143

00:21:37.160 --> 00:21:39.120 and this is some of those exit.

NOTE Confidence: 0.858561577857143

00:21:39.120 --> 00:21:41.045 This is a patient after the surgery,

NOTE Confidence: 0.858561577857143

00:21:41.050 --> 00:21:43.744 so these are obviously a big

NOTE Confidence: 0.858561577857143

00:21:43.744 --> 00:21:45.628 time surgeries when it comes to

NOTE Confidence: 0.858561577857143

00:21:45.628 --> 00:21:47.130 doing these unblocker sections.

NOTE Confidence: 0.858561577857143

00:21:47.130 --> 00:21:50.505 But the the the the principle is the same.

NOTE Confidence: 0.858561577857143

00:21:50.510 --> 00:21:52.670 We always have to figure out if we can

NOTE Confidence: 0.858561577857143

00:21:52.670 --> 00:21:54.648 put some sort of a vascularized bone

NOTE Confidence: 0.858561577857143

00:21:54.648 --> 00:21:57.172 graft to be able to get a nice fusion.

NOTE Confidence: 0.858561577857143

00:21:57.172 --> 00:21:59.510 At the end of these cases there

NOTE Confidence: 0.858561577857143

00:21:59.588 --> 00:22:01.623 are some emerging technology that

NOTE Confidence: 0.858561577857143

00:22:01.623 --> 00:22:04.459 I start working at the the spine.

NOTE Confidence: 0.858561577857143

00:22:04.460 --> 00:22:06.595 Research Institute at Ohio State in our,

NOTE Confidence: 0.858561577857143

00:22:06.600 --> 00:22:06.966 you know,

NOTE Confidence: 0.858561577857143

00:22:06.966 --> 00:22:08.247 I'm start working and doing it here.

NOTE Confidence: 0.858561577857143

00:22:08.250 --> 00:22:10.356 There's a lot of 3D printers,

NOTE Confidence: 0.858561577857143

00:22:10.360 --> 00:22:11.776 a lot of 3D reconstruction that

NOTE Confidence: 0.858561577857143

00:22:11.776 --> 00:22:13.459 we did in the lumbar spine.

NOTE Confidence: 0.858561577857143

00:22:13.460 --> 00:22:14.940 Now we can do it in the neck,

NOTE Confidence: 0.858561577857143

00:22:14.940 --> 00:22:16.680 we can reconstruct the cancer.

NOTE Confidence: 0.858561577857143

00:22:16.680 --> 00:22:18.894 We know where it is and we can then

NOTE Confidence: 0.858561577857143

00:22:18.894 --> 00:22:20.913 start thinking about the type of

NOTE Confidence: 0.858561577857143

00:22:20.913 --> 00:22:23.000 reconstructions that we can go about

NOTE Confidence: 0.858561577857143

00:22:23.000 --> 00:22:25.504 doing and then do a specific 3D printers,

NOTE Confidence: 0.858561577857143

00:22:25.510 --> 00:22:26.702 those that have cycle,

NOTE Confidence: 0.858561577857143

00:22:26.702 --> 00:22:28.192 there is a 3D printer.

NOTE Confidence: 0.858561577857143

00:22:28.200 --> 00:22:30.750 These are personalized vertebral bodies that

NOTE Confidence: 0.858561577857143

00:22:30.750 --> 00:22:33.736 are fit right into the potential defect.

NOTE Confidence: 0.858561577857143

00:22:33.736 --> 00:22:35.260 So in conclusions.

NOTE Confidence: 0.858561577857143

00:22:35.260 --> 00:22:37.228 Management should be individualized.

NOTE Confidence: 0.858561577857143

00:22:37.228 --> 00:22:39.688 It clearly is a multidisciplinary.

NOTE Confidence: 0.858561577857143

00:22:39.690 --> 00:22:41.810 This is one picture from the James Cancer.

NOTE Confidence: 0.858561577857143

00:22:41.810 --> 00:22:43.778 So you can see the magnitude of how

NOTE Confidence: 0.858561577857143

00:22:43.778 --> 00:22:45.789 many people are involved in these cases,

NOTE Confidence: 0.858561577857143

00:22:45.790 --> 00:22:46.834 you know between orthopedic

NOTE Confidence: 0.858561577857143

00:22:46.834 --> 00:22:48.580 neurosurgeon and on and on and on.

NOTE Confidence: 0.858561577857143

00:22:48.580 --> 00:22:51.040 There's just these are two

NOTE Confidence: 0.858561577857143

00:22:51.040 --> 00:22:53.008 default type of surgery.

NOTE Confidence: 0.858561577857143

00:22:53.010 --> 00:22:54.520 So thank you very much.

NOTE Confidence: 0.784760821666667

00:22:56.560 --> 00:22:58.172 Thank you. Doctor Mendel,

NOTE Confidence: 0.784760821666667

00:22:58.172 --> 00:23:00.144 that's just very, you know,

NOTE Confidence: 0.784760821666667

00:23:00.144 --> 00:23:02.084 just amazing stuff to see

NOTE Confidence: 0.784760821666667

00:23:02.084 --> 00:23:03.740 what you're doing here.

NOTE Confidence: 0.784760821666667

00:23:03.740 --> 00:23:05.801 There are a bunch of questions in the chat.

NOTE Confidence: 0.784760821666667

00:23:05.801 --> 00:23:07.320 So if you know if you can

NOTE Confidence: 0.784760821666667

00:23:07.379 --> 00:23:08.975 stay on for a few questions,

NOTE Confidence: 0.784760821666667

00:23:08.980 --> 00:23:11.580 one individual asked about recordings,

NOTE Confidence: 0.784760821666667

00:23:11.580 --> 00:23:13.662 yes, that will be available e-mail

NOTE Confidence: 0.784760821666667

00:23:13.662 --> 00:23:15.819 to registered guests and available on

NOTE Confidence: 0.784760821666667

00:23:15.820 --> 00:23:17.680 yalecancercenter.org and the YouTube channel.

NOTE Confidence: 0.784760821666667

00:23:17.680 --> 00:23:21.264 But 22 clinical questions here.

NOTE Confidence: 0.784760821666667

00:23:21.264 --> 00:23:24.660 One has to do with prevertebral fascia,

NOTE Confidence: 0.784760821666667

00:23:24.660 --> 00:23:26.977 so as head and neck cancer surgeons.

NOTE Confidence: 0.784760821666667

00:23:26.980 --> 00:23:29.876 I'm doing a lot with squamous cell carcinomas

NOTE Confidence: 0.784760821666667

00:23:29.876 --> 00:23:33.178 of the pharynx and the throat and the neck.

NOTE Confidence: 0.784760821666667

00:23:33.180 --> 00:23:36.048 The prevertebral fascia has.

NOTE Confidence: 0.784760821666667

00:23:36.050 --> 00:23:39.190 Essentially been a T4B disease,

NOTE Confidence: 0.784760821666667

00:23:39.190 --> 00:23:41.758 unresectable, don't even bother.

NOTE Confidence: 0.784760821666667

00:23:41.758 --> 00:23:43.684 Don't even try.

NOTE Confidence: 0.784760821666667

00:23:43.690 --> 00:23:47.148 But what are your thoughts on, you know,

NOTE Confidence: 0.784760821666667

00:23:47.148 --> 00:23:48.660 if that is the only site of some

NOTE Confidence: 0.784760821666667

00:23:48.710 --> 00:23:50.648 questionable sometimes we're not even sure,

NOTE Confidence: 0.784760821666667

00:23:50.650 --> 00:23:51.568 is it involved?

NOTE Confidence: 0.784760821666667

00:23:51.568 --> 00:23:52.992 Is it not, you know,

NOTE Confidence: 0.784760821666667

00:23:52.992 --> 00:23:54.749 and it can really change the the

NOTE Confidence: 0.784760821666667

00:23:54.749 --> 00:23:55.882 course of a patient's treatment

NOTE Confidence: 0.784760821666667

00:23:55.882 --> 00:23:57.748 on if it's involved or not.

NOTE Confidence: 0.784760821666667

00:23:57.750 --> 00:24:00.823 So can you just comment on local

NOTE Confidence: 0.784760821666667

00:24:00.823 --> 00:24:03.698 tumors from the throat with

NOTE Confidence: 0.784760821666667

00:24:03.698 --> 00:24:05.146 prevertebral fascia involvement,

NOTE Confidence: 0.784760821666667

00:24:05.146 --> 00:24:06.220 whether that's her?

NOTE Confidence: 0.784760821666667

00:24:06.220 --> 00:24:07.340 Acceptable or not and especially

NOTE Confidence: 0.784760821666667

00:24:07.340 --> 00:24:08.684 in those cases where we're just

NOTE Confidence: 0.784760821666667

00:24:08.684 --> 00:24:09.944 not sure if it's involved or not.

NOTE Confidence: 0.784760821666667

00:24:09.950 --> 00:24:10.958 Any thoughts on that?

NOTE Confidence: 0.852319251428572

00:24:11.030 --> 00:24:13.782 Yes. So I'm going to go to this

NOTE Confidence: 0.852319251428572

00:24:13.782 --> 00:24:15.698 particular slide on the case that

NOTE Confidence: 0.852319251428572

00:24:15.700 --> 00:24:17.332 Charles and I have done right

NOTE Confidence: 0.852319251428572

00:24:17.332 --> 00:24:19.370 here and you can see right here,

NOTE Confidence: 0.852319251428572

00:24:19.370 --> 00:24:22.529 this is the radio surgery picture of a tumor

NOTE Confidence: 0.852319251428572

00:24:22.529 --> 00:24:25.227 that's involved the prevertebral fascia.

NOTE Confidence: 0.852319251428572

00:24:25.230 --> 00:24:27.156 The radio surgery can map exactly

NOTE Confidence: 0.852319251428572

00:24:27.156 --> 00:24:29.803 where we are going to deliver that

NOTE Confidence: 0.852319251428572

00:24:29.803 --> 00:24:31.963 radiation unlike the typical Convention

NOTE Confidence: 0.852319251428572

00:24:31.963 --> 00:24:33.952 radiation that goes through everything

NOTE Confidence: 0.852319251428572

00:24:33.952 --> 00:24:36.416 if there is any suspicion of the.

NOTE Confidence: 0.852319251428572

00:24:36.420 --> 00:24:38.304 Private table fascia here is the

NOTE Confidence: 0.852319251428572

00:24:38.304 --> 00:24:40.373 sagittal and here is the axiom you

NOTE Confidence: 0.852319251428572

00:24:40.373 --> 00:24:42.534 can see that there is a dose of

NOTE Confidence: 0.852319251428572

00:24:42.534 --> 00:24:44.314 radiation that's being given to

NOTE Confidence: 0.852319251428572

00:24:44.314 --> 00:24:46.058 the private civil fashion itself.

NOTE Confidence: 0.852319251428572

00:24:46.058 --> 00:24:48.920 So if there is a if there is a

NOTE Confidence: 0.852319251428572

00:24:49.008 --> 00:24:51.934 suspicion for it and on these cases

NOTE Confidence: 0.852319251428572

00:24:51.940 --> 00:24:53.602 with this you know whenever there's

NOTE Confidence: 0.852319251428572

00:24:53.602 --> 00:24:55.381 a cervical met the suspicion that

NOTE Confidence: 0.852319251428572

00:24:55.381 --> 00:24:57.229 there is a primitive of fashionable

NOTE Confidence: 0.852319251428572

00:24:57.229 --> 00:24:59.078 it always is high we always will

00:24:59.078 --> 00:25:00.876 include it in the radio surgery field.

00:25:00.876 --> 00:25:02.724 We don't necessarily you know we

00:25:02.724 --> 00:25:04.720 remove a lot of it in our approach

00:25:04.720 --> 00:25:06.429 to get down to the vertebral.

00:25:06.430 --> 00:25:08.670 Buddy, but even if we don't remove it,

00:25:08.670 --> 00:25:10.175 we feel very comfortable that

00:25:10.175 --> 00:25:11.680 with radiosurgery we can control

00:25:11.734 --> 00:25:12.949 the disease at that site.

00:25:14.510 --> 00:25:15.890 Yeah, that that is great.

00:25:15.890 --> 00:25:17.890 And I know you and I have discussed

00:25:17.890 --> 00:25:19.669 some cases where there's some direct

00:25:19.669 --> 00:25:21.499 invasion maybe or maybe not to

00:25:21.553 --> 00:25:23.348 the prevertebral fascia where we,

00:25:23.350 --> 00:25:24.370 you know, you say we're well,

00:25:24.370 --> 00:25:25.644 you know what, you can get in

00:25:25.644 --> 00:25:27.232 there and you can take down some

NOTE Confidence: 0.80106988

00:25:27.232 --> 00:25:28.228 of the prevertebral fashion,

NOTE Confidence: 0.80106988

00:25:28.230 --> 00:25:30.060 even drill down some of the

NOTE Confidence: 0.80106988

00:25:30.060 --> 00:25:32.015 bone on block resection.

NOTE Confidence: 0.80106988

00:25:32.015 --> 00:25:33.675 So different techniques that

NOTE Confidence: 0.675297897692308

00:25:33.870 --> 00:25:35.658 these will file already a surgery

NOTE Confidence: 0.675297897692308

00:25:35.658 --> 00:25:37.890 because we can remove the growth aspect,

NOTE Confidence: 0.675297897692308

00:25:37.890 --> 00:25:39.706 the microscopic aspect will

NOTE Confidence: 0.675297897692308

00:25:39.706 --> 00:25:41.440 follow with radiosurgery. Yeah,

NOTE Confidence: 0.709771133333333

00:25:41.450 --> 00:25:42.426 absolutely. So that's great.

NOTE Confidence: 0.709771133333333

00:25:42.426 --> 00:25:43.402 And there's another question

NOTE Confidence: 0.709771133333333

00:25:43.402 --> 00:25:44.299 which you did touch.

NOTE Confidence: 0.709771133333333

00:25:44.300 --> 00:25:47.560 On about vascularized bone graft,

NOTE Confidence: 0.709771133333333

00:25:47.560 --> 00:25:50.160 specifically from the fibula for

NOTE Confidence: 0.709771133333333

00:25:50.160 --> 00:25:51.720 cervical spine reconstruction,

NOTE Confidence: 0.709771133333333

00:25:51.720 --> 00:25:53.142 either for osteoradionecrosis,

NOTE Confidence: 0.709771133333333

00:25:53.142 --> 00:25:56.460 which is a problem that we often

NOTE Confidence: 0.709771133333333

00:25:56.535 --> 00:25:58.791 see as head and neck cancer

NOTE Confidence: 0.709771133333333

00:25:58.791 --> 00:26:01.200 surgeons and also just in general.

NOTE Confidence: 0.709771133333333

00:26:01.200 --> 00:26:03.076 What is what is your experience with

NOTE Confidence: 0.709771133333333

00:26:03.076 --> 00:26:04.889 fibular bone grafts for cervical spines?

NOTE Confidence: 0.471775491

00:26:04.900 --> 00:26:07.780 Amazing. So we want Fusion,

NOTE Confidence: 0.471775491

00:26:07.780 --> 00:26:11.174 we want bone growth, artificial, you know,

NOTE Confidence: 0.471775491

00:26:11.174 --> 00:26:13.953 Bond Bank does don't work as well,

NOTE Confidence: 0.471775491

00:26:13.960 --> 00:26:14.911 my experience. Vascular,

NOTE Confidence: 0.471775491

00:26:14.911 --> 00:26:17.130 the bone growth is just absolutely amazing.

NOTE Confidence: 0.471775491

00:26:17.130 --> 00:26:18.492 So if there's any way to

NOTE Confidence: 0.471775491

00:26:18.492 --> 00:26:19.770 get a vascular bone graft,

NOTE Confidence: 0.471775491

00:26:19.770 --> 00:26:21.625 I think that's the way to go.

NOTE Confidence: 0.471775491

00:26:21.630 --> 00:26:23.850 So definitely it's require some coordination,

NOTE Confidence: 0.471775491

00:26:23.850 --> 00:26:25.722 uh, when it comes to work to take

NOTE Confidence: 0.471775491

00:26:25.722 --> 00:26:27.568 it from how big do you need it?

NOTE Confidence: 0.471775491

00:26:27.570 --> 00:26:29.560 What's the likelihood that you

NOTE Confidence: 0.471775491

00:26:29.560 --> 00:26:31.568 will survive those kind of things.

NOTE Confidence: 0.471775491

00:26:31.568 --> 00:26:33.078 But I think whenever there's

NOTE Confidence: 0.471775491

00:26:33.078 --> 00:26:34.667 a opportunity to do it,

NOTE Confidence: 0.471775491

00:26:34.670 --> 00:26:36.020 especially for our point of view,

NOTE Confidence: 0.471775491

00:26:36.020 --> 00:26:37.847 a lot of these patients end up not fusing,

NOTE Confidence: 0.471775491

00:26:37.850 --> 00:26:39.205 right, unlike the trauma and

NOTE Confidence: 0.471775491

00:26:39.205 --> 00:26:40.289 the degenerative spine with

NOTE Confidence: 0.471775491

00:26:40.289 --> 00:26:41.369 bone growth over time.

NOTE Confidence: 0.471775491

00:26:41.370 --> 00:26:43.150 And they implant becomes one

NOTE Confidence: 0.471775491

00:26:43.150 --> 00:26:44.930 with the surrounding in cancer

NOTE Confidence: 0.471775491

00:26:44.996 --> 00:26:46.988 after chemotherapy and radiation,

NOTE Confidence: 0.471775491

00:26:46.990 --> 00:26:48.028 it doesn't happen.

NOTE Confidence: 0.471775491

00:26:48.028 --> 00:26:50.450 So we completely relying on the hardware,

NOTE Confidence: 0.471775491

00:26:50.450 --> 00:26:51.266 so these vascularized.

NOTE Confidence: 0.471775491

00:26:51.266 --> 00:26:53.560 Don't just give us the security of fusion,

NOTE Confidence: 0.471775491

00:26:53.560 --> 00:26:54.860 the bone growth around it,

NOTE Confidence: 0.471775491

00:26:54.860 --> 00:26:55.280 and heal.

NOTE Confidence: 0.878960786666667

00:26:56.370 --> 00:26:57.828 Yeah, no, that's great to hear.

NOTE Confidence: 0.878960786666667

00:26:57.830 --> 00:26:58.890 It's a great question too,

NOTE Confidence: 0.878960786666667

00:26:58.890 --> 00:27:00.450 because we often think of the

NOTE Confidence: 0.878960786666667

00:27:00.450 --> 00:27:01.490 fibula mainly for mandible,

NOTE Confidence: 0.878960786666667

00:27:01.490 --> 00:27:02.288 maxillary reconstruction.

NOTE Confidence: 0.878960786666667

00:27:02.288 --> 00:27:04.283 But let's not forget that

NOTE Confidence: 0.878960786666667

00:27:04.283 --> 00:27:06.185 our spine colleagues can use

NOTE Confidence: 0.878960786666667

00:27:06.185 --> 00:27:07.805 vascularized bone grafts as well,

NOTE Confidence: 0.878960786666667

00:27:07.810 --> 00:27:10.040 even for ORN and complications

NOTE Confidence: 0.878960786666667

00:27:10.040 --> 00:27:12.270 of head neck cancer treatment.

NOTE Confidence: 0.878960786666667

00:27:12.270 --> 00:27:14.088 So they, thank you very much,

NOTE Confidence: 0.878960786666667

00:27:14.090 --> 00:27:14.926 Doctor Mandell,

NOTE Confidence: 0.878960786666667

00:27:14.926 --> 00:27:16.598 really appreciate that kind

NOTE Confidence: 0.878960786666667

00:27:16.598 --> 00:27:18.590 of pushing the envelope for,

NOTE Confidence: 0.878960786666667

00:27:18.590 --> 00:27:21.056 you know, in in spinal surgery.

NOTE Confidence: 0.878960786666667

00:27:21.060 --> 00:27:22.768 And it's great to his head neck

NOTE Confidence: 0.878960786666667

00:27:22.768 --> 00:27:24.441 surgeons to hear what is actually

NOTE Confidence: 0.878960786666667

00:27:24.441 --> 00:27:26.211 available if you have the right

NOTE Confidence: 0.878960786666667

00:27:26.211 --> 00:27:27.578 expertise at your institution.

NOTE Confidence: 0.878960786666667

00:27:27.580 --> 00:27:30.200 Thank you you so much. Right.

NOTE Confidence: 0.878960786666667

00:27:30.200 --> 00:27:32.840 So our next speaker is another

NOTE Confidence: 0.878960786666667

00:27:32.840 --> 00:27:33.720 neurosurgeon executive.

NOTE Confidence: 0.878960786666667

00:27:33.720 --> 00:27:35.880 He's the vice chair of clinical

NOTE Confidence: 0.878960786666667

00:27:35.880 --> 00:27:37.700 affairs of neurosurgery at Yale,

NOTE Confidence: 0.878960786666667

00:27:37.700 --> 00:27:39.948 and he's a neurovascular

NOTE Confidence: 0.878960786666667

00:27:39.948 --> 00:27:42.196 surgeon Doctor Charles Matouk.

NOTE Confidence: 0.878960786666667

00:27:42.200 --> 00:27:45.240 The next two talks kind of go hand in hand,

NOTE Confidence: 0.878960786666667

00:27:45.240 --> 00:27:46.850 especially in my practice of head and

NOTE Confidence: 0.878960786666667

00:27:46.850 --> 00:27:48.508 neck cancer surgeon, because again,

NOTE Confidence: 0.878960786666667

00:27:48.508 --> 00:27:51.082 the carotid artery, similar T4B disease.

NOTE Confidence: 0.878960786666667

00:27:51.082 --> 00:27:54.192 We think of it as the some, you know,

NOTE Confidence: 0.878960786666667

00:27:54.192 --> 00:27:56.160 often is thought of as an untouchable area,

NOTE Confidence: 0.878960786666667

00:27:56.160 --> 00:27:57.804 but there are cases.

NOTE Confidence: 0.878960786666667

00:27:57.804 --> 00:28:00.270 Doctor Matuk and Doctor Thomas and

NOTE Confidence: 0.878960786666667

00:28:00.344 --> 00:28:02.808 know that we we can take it down.

NOTE Confidence: 0.878960786666667

00:28:02.810 --> 00:28:03.770 We need to take it down.

NOTE Confidence: 0.878960786666667

00:28:03.770 --> 00:28:05.290 It is the best option.

NOTE Confidence: 0.878960786666667

00:28:05.290 --> 00:28:05.678 Of course,

NOTE Confidence: 0.878960786666667

00:28:05.678 --> 00:28:07.230 we need to know if we can safely

NOTE Confidence: 0.878960786666667

00:28:07.281 --> 00:28:08.674 take it down and then what to

NOTE Confidence: 0.878960786666667

00:28:08.674 --> 00:28:09.950 do after we've taken it down.

NOTE Confidence: 0.878960786666667

00:28:09.950 --> 00:28:12.400 And that's why Doctor Matuk and Doctor

NOTE Confidence: 0.878960786666667

00:28:12.400 --> 00:28:13.886 Thomason are going to speak to us about that.

NOTE Confidence: 0.878960786666667

00:28:13.890 --> 00:28:14.883 So doctor Matuk,

NOTE Confidence: 0.878960786666667

00:28:14.883 --> 00:28:17.340 if you could tell us about the

NOTE Confidence: 0.878960786666667

00:28:17.340 --> 00:28:19.690 carotid artery and doctor Matthew,

NOTE Confidence: 0.878960786666667

00:28:19.690 --> 00:28:20.670 stop sharing for a moment.

NOTE Confidence: 0.878960786666667

00:28:20.670 --> 00:28:22.610 Doctor Matute can pull up.

NOTE Confidence: 0.878960786666667

00:28:22.610 --> 00:28:24.882 So Doctor Matuk is going to talk to

NOTE Confidence: 0.878960786666667

00:28:24.882 --> 00:28:27.706 us about carotid artery preoperative.

NOTE Confidence: 0.878960786666667

00:28:27.706 --> 00:28:28.982 Uh,

NOTE Confidence: 0.878960786666667

00:28:28.982 --> 00:28:30.258 assessment?

NOTE Confidence: 0.878960786666667

00:28:30.260 --> 00:28:30.610 Thanks

NOTE Confidence: 0.845513244285714

00:28:30.620 --> 00:28:33.552 so much, Sarah. Thanks for having me, Judy.

NOTE Confidence: 0.845513244285714

00:28:33.552 --> 00:28:36.560 That's impossible to follow.

NOTE Confidence: 0.845513244285714

00:28:36.560 --> 00:28:40.028 Sorry, what I am going to do see apology

NOTE Confidence: 0.845513244285714

00:28:40.028 --> 00:28:42.418 not accepted but very very impressive,

NOTE Confidence: 0.845513244285714

00:28:42.420 --> 00:28:43.784 very impressive slide that

NOTE Confidence: 0.845513244285714

00:28:43.784 --> 00:28:45.489 can work over the years.

NOTE Confidence: 0.845513244285714

00:28:45.490 --> 00:28:48.446 I'm going to try to let me

NOTE Confidence: 0.845513244285714

00:28:48.446 --> 00:28:50.217 see if I can do this here.

NOTE Confidence: 0.845513244285714

00:28:50.220 --> 00:28:51.360 Can you guys see my screen?

NOTE Confidence: 0.845513244285714

00:28:51.360 --> 00:28:53.708 OK, just by chance

NOTE Confidence: 0.7913719025

00:28:53.720 --> 00:28:55.550 we see this some slides or

NOTE Confidence: 0.7913719025

00:28:55.550 --> 00:28:57.820 something on this side as well, but

NOTE Confidence: 0.71969034

00:28:57.960 --> 00:29:00.889 let me try to let me try to fix that up here.

NOTE Confidence: 0.7329739

00:29:03.550 --> 00:29:04.930 But even if not, we can,

NOTE Confidence: 0.84511531

00:29:04.930 --> 00:29:05.620 we can see it.

NOTE Confidence: 0.82591287

00:29:08.840 --> 00:29:09.989 Even better. Perfect,

NOTE Confidence: 0.7684915365

00:29:10.620 --> 00:29:13.419 perfect. So what what I'm going to try to

NOTE Confidence: 0.7684915365

00:29:13.419 --> 00:29:16.354 do today is to to give you a an overview

NOTE Confidence: 0.7684915365

00:29:16.354 --> 00:29:19.139 of how to think about the carotid artery

NOTE Confidence: 0.7684915365

00:29:19.139 --> 00:29:21.587 and a preop assessment when you're

NOTE Confidence: 0.7684915365

00:29:21.587 --> 00:29:23.932 looking to maximize an oncological

NOTE Confidence: 0.7684915365

00:29:23.932 --> 00:29:26.379 resection often or for recurrent but

NOTE Confidence: 0.7684915365

00:29:26.379 --> 00:29:28.539 you know sometimes a primary tumor.

NOTE Confidence: 0.7684915365

00:29:28.540 --> 00:29:31.096 And what I again I'm going to sort of

NOTE Confidence: 0.7684915365

00:29:31.096 --> 00:29:34.171 try to introduce you to some terms and

NOTE Confidence: 0.7684915365

00:29:34.171 --> 00:29:37.108 some specific anatomy so that when you're

NOTE Confidence: 0.7684915365

00:29:37.108 --> 00:29:39.228 considering these types of options.

NOTE Confidence: 0.7684915365

00:29:39.230 --> 00:29:41.534 You can communicate I guess best

NOTE Confidence: 0.7684915365

00:29:41.534 --> 00:29:43.971 with us and hopefully that will

NOTE Confidence: 0.7684915365

00:29:43.971 --> 00:29:46.779 translate to better you know decision

NOTE Confidence: 0.7684915365

00:29:46.779 --> 00:29:49.394 making for for our patients.

NOTE Confidence: 0.7684915365

00:29:49.400 --> 00:29:51.255 So we'll, we'll start a little bit

NOTE Confidence: 0.7684915365

00:29:51.255 --> 00:29:53.319 with some new neurovascular anatomy,

NOTE Confidence: 0.7684915365

00:29:53.320 --> 00:29:56.146 which you guys don't, you know,

NOTE Confidence: 0.7684915365

00:29:56.150 --> 00:29:59.378 necessarily always think about and then

NOTE Confidence: 0.7684915365

00:29:59.380 --> 00:30:01.115 talk about specifically balloon test

NOTE Confidence: 0.7684915365

00:30:01.115 --> 00:30:03.455 occlusion and some sort of Nuggets that

58

NOTE Confidence: 0.7684915365

00:30:03.455 --> 00:30:05.990 you can take home with you after this talk.

NOTE Confidence: 0.7684915365

00:30:05.990 --> 00:30:08.156 And then we'll just go quickly

NOTE Confidence: 0.7684915365

00:30:08.156 --> 00:30:10.808 through one case and see how we use

NOTE Confidence: 0.7684915365

00:30:10.808 --> 00:30:13.220 it here at Yale New Haven Hospital.

NOTE Confidence: 0.7684915365

00:30:13.220 --> 00:30:16.700 So this is a, you know,

NOTE Confidence: 0.7684915365

00:30:16.700 --> 00:30:19.229 a 3D rendering of a CTA of the head

NOTE Confidence: 0.7684915365

00:30:19.229 --> 00:30:21.818 and neck of of one of our patients.

NOTE Confidence: 0.7684915365

00:30:21.820 --> 00:30:23.782 And it's just to make sure that

NOTE Confidence: 0.7684915365

00:30:23.782 --> 00:30:25.050 we're on the same page.

NOTE Confidence: 0.7684915365

00:30:25.050 --> 00:30:29.100 And for trainees that, you know,

NOTE Confidence: 0.7684915365

00:30:29.100 --> 00:30:30.620 we have two carotid arteries,

NOTE Confidence: 0.7684915365

00:30:30.620 --> 00:30:32.960 one on the right, one on the left that go on,

NOTE Confidence: 0.7684915365

00:30:32.960 --> 00:30:35.579 you know, go up the front of our necks.

NOTE Confidence: 0.7684915365

00:30:35.580 --> 00:30:37.729 And we also have two paired vertebral

NOTE Confidence: 0.7684915365

00:30:37.729 --> 00:30:39.423 arteries and here you can see

NOTE Confidence: 0.7684915365

00:30:39.423 --> 00:30:40.379 it on the lateral.

NOTE Confidence: 0.7684915365

00:30:40.380 --> 00:30:42.160 It's usually a smaller vessel,

NOTE Confidence: 0.7684915365

00:30:42.160 --> 00:30:43.504 significantly smaller than

NOTE Confidence: 0.7684915365

00:30:43.504 --> 00:30:44.848 the vertebral artery.

NOTE Confidence: 0.7684915365

00:30:44.850 --> 00:30:46.524 And there's two paired vertebral arteries

NOTE Confidence: 0.7684915365

00:30:46.524 --> 00:30:48.599 that go also up to the base of the

NOTE Confidence: 0.7684915365

00:30:48.599 --> 00:30:50.388 skull and go on to supply the brain.

NOTE Confidence: 0.7684915365

00:30:50.390 --> 00:30:52.010 And so you can think of,

NOTE Confidence: 0.7684915365

00:30:52.010 --> 00:30:55.321 you can think of the neurovascular anatomy

NOTE Confidence: 0.7684915365

00:30:55.321 --> 00:30:58.946 as being supplied by these four neck vessels,

NOTE Confidence: 0.7684915365

00:30:58.950 --> 00:30:59.173 right.

NOTE Confidence: 0.7684915365

00:30:59.173 --> 00:31:00.957 So the two carotid arteries in the front

NOTE Confidence: 0.7684915365

00:31:00.957 --> 00:31:02.925 of the tuber tibial arteries in the back,

NOTE Confidence: 0.7684915365

00:31:02.930 --> 00:31:04.436 you can think of it a

NOTE Confidence: 0.7684915365

00:31:04.436 --> 00:31:05.890 little bit like a stool.

NOTE Confidence: 0.7684915365

00:31:05.890 --> 00:31:08.620 And the the stool basically feeds a

NOTE Confidence: 0.7684915365

00:31:08.620 --> 00:31:11.257 circle of vessels in the center of

NOTE Confidence: 0.7684915365

00:31:11.257 --> 00:31:13.930 the brain called the circle of Willis.

NOTE Confidence: 0.7684915365

00:31:13.930 --> 00:31:15.974 And we're going to go specifically through.

NOTE Confidence: 0.7684915365

00:31:15.980 --> 00:31:17.898 What you know what that means and

NOTE Confidence: 0.7684915365

00:31:17.898 --> 00:31:20.500 and why it's important to think about

NOTE Confidence: 0.7684915365

00:31:20.500 --> 00:31:22.216 when we're entertaining decisions

NOTE Confidence: 0.7684915365

00:31:22.216 --> 00:31:24.572 about carotid resection plus or minus

NOTE Confidence: 0.7684915365

00:31:24.572 --> 00:31:26.720 reconstruction in the in the context

NOTE Confidence: 0.7684915365

00:31:26.720 --> 00:31:29.636 of head and neck cancer surgery.

NOTE Confidence: 0.7684915365

00:31:29.640 --> 00:31:32.224 So this is the same patient that we

NOTE Confidence: 0.7684915365

00:31:32.224 --> 00:31:34.962 we just saw in the earlier slide and

NOTE Confidence: 0.7684915365

00:31:34.962 --> 00:31:36.578 I'm going to walk us through here you

NOTE Confidence: 0.7684915365

00:31:36.578 --> 00:31:38.317 know what we call the circle of Willis.

NOTE Confidence: 0.7684915365

00:31:38.320 --> 00:31:41.767 So we're the two red dots are are

NOTE Confidence: 0.7684915365

00:31:41.767 --> 00:31:43.861 both the the internal carotid arteries

NOTE Confidence: 0.7684915365

00:31:43.861 --> 00:31:46.196 which are the the termination of

NOTE Confidence: 0.7684915365

00:31:46.196 --> 00:31:47.345 these carotid arteries.

NOTE Confidence: 0.7684915365

00:31:47.350 --> 00:31:48.726 Well, inside the hub,

NOTE Confidence: 0.7684915365

00:31:48.726 --> 00:31:51.502 so those are both the left ICA and

NOTE Confidence: 0.7684915365

00:31:51.502 --> 00:31:52.450 the right ICA.

NOTE Confidence: 0.7684915365

00:31:52.450 --> 00:31:54.760 And what I've done here is that

NOTE Confidence: 0.7684915365

00:31:54.760 --> 00:31:57.545 the I've tried to label the main

NOTE Confidence: 0.7684915365

00:31:57.545 --> 00:32:00.060 bifurcation points of the terminal

NOTE Confidence: 0.7684915365

00:32:00.060 --> 00:32:01.710 internal carotid artery,

NOTE Confidence: 0.7684915365

00:32:01.710 --> 00:32:04.050 so it branches into two branches,

NOTE Confidence: 0.7684915365

00:32:04.050 --> 00:32:04.824 you know,

NOTE Confidence: 0.7684915365

00:32:04.824 --> 00:32:06.759 one is the anterior cerebral

NOTE Confidence: 0.7684915365

00:32:06.759 --> 00:32:07.920 artery and this

NOTE Confidence: 0.883413316666666

00:32:07.996 --> 00:32:09.786 is called the A1 segment.

NOTE Confidence: 0.883413316666666

00:32:09.790 --> 00:32:11.380 And and this goes towards

NOTE Confidence: 0.883413316666666

00:32:11.380 --> 00:32:12.970 the nose or the midline,

NOTE Confidence: 0.883413316666666

00:32:12.970 --> 00:32:15.400 and then laterally there's the middle

NOTE Confidence: 0.883413316666666

00:32:15.400 --> 00:32:17.870 cerebral artery and this year's term,

NOTE Confidence: 0.883413316666666

00:32:17.870 --> 00:32:20.720 the M1 segment.

NOTE Confidence: 0.883413316666666

00:32:20.720 --> 00:32:22.876 And that that those are the two

NOTE Confidence: 0.883413316666666

00:32:22.876 --> 00:32:24.671 main sort of like bifurcation

NOTE Confidence: 0.883413316666666

00:32:24.671 --> 00:32:27.464 points of the of the ICA termination

NOTE Confidence: 0.883413316666666

00:32:27.464 --> 00:32:29.911 and that occurs on both the right

NOTE Confidence: 0.883413316666666

00:32:29.911 --> 00:32:31.532 and the left side obviously.

NOTE Confidence: 0.883413316666666

00:32:31.532 --> 00:32:33.344 So here again is the M1,

NOTE Confidence: 0.883413316666666

00:32:33.350 --> 00:32:34.199 here's the A1.

NOTE Confidence: 0.883413316666666

00:32:34.199 --> 00:32:35.897 Here you can see the internal

NOTE Confidence: 0.883413316666666

00:32:35.897 --> 00:32:37.366 carotid heading down towards the

NOTE Confidence: 0.883413316666666

00:32:37.366 --> 00:32:39.379 skull base and then it sort of

NOTE Confidence: 0.883413316666666

00:32:39.379 --> 00:32:41.206 goes up and then branches into The

NOTE Confidence: 0.883413316666666

00:32:41.206 --> 00:32:42.672 Chew those two different vessels.

NOTE Confidence: 0.883413316666666

00:32:42.672 --> 00:32:45.530 If we look at the back of the head,

NOTE Confidence: 0.883413316666666

00:32:45.530 --> 00:32:47.728 you can see here that the basilar

NOTE Confidence: 0.883413316666666

00:32:47.728 --> 00:32:49.471 artery forms from a fusion

NOTE Confidence: 0.883413316666666

00:32:49.471 --> 00:32:50.947 of both vertebral arteries.

NOTE Confidence: 0.883413316666666

00:32:50.950 --> 00:32:52.010 They're closing up the right

NOTE Confidence: 0.883413316666666

00:32:52.010 --> 00:32:53.340 and left side of the head,

NOTE Confidence: 0.883413316666666

00:32:53.340 --> 00:32:54.780 so here's our of the neck,

NOTE Confidence: 0.883413316666666

00:32:54.780 --> 00:32:55.700 so here's the right side

NOTE Confidence: 0.883413316666666

00:32:55.700 --> 00:32:56.620 and here's the left side.

NOTE Confidence: 0.883413316666666

00:32:56.620 --> 00:32:57.673 And they fuse,

NOTE Confidence: 0.883413316666666

00:32:57.673 --> 00:32:59.779 so it's a little bit different

NOTE Confidence: 0.883413316666666

00:32:59.780 --> 00:33:01.620 than the the carotid arteries,

NOTE Confidence: 0.883413316666666

00:33:01.620 --> 00:33:04.338 which will sort of like go up on each

NOTE Confidence: 0.883413316666666

00:33:04.338 --> 00:33:06.808 side of the neck and then continue

NOTE Confidence: 0.883413316666666

00:33:06.810 --> 00:33:09.154 on the right and left side and the

NOTE Confidence: 0.883413316666666

00:33:09.154 --> 00:33:11.399 head before doing their bifurcations.

NOTE Confidence: 0.883413316666666

00:33:11.400 --> 00:33:12.144 The vertebral arteries,

NOTE Confidence: 0.883413316666666

00:33:12.144 --> 00:33:14.360 which go up on both sides of the neck,

NOTE Confidence: 0.883413316666666

00:33:14.360 --> 00:33:16.608 fuse at the base of the skull and

NOTE Confidence: 0.883413316666666

00:33:16.608 --> 00:33:19.334 then go up as a common basilar

NOTE Confidence: 0.883413316666666

00:33:19.334 --> 00:33:21.010 artery before bifurcating again.

NOTE Confidence: 0.883413316666666

00:33:21.010 --> 00:33:24.321 And that has implications about how safe

NOTE Confidence: 0.883413316666666

00:33:24.321 --> 00:33:27.430 it is to take a vertebral artery and,

NOTE Confidence: 0.883413316666666

00:33:27.430 --> 00:33:28.765 and doctor Mandel mentioned that

NOTE Confidence: 0.883413316666666

00:33:28.765 --> 00:33:30.718 a few times in his talk versus

NOTE Confidence: 0.883413316666666

00:33:30.718 --> 00:33:32.404 a carotid artery in the workup.

NOTE Confidence: 0.883413316666666

00:33:32.410 --> 00:33:33.678 That's required for both.

NOTE Confidence: 0.883413316666666

00:33:33.678 --> 00:33:35.580 Has to do with this anatomical

NOTE Confidence: 0.883413316666666

00:33:35.642 --> 00:33:37.452 nuance that the vertebral arteries

NOTE Confidence: 0.883413316666666

00:33:37.452 --> 00:33:39.262 fuse into the basilar artery,

NOTE Confidence: 0.883413316666666

00:33:39.270 --> 00:33:40.215 a common channel,

NOTE Confidence: 0.883413316666666

00:33:40.215 --> 00:33:42.420 before going on to supply the circle

NOTE Confidence: 0.883413316666666

00:33:42.485 --> 00:33:43.883 of Willis. Where's the carotids?

NOTE Confidence: 0.883413316666666

00:33:43.883 --> 00:33:45.509 Do not they supply the circle

NOTE Confidence: 0.883413316666666

00:33:45.509 --> 00:33:46.890 of Willis independently,

NOTE Confidence: 0.883413316666666

00:33:46.890 --> 00:33:50.406 each one right and left independently?

NOTE Confidence: 0.883413316666666

00:33:50.410 --> 00:33:51.916 As the basilar artery comes up,

NOTE Confidence: 0.883413316666666

00:33:51.920 --> 00:33:53.420 it divides into these two branches,

NOTE Confidence: 0.883413316666666

00:33:53.420 --> 00:33:55.130 which we call the posterior

NOTE Confidence: 0.883413316666666

00:33:55.130 --> 00:33:55.814 cerebral arteries,

NOTE Confidence: 0.883413316666666

00:33:55.820 --> 00:33:58.310 labeled the right P1 and left

NOTE Confidence: 0.883413316666666

00:33:58.310 --> 00:34:01.360 P1 segments individually now.

NOTE Confidence: 0.883413316666666

00:34:01.360 --> 00:34:03.427 There are communications that

NOTE Confidence: 0.883413316666666

00:34:03.427 --> 00:34:05.772 can occur between the posterior

NOTE Confidence: 0.883413316666666

00:34:05.772 --> 00:34:07.963 circulation supplied by the vertebral

NOTE Confidence: 0.883413316666666

00:34:07.963 --> 00:34:09.938 artery and the anterior circulation

NOTE Confidence: 0.883413316666666

00:34:09.938 --> 00:34:11.916 supplied by the carotid arteries,

NOTE Confidence: 0.883413316666666

00:34:11.916 --> 00:34:14.256 and here's an example of

NOTE Confidence: 0.883413316666666

00:34:14.256 --> 00:34:15.660 these communicating vessels.

NOTE Confidence: 0.883413316666666

00:34:15.660 --> 00:34:18.980 Which will, which will connect the right PCA,

NOTE Confidence: 0.883413316666666

00:34:18.980 --> 00:34:21.152 the P1 segment to the internal

NOTE Confidence: 0.883413316666666

00:34:21.152 --> 00:34:21.876 carotid artery.

NOTE Confidence: 0.883413316666666

00:34:21.880 --> 00:34:23.900 And here you can see that best on this side.

NOTE Confidence: 0.883413316666666

00:34:23.900 --> 00:34:25.490 There's a smaller vessel that we

NOTE Confidence: 0.883413316666666

00:34:25.490 --> 00:34:27.299 can see over here on this side.

NOTE Confidence: 0.883413316666666

00:34:27.300 --> 00:34:29.620 These are the natural communications

NOTE Confidence: 0.883413316666666

00:34:29.620 --> 00:34:31.940 between the anterior and posterior

NOTE Confidence: 0.883413316666666

00:34:32.014 --> 00:34:32.800 circulation.

NOTE Confidence: 0.883413316666666

00:34:32.800 --> 00:34:35.260 We also have a communicating artery

NOTE Confidence: 0.883413316666666

00:34:35.260 --> 00:34:38.020 that connects the right A1 on the left,

NOTE Confidence: 0.883413316666666

00:34:38.020 --> 00:34:40.294 a one that communicating artery which

NOTE Confidence: 0.883413316666666

00:34:40.294 --> 00:34:43.298 is often less than a millimeter in size.

NOTE Confidence: 0.883413316666666

00:34:43.300 --> 00:34:45.844 Connect both hemispheres, so in a

NOTE Confidence: 0.883413316666666

00:34:45.844 --> 00:34:48.520 sense connects both carotid circulations.

NOTE Confidence: 0.883413316666666

00:34:48.520 --> 00:34:50.830 So now you essentially have this ring,

NOTE Confidence: 0.883413316666666

00:34:50.830 --> 00:34:52.854 which was the top of the stool that

NOTE Confidence: 0.883413316666666

00:34:52.854 --> 00:34:54.878 we talked about in the last example,

NOTE Confidence: 0.883413316666666

00:34:54.880 --> 00:34:57.165 and this represents a complete

NOTE Confidence: 0.883413316666666

00:34:57.165 --> 00:34:58.536 circle of Willis.

NOTE Confidence: 0.883413316666666

00:34:58.540 --> 00:34:58.891 Right.

NOTE Confidence: 0.883413316666666

00:34:58.891 --> 00:35:00.646 And so in doing this,

NOTE Confidence: 0.883413316666666

00:35:00.650 --> 00:35:02.110 if you sacrifice 1 vessel

NOTE Confidence: 0.883413316666666

00:35:02.110 --> 00:35:03.570 and we're going to go

NOTE Confidence: 0.918129304666667

00:35:03.637 --> 00:35:05.377 through this in more detail,

NOTE Confidence: 0.918129304666667

00:35:05.380 --> 00:35:08.005 you can see that the other vessels

NOTE Confidence: 0.918129304666667

00:35:08.005 --> 00:35:11.227 have a route to get blood to the part

NOTE Confidence: 0.918129304666667

00:35:11.227 --> 00:35:13.931 of the brain that is now compromised

NOTE Confidence: 0.918129304666667

00:35:13.931 --> 00:35:16.487 in terms of its blood supply.

NOTE Confidence: 0.918129304666667

00:35:16.490 --> 00:35:18.355 So sometimes we're born without

NOTE Confidence: 0.918129304666667

00:35:18.355 --> 00:35:20.220 a complete circle of Willis,

NOTE Confidence: 0.918129304666667

00:35:20.220 --> 00:35:22.208 and in fact that's that's the norm.

NOTE Confidence: 0.918129304666667

00:35:22.210 --> 00:35:25.073 The norm is that we don't have

NOTE Confidence: 0.918129304666667

00:35:25.073 --> 00:35:26.902 symmetric large pcom arteries

NOTE Confidence: 0.918129304666667

00:35:26.902 --> 00:35:29.998 bilaterally and a large acom artery.

NOTE Confidence: 0.918129304666667

00:35:30.000 --> 00:35:33.560 And that's when we can get into problems

NOTE Confidence: 0.918129304666667

00:35:33.560 --> 00:35:36.488 with therapeutic carotid artery sacrifice,

NOTE Confidence: 0.918129304666667

00:35:36.490 --> 00:35:39.809 because just by chance in the way

NOTE Confidence: 0.918129304666667

00:35:39.809 --> 00:35:41.620 we were born, sometimes we're born

NOTE Confidence: 0.918129304666667

00:35:41.620 --> 00:35:43.720 with an incomplete circle of Willis,

NOTE Confidence: 0.918129304666667

00:35:43.720 --> 00:35:45.946 and that circle can be variably.

NOTE Confidence: 0.918129304666667

00:35:45.950 --> 00:35:46.305 Incomplete.

NOTE Confidence: 0.918129304666667

00:35:46.305 --> 00:35:48.435 So in some instances it might

NOTE Confidence: 0.918129304666667

00:35:48.435 --> 00:35:51.043 just be an asymmetry so that one

NOTE Confidence: 0.918129304666667

00:35:51.043 --> 00:35:53.251 pecom is smaller than the other,

NOTE Confidence: 0.918129304666667

00:35:53.260 --> 00:35:55.084 or an acom artery is smaller

NOTE Confidence: 0.918129304666667

00:35:55.084 --> 00:35:56.300 than it normally is.

NOTE Confidence: 0.918129304666667

00:35:56.300 --> 00:35:58.000 Sometimes there's complete aplasia

NOTE Confidence: 0.918129304666667

00:35:58.000 --> 00:36:00.125 so there's like non development,

NOTE Confidence: 0.918129304666667

00:36:00.130 --> 00:36:00.928 they're aplastic vessels.

NOTE Confidence: 0.918129304666667

00:36:00.928 --> 00:36:03.180 So there's like we don't see a vessel,

NOTE Confidence: 0.918129304666667

00:36:03.180 --> 00:36:05.200 there's no vessel connecting,

NOTE Confidence: 0.918129304666667

00:36:05.200 --> 00:36:07.341 for example, the ICA termination,

NOTE Confidence: 0.918129304666667

00:36:07.341 --> 00:36:09.603 there's like and and the and

NOTE Confidence: 0.918129304666667

00:36:09.603 --> 00:36:11.840 and the communicating artery.

NOTE Confidence: 0.918129304666667

00:36:11.840 --> 00:36:12.406 For example,

NOTE Confidence: 0.918129304666667

00:36:12.406 --> 00:36:14.670 there might be a missing A1 segment and

NOTE Confidence: 0.918129304666667

00:36:14.726 --> 00:36:16.735 its entirety and you can't know that.

NOTE Confidence: 0.918129304666667

00:36:16.740 --> 00:36:19.260 Unless you sort of spent some time

NOTE Confidence: 0.918129304666667

00:36:19.260 --> 00:36:21.800 with the CTA and T is this out?

NOTE Confidence: 0.918129304666667

00:36:21.800 --> 00:36:23.760 So in this example, we're going to say,

NOTE Confidence: 0.918129304666667

00:36:23.760 --> 00:36:25.004 well, let's say we,

NOTE Confidence: 0.918129304666667

00:36:25.004 --> 00:36:26.870 we're going to sacrifice the carotid

NOTE Confidence: 0.918129304666667

00:36:26.928 --> 00:36:28.536 artery in the neck over here.

NOTE Confidence: 0.918129304666667

00:36:28.540 --> 00:36:31.340 So that still means that,

NOTE Confidence: 0.918129304666667

00:36:31.340 --> 00:36:32.864 that means what that means if

NOTE Confidence: 0.918129304666667

00:36:32.864 --> 00:36:34.148 we sacrifice the carotid artery

NOTE Confidence: 0.918129304666667

00:36:34.148 --> 00:36:35.208 in the neck is that.

NOTE Confidence: 0.918129304666667

00:36:35.210 --> 00:36:37.212 The MCA and the ACA territories of

NOTE Confidence: 0.918129304666667

00:36:37.212 --> 00:36:39.454 the brain can still get blood by

NOTE Confidence: 0.918129304666667

00:36:39.454 --> 00:36:41.109 traveling up the Basler artery,

NOTE Confidence: 0.918129304666667

00:36:41.110 --> 00:36:43.970 the P1 segment across here,

NOTE Confidence: 0.918129304666667

00:36:43.970 --> 00:36:45.755 this pcom segment to the

NOTE Confidence: 0.918129304666667

00:36:45.755 --> 00:36:46.826 internal carotid artery,

NOTE Confidence: 0.918129304666667

00:36:46.830 --> 00:36:49.674 and then fill the A1 and the M1 segments

NOTE Confidence: 0.918129304666667

00:36:49.674 --> 00:36:52.369 and their corresponding territories.

NOTE Confidence: 0.918129304666667

00:36:52.370 --> 00:36:55.058 Or you can get contralateral blood

NOTE Confidence: 0.918129304666667

00:36:55.058 --> 00:36:58.049 coming from the right eye CA across

NOTE Confidence: 0.918129304666667

00:36:58.049 --> 00:37:00.765 an acom artery to supply again the A1

NOTE Confidence: 0.918129304666667

00:37:00.765 --> 00:37:03.478 segment on the left and the M1 segment.

NOTE Confidence: 0.918129304666667

00:37:03.480 --> 00:37:05.220 Now let's say that you're born

NOTE Confidence: 0.918129304666667

00:37:05.220 --> 00:37:06.920 without a right A1 segment,

NOTE Confidence: 0.918129304666667

00:37:06.920 --> 00:37:08.444 so this is gone.

NOTE Confidence: 0.918129304666667

00:37:08.444 --> 00:37:11.459 Or that the acom artery itself is gone,

NOTE Confidence: 0.918129304666667

00:37:11.460 --> 00:37:13.194 and you don't have that just

NOTE Confidence: 0.918129304666667

00:37:13.194 --> 00:37:14.929 because you were born that way.

NOTE Confidence: 0.918129304666667

00:37:14.930 --> 00:37:16.544 And that you were born without

NOTE Confidence: 0.918129304666667

00:37:16.544 --> 00:37:18.239 a pecom artery on this side.

NOTE Confidence: 0.918129304666667

00:37:18.240 --> 00:37:19.794 Now you have what was referred

NOTE Confidence: 0.918129304666667

00:37:19.794 --> 00:37:21.540 to as an isolated circulation,

NOTE Confidence: 0.918129304666667

00:37:21.540 --> 00:37:23.325 so that if you take the internal

NOTE Confidence: 0.918129304666667

00:37:23.325 --> 00:37:24.659 carotid artery on this side,

NOTE Confidence: 0.918129304666667

00:37:24.660 --> 00:37:26.935 there can be no compensatory

NOTE Confidence: 0.918129304666667

00:37:26.935 --> 00:37:29.164 blood throw across from the

NOTE Confidence: 0.918129304666667

00:37:29.164 --> 00:37:31.324 right carotid artery to supply.

NOTE Confidence: 0.918129304666667

00:37:31.330 --> 00:37:32.746 This left MCA territory.

NOTE Confidence: 0.918129304666667

00:37:32.746 --> 00:37:35.279 Either from the front or from the

NOTE Confidence: 0.918129304666667

00:37:35.279 --> 00:37:37.666 back through pecan and that's what we

NOTE Confidence: 0.918129304666667

00:37:37.666 --> 00:37:39.990 would call an isolated circulation.

NOTE Confidence: 0.918129304666667

00:37:39.990 --> 00:37:41.968 So if you were doing, for example,

NOTE Confidence: 0.918129304666667

00:37:41.968 --> 00:37:43.663 a carotid endarterectomy on this

NOTE Confidence: 0.918129304666667

00:37:43.663 --> 00:37:45.793 patient and the patient was under

NOTE Confidence: 0.918129304666667

00:37:45.793 --> 00:37:47.520 a general anesthetic and you

NOTE Confidence: 0.918129304666667

00:37:47.520 --> 00:37:48.525 were using electrophysiological

NOTE Confidence: 0.918129304666667

00:37:48.525 --> 00:37:50.670 monitoring to look at the patient,

NOTE Confidence: 0.918129304666667

00:37:50.670 --> 00:37:52.756 you would put your cross clamp on

NOTE Confidence: 0.918129304666667

00:37:52.756 --> 00:37:54.374 the internal carotid artery and

NOTE Confidence: 0.918129304666667

00:37:54.374 --> 00:37:55.698 your electrophysiology would just

NOTE Confidence: 0.918129304666667

00:37:55.698 --> 00:37:58.102 go flat to zero and then you would

NOTE Confidence: 0.918129304666667

00:37:58.102 --> 00:38:00.064 take the clamp off and then over a

NOTE Confidence: 0.918129304666667

00:38:00.064 --> 00:38:01.583 few seconds it would come back up.

NOTE Confidence: 0.819826194285714

00:38:01.590 --> 00:38:04.229 So these are patients that you know.

NOTE Confidence: 0.819826194285714

00:38:04.230 --> 00:38:07.590 That need a shunt right during the procedure

NOTE Confidence: 0.819826194285714

00:38:07.590 --> 00:38:09.798 because otherwise their brain is going

NOTE Confidence: 0.819826194285714

00:38:09.798 --> 00:38:12.360 to be ischemic for a period of time.

NOTE Confidence: 0.819826194285714

00:38:12.360 --> 00:38:13.488 Sufficiently, it just,

NOTE Confidence: 0.819826194285714

00:38:13.488 --> 00:38:16.120 it just takes like about 10 minutes

NOTE Confidence: 0.819826194285714

00:38:16.186 --> 00:38:18.490 or so to create an infarct which

NOTE Confidence: 0.819826194285714

00:38:18.490 --> 00:38:20.470 is an irreversible brain injury.

NOTE Confidence: 0.819826194285714

00:38:20.470 --> 00:38:21.968 So that's what we're trying to avoid.

NOTE Confidence: 0.819826194285714

00:38:21.970 --> 00:38:25.050 And and because we don't have this

NOTE Confidence: 0.819826194285714

00:38:25.050 --> 00:38:27.300 sort of information robustly or we

NOTE Confidence: 0.819826194285714

00:38:27.300 --> 00:38:29.470 want to challenge it and test it,

NOTE Confidence: 0.819826194285714

00:38:29.470 --> 00:38:32.256 that's the purpose of the balloon test

NOTE Confidence: 0.819826194285714

00:38:32.256 --> 00:38:34.381 occlusion is that we're essentially

NOTE Confidence: 0.819826194285714

00:38:34.381 --> 00:38:36.943 stressing the circle of Willis that

NOTE Confidence: 0.819826194285714

00:38:36.943 --> 00:38:39.746 we see on a CTA and to see whether

NOTE Confidence: 0.819826194285714

00:38:39.746 --> 00:38:42.250 or not the patient can tolerate it.

NOTE Confidence: 0.819826194285714

00:38:42.250 --> 00:38:44.474 State in terms of.

NOTE Confidence: 0.819826194285714

00:38:44.474 --> 00:38:45.468 They're, they're,

NOTE Confidence: 0.819826194285714

00:38:45.468 --> 00:38:47.220 they're aschematic tolerance, right?

NOTE Confidence: 0.8337793925

00:38:49.260 --> 00:38:53.340 Alright, so let's continue.

NOTE Confidence: 0.8337793925

00:38:53.340 --> 00:38:57.192 So this is how it works in practice so.

NOTE Confidence: 0.8337793925

00:38:57.200 --> 00:38:58.864 We've been through like multiple

NOTE Confidence: 0.8337793925

00:38:58.864 --> 00:39:00.228 modifications of this technique

NOTE Confidence: 0.8337793925

00:39:00.228 --> 00:39:01.916 and every institution has a

NOTE Confidence: 0.8337793925

00:39:01.916 --> 00:39:03.180 different version of this.

NOTE Confidence: 0.8337793925

00:39:03.180 --> 00:39:06.660 What we typically use is Umm we do

00:39:06.660 --> 00:39:09.484 2 arterial punctures, 1 in the leg.

00:39:09.484 --> 00:39:11.605 We place the big sheep in the leg and

00:39:11.605 --> 00:39:13.600 we place a smaller sheep in the arm.

00:39:13.600 --> 00:39:14.980 Through the sheath and the leg.

00:39:14.980 --> 00:39:16.660 We can go up through the body and

00:39:16.660 --> 00:39:18.249 we can access the common carotid

00:39:18.249 --> 00:39:20.400 artery and we can inflate a balloon.

00:39:21.520 --> 00:39:22.488 And once we inflate

00:39:22.500 --> 00:39:24.480 that balloon, it's typically done

00:39:24.480 --> 00:39:26.460 on the proximal internal carotid

00:39:26.520 --> 00:39:28.432 artery or in the OR in the, sorry,

00:39:28.432 --> 00:39:30.476 in the in the proximal internal carotid

00:39:30.476 --> 00:39:32.366 artery or the distal common carotid

00:39:32.366 --> 00:39:34.710 artery depending on whether or not there's

00:39:34.710 --> 00:39:36.770 atheromatous disease or sometimes these

00:39:36.770 --> 00:39:38.640 patients have radiation induced changes.

00:39:38.640 --> 00:39:40.982 So we don't want to, we don't want

00:39:40.982 --> 00:39:43.466 to disrupt that sort of pathology.

00:39:43.470 --> 00:39:45.920 We inflate the balloon and we then

00:39:45.920 --> 00:39:47.750 examine the patient clinically.

00:39:47.750 --> 00:39:49.808 So these patients are awake so

00:39:49.808 --> 00:39:52.529 we can ask them like things like,

00:39:52.530 --> 00:39:53.808 do you know where you are,

00:39:53.810 --> 00:39:55.567 what year is it, what's the date,

00:39:55.570 --> 00:39:57.910 what's the day, spell world forward,

00:39:57.910 --> 00:39:59.071 spell world backwards?

00:39:59.071 --> 00:40:01.006 Can you repeat this sentence,

00:40:01.010 --> 00:40:03.145 do serial sevens backwards to try to

00:40:03.145 --> 00:40:05.804 get a sense about whether or not these

00:40:05.804 --> 00:40:08.700 patients are going to have language deficits.

00:40:08.700 --> 00:40:11.028 And very often during these exams,

NOTE Confidence: 0.832516312352941

00:40:11.030 --> 00:40:12.520 I'm trying to be conversational

NOTE Confidence: 0.832516312352941

00:40:12.520 --> 00:40:13.414 with the patient.

NOTE Confidence: 0.832516312352941

00:40:13.420 --> 00:40:15.422 Because one of the first things that

NOTE Confidence: 0.832516312352941

00:40:15.422 --> 00:40:17.743 goes is their ability to sort of like

NOTE Confidence: 0.832516312352941

00:40:17.743 --> 00:40:19.590 tell small jokes if we're joking

NOTE Confidence: 0.832516312352941

00:40:19.590 --> 00:40:21.500 around or to understand contacts,

NOTE Confidence: 0.832516312352941

00:40:21.500 --> 00:40:23.018 they start to get more confused.

NOTE Confidence: 0.832516312352941

00:40:23.020 --> 00:40:24.484 And it's obvious that their brain

NOTE Confidence: 0.832516312352941

00:40:24.484 --> 00:40:26.050 is is laboring a little bit.

NOTE Confidence: 0.832516312352941

00:40:26.050 --> 00:40:28.606 This sort of the sort of,

NOTE Confidence: 0.832516312352941

00:40:28.610 --> 00:40:30.745 you know, make it work as normal.

NOTE Confidence: 0.832516312352941

00:40:30.750 --> 00:40:33.150 So we're also testing their motor

NOTE Confidence: 0.832516312352941

00:40:33.150 --> 00:40:35.205 strength and their sensory and

NOTE Confidence: 0.832516312352941

00:40:35.205 --> 00:40:37.145 position sense of their joints.

NOTE Confidence: 0.832516312352941

00:40:37.150 --> 00:40:39.070 And we do this over a period of

00:40:39.070 --> 00:40:41.273 20 to 30 minutes and during this

00:40:41.273 --> 00:40:43.580 time when the balloon is inflated.

00:40:43.580 --> 00:40:45.540 We can also then go through this

00:40:45.540 --> 00:40:47.630 vessel here and we can inject the

00:40:47.630 --> 00:40:49.412 other blood vessels in the brain.

00:40:49.420 --> 00:40:51.730 And we can angiographically show

00:40:51.730 --> 00:40:55.115 that the a common pcom are actually

00:40:55.115 --> 00:40:58.030 supplying the brain and that the

00:40:58.030 --> 00:40:59.728 timing of filling even though

00:40:59.728 --> 00:41:02.162 there's a balloon up in the carotid

00:41:02.162 --> 00:41:03.659 is relatively symmetric.

00:41:03.660 --> 00:41:05.760 And that the venous phase of the

00:41:05.760 --> 00:41:08.744 angiogram so that the the blood is also

00:41:08.744 --> 00:41:10.759 emptying symmetrically from both hemispheres,

00:41:10.760 --> 00:41:14.270 even with the 1 carotid occluded.

00:41:14.270 --> 00:41:16.685 Then after all that's done at Yale,

NOTE Confidence: 0.832516312352941

00:41:16.690 --> 00:41:18.410 we do a hypotensive challenge.

NOTE Confidence: 0.832516312352941

00:41:18.410 --> 00:41:20.320 So I'll ask our anesthesiologist

NOTE Confidence: 0.832516312352941

00:41:20.320 --> 00:41:22.860 to lower the blood pressure by 20%

NOTE Confidence: 0.832516312352941

00:41:22.860 --> 00:41:25.870 for more than 5 minutes from his

NOTE Confidence: 0.832516312352941

00:41:25.870 --> 00:41:28.010 baseline systolic blood pressure.

NOTE Confidence: 0.832516312352941

00:41:28.010 --> 00:41:29.666 And during that period of time,

NOTE Confidence: 0.832516312352941

00:41:29.670 --> 00:41:31.445 we're also testing the patient

NOTE Confidence: 0.832516312352941

00:41:31.445 --> 00:41:32.510 clinically as well.

NOTE Confidence: 0.832516312352941

00:41:32.510 --> 00:41:35.009 So we use at Yale these three

NOTE Confidence: 0.832516312352941

00:41:35.009 --> 00:41:35.723 different parameters.

NOTE Confidence: 0.832516312352941

00:41:35.730 --> 00:41:37.040 Early in my practice here,

NOTE Confidence: 0.832516312352941

00:41:37.040 --> 00:41:39.527 we also did a nuclear medicine test,

NOTE Confidence: 0.832516312352941

00:41:39.527 --> 00:41:41.669 which is very easy to administer,

NOTE Confidence: 0.832516312352941

00:41:41.670 --> 00:41:43.614 but I found it to be not very.

NOTE Confidence: 0.832516312352941

00:41:43.620 --> 00:41:46.356 Helpful in terms of additive information,

00:41:46.360 --> 00:41:47.620 but essentially what it is,

00:41:47.620 --> 00:41:50.462 is that you take a a lipophilic

00:41:50.462 --> 00:41:51.680 nuclear medicine tracer,

00:41:51.680 --> 00:41:53.500 you inject it transvenous sly.

00:41:53.500 --> 00:41:56.300 So through an IV it then circulates and

00:41:56.300 --> 00:41:59.334 it's pumped out as a bolus through the heart.

00:41:59.340 --> 00:42:01.335 And when it gets when it goes

00:42:01.335 --> 00:42:02.996 through the brain because the brain

00:42:02.996 --> 00:42:04.732 has a lot of fat in it,

00:42:04.740 --> 00:42:06.630 the nuclear medicine tracer gets

00:42:06.630 --> 00:42:09.305 stuck in the brain and you want

00:42:09.305 --> 00:42:11.447 to see symmetric uptake again on

00:42:11.447 --> 00:42:13.676 both sides of the brain to pass.

00:42:13.680 --> 00:42:15.132 That particular task,

00:42:15.132 --> 00:42:16.584 there's also modifications

00:42:16.584 --> 00:42:18.520 using perfusion imaging or

NOTE Confidence: 0.787923675833333

00:42:18.593 --> 00:42:19.949 transcranial Doppler,

NOTE Confidence: 0.787923675833333

00:42:19.950 --> 00:42:21.744 but I haven't found those to

NOTE Confidence: 0.787923675833333

00:42:21.744 --> 00:42:22.940 be particularly useful either.

NOTE Confidence: 0.787923675833333

00:42:22.940 --> 00:42:25.980 And in meta analysis of this technique that

NOTE Confidence: 0.787923675833333

00:42:25.980 --> 00:42:29.309 are done for therapeutic carotid sacrifice,

NOTE Confidence: 0.787923675833333

00:42:29.310 --> 00:42:33.600 there's no sort of like clear benefit to

NOTE Confidence: 0.787923675833333

00:42:33.600 --> 00:42:35.910 doing these sort of adjunctive measures,

NOTE Confidence: 0.787923675833333

00:42:35.910 --> 00:42:37.299 including hypotensive challenge.

NOTE Confidence: 0.787923675833333

00:42:37.299 --> 00:42:40.005 But at Yale, we do these three and

NOTE Confidence: 0.787923675833333

00:42:40.005 --> 00:42:42.088 we found it to be effective and

NOTE Confidence: 0.787923675833333

00:42:42.088 --> 00:42:44.164 we used this sort of setup.

NOTE Confidence: 0.787923675833333

00:42:44.170 --> 00:42:46.458 Just some sort of like facts that you can

NOTE Confidence: 0.787923675833333

00:42:46.458 --> 00:42:49.294 take home with you after this talk if you

NOTE Confidence: 0.787923675833333

00:42:49.294 --> 00:42:52.186 did a non selective permanent sacrifice,

NOTE Confidence: 0.787923675833333

00:42:52.190 --> 00:42:54.422 if the ICA for a head and neck

NOTE Confidence: 0.787923675833333

00:42:54.422 --> 00:42:57.177 cancer or an A giant aneurysm or

NOTE Confidence: 0.787923675833333

00:42:57.177 --> 00:42:59.302 sometimes for direct carotid fistulas,

NOTE Confidence: 0.787923675833333

00:42:59.310 --> 00:43:00.910 things of that nature.

NOTE Confidence: 0.787923675833333

00:43:00.910 --> 00:43:04.180 We think that about 20 to 30% in the

NOTE Confidence: 0.787923675833333

00:43:04.180 --> 00:43:06.206 literature at 17 to 40% of patients

NOTE Confidence: 0.787923675833333

00:43:06.206 --> 00:43:07.946 will have an ischemic insult.

NOTE Confidence: 0.787923675833333

00:43:07.950 --> 00:43:09.270 What's interesting is that they

NOTE Confidence: 0.787923675833333

00:43:09.270 --> 00:43:10.326 often occur right away,

NOTE Confidence: 0.787923675833333

00:43:10.330 --> 00:43:11.760 but sometimes they occur after

NOTE Confidence: 0.787923675833333

00:43:11.760 --> 00:43:13.675 three to four days with even

NOTE Confidence: 0.787923675833333

00:43:13.675 --> 00:43:14.947 like minimal physiological.

NOTE Confidence: 0.787923675833333

00:43:14.950 --> 00:43:16.910 Disruption.

NOTE Confidence: 0.787923675833333

00:43:16.910 --> 00:43:19.790 You know, such as a you know a Valsalva

NOTE Confidence: 0.787923675833333

00:43:19.790 --> 00:43:22.584 maneuver when going to the bathroom or or or.

NOTE Confidence: 0.787923675833333

00:43:22.590 --> 00:43:26.520 Really minimal disruption so if you

NOTE Confidence: 0.787923675833333

00:43:26.520 --> 00:43:30.310 use balloon test occlusion to inform,

NOTE Confidence: 0.787923675833333

00:43:30.310 --> 00:43:34.486 doing a safe carotid sacrifice or.

NOTE Confidence: 0.787923675833333

00:43:34.490 --> 00:43:36.420 Whether you realize that they're,

NOTE Confidence: 0.787923675833333

00:43:36.420 --> 00:43:38.261 they're not going to tolerate a carotid

NOTE Confidence: 0.787923675833333

00:43:38.261 --> 00:43:40.331 sacrifice and you have to do some kind

NOTE Confidence: 0.787923675833333

00:43:40.331 --> 00:43:41.930 of reconstruction of the carotid artery,

NOTE Confidence: 0.787923675833333

00:43:41.930 --> 00:43:43.866 whether that be endovascular

NOTE Confidence: 0.787923675833333

00:43:43.866 --> 00:43:46.286 or using open surgical bypass,

NOTE Confidence: 0.787923675833333

00:43:46.290 --> 00:43:48.649 then the complication rate really falls to,

NOTE Confidence: 0.787923675833333

00:43:48.650 --> 00:43:50.750 to, to less than 4%.

NOTE Confidence: 0.787923675833333

00:43:50.750 --> 00:43:53.018 Now 4% sounds like a small

NOTE Confidence: 0.787923675833333

00:43:53.018 --> 00:43:55.058 number and you know, compared to,

NOTE Confidence: 0.787923675833333

00:43:55.058 --> 00:43:57.182 I don't know, UDI, you know,

NOTE Confidence: 0.787923675833333

00:43:57.182 --> 00:43:59.402 what are the complications that

NOTE Confidence: 0.787923675833333

00:43:59.402 --> 00:44:01.458 you quote for, for those big,

NOTE Confidence: 0.787923675833333

00:44:01.458 --> 00:44:02.219 you know, resections,

NOTE Confidence: 0.787923675833333

00:44:02.219 --> 00:44:03.713 maybe you don't even get to

NOTE Confidence: 0.787923675833333

00:44:03.713 --> 00:44:04.950 them because it's intuitive.

NOTE Confidence: 0.787923675833333

00:44:04.950 --> 00:44:06.498 That there's going to have high

NOTE Confidence: 0.787923675833333

00:44:06.498 --> 00:44:07.560 complication rates, right,

NOTE Confidence: 0.787923675833333

00:44:07.560 --> 00:44:09.656 but four, 4%,

NOTE Confidence: 0.787923675833333

00:44:09.656 --> 00:44:10.092 right.

NOTE Confidence: 0.787923675833333

00:44:10.092 --> 00:44:13.580 With you know what that means is that

NOTE Confidence: 0.787923675833333

00:44:13.580 --> 00:44:15.519 you know four out of 100 patients

NOTE Confidence: 0.787923675833333

00:44:15.519 --> 00:44:17.861 that you do this to are going to

NOTE Confidence: 0.787923675833333

00:44:17.861 --> 00:44:19.775 have a problem even though they

NOTE Confidence: 0.787923675833333

00:44:19.775 --> 00:44:21.775 passed the balloon test occlusion.

NOTE Confidence: 0.787923675833333

00:44:21.780 --> 00:44:23.900 So 4% is not nothing,

NOTE Confidence: 0.787923675833333

00:44:23.900 --> 00:44:24.231 right,

NOTE Confidence: 0.787923675833333

00:44:24.231 --> 00:44:26.879 like 4% is the rate of ischemic stroke

NOTE Confidence: 0.787923675833333

00:44:26.879 --> 00:44:29.576 for a patient who presents with

NOTE Confidence: 0.787923675833333

85

00:44:29.576 --> 00:44:31.871 symptomatic high grade carotid stenosis,

NOTE Confidence: 0.787923675833333

00:44:31.880 --> 00:44:32.228 right.

NOTE Confidence: 0.787923675833333

00:44:32.228 --> 00:44:34.668 If you're any higher than 4% then.

NOTE Confidence: 0.787923675833333

00:44:34.668 --> 00:44:36.408 You probably shouldn't be doing

NOTE Confidence: 0.787923675833333

00:44:36.408 --> 00:44:37.104 the operation.

NOTE Confidence: 0.787923675833333

00:44:37.110 --> 00:44:40.078 So even though 4% sounds good and this

NOTE Confidence: 0.787923675833333

00:44:40.078 --> 00:44:43.988 is in the context of hopefully achieving

NOTE Confidence: 0.787923675833333

00:44:43.988 --> 00:44:47.068 like a curative oncological resection,

NOTE Confidence: 0.787923675833333

00:44:47.070 --> 00:44:48.870 it is still a significant complication

NOTE Confidence: 0.787923675833333

00:44:48.870 --> 00:44:50.697 rate compared to many things that

NOTE Confidence: 0.787923675833333

00:44:50.697 --> 00:44:52.407 we do because here we're really

NOTE Confidence: 0.787923675833333

00:44:52.407 --> 00:44:54.184 talking about the rate of having a

NOTE Confidence: 0.787923675833333

00:44:54.184 --> 00:44:57.090 stroke and strokes can be disabling.

NOTE Confidence: 0.787923675833333

00:44:57.090 --> 00:44:57.496 Thankfully,

NOTE Confidence: 0.787923675833333

00:44:57.496 --> 00:44:59.932 the rate of complications of the

NOTE Confidence: 0.787923675833333

00:44:59.932 --> 00:45:02.428 balloon test occlusion itself are very low.

NOTE Confidence: 0.787923675833333

00:45:02.430 --> 00:45:04.086 So it's like less than 1%.

NOTE Confidence: 0.787923675833333

00:45:04.090 --> 00:45:06.158 It's like often quoted.

NOTE Confidence: 0.787923675833333

00:45:06.160 --> 00:45:07.904 0.8% from this Umm,

NOTE Confidence: 0.787923675833333

00:45:07.904 --> 00:45:08.776 you know,

NOTE Confidence: 0.787923675833333

00:45:08.780 --> 00:45:10.652 sort of like well cited meta

NOTE Confidence: 0.787923675833333

00:45:10.652 --> 00:45:11.900 analysis of the literature.

NOTE Confidence: 0.787923675833333

00:45:11.900 --> 00:45:14.150 So I think that getting the

NOTE Confidence: 0.787923675833333

00:45:14.150 --> 00:45:15.650 information is always helpful

NOTE Confidence: 0.787923675833333

00:45:15.724 --> 00:45:17.699 if you're considering a carotid

NOTE Confidence: 0.787923675833333

00:45:17.699 --> 00:45:20.096 sacrifice that during a head and

NOTE Confidence: 0.787923675833333

00:45:20.096 --> 00:45:23.719 neck surgery discussion and workout.

NOTE Confidence: 0.787923675833333

00:45:23.720 --> 00:45:24.956 Just very quickly,

NOTE Confidence: 0.787923675833333

00:45:24.956 --> 00:45:27.840 this is also a patient of Sara's

NOTE Confidence: 0.787923675833333

00:45:27.927 --> 00:45:30.839 that we recently have taken care of.

NOTE Confidence: 0.857479084166667

00:45:30.840 --> 00:45:33.038 But you know, a woman in her

NOTE Confidence: 0.857479084166667

00:45:33.038 --> 00:45:35.160 60s had had tongue cancer.

NOTE Confidence: 0.857479084166667

00:45:35.160 --> 00:45:37.194 She had a partial glossectomy years

NOTE Confidence: 0.857479084166667

00:45:37.194 --> 00:45:39.707 ago and she now comes back with a

NOTE Confidence: 0.857479084166667

00:45:39.707 --> 00:45:42.078 neck mass and they do a fine needle

NOTE Confidence: 0.857479084166667

00:45:42.078 --> 00:45:44.734 aspirate of the neck mass and it comes

NOTE Confidence: 0.857479084166667

00:45:44.740 --> 00:45:46.460 back as squamous cell carcinoma.

NOTE Confidence: 0.857479084166667

00:45:46.460 --> 00:45:48.917 So then the question is on on the amaging.

NOTE Confidence: 0.857479084166667

00:45:48.920 --> 00:45:51.704 It looks like the left common carotid artery

NOTE Confidence: 0.857479084166667

00:45:51.704 --> 00:45:54.278 is really encased by the tumor and so.

NOTE Confidence: 0.857479084166667

00:45:54.280 --> 00:45:56.866 Can you safely resect and take

NOTE Confidence: 0.857479084166667

00:45:56.866 --> 00:45:59.824 down the carotid artery to achieve

NOTE Confidence: 0.857479084166667

00:45:59.824 --> 00:46:01.549 an oncological resection,

NOTE Confidence: 0.857479084166667

00:46:01.550 --> 00:46:03.240 understanding that there's other options,

NOTE Confidence: 0.857479084166667

00:46:03.240 --> 00:46:05.152 including, you know, radiation,

NOTE Confidence: 0.857479084166667

00:46:05.152 --> 00:46:07.769 chemotherapy, and other things?

NOTE Confidence: 0.857479084166667

00:46:07.770 --> 00:46:09.930 Or do you need, you know,

00:46:09.930 --> 00:46:12.585 if that's the decision to to to do something,

00:46:12.590 --> 00:46:14.534 does it need to be augmented by something

00:46:14.534 --> 00:46:16.585 that Doctor Tomlinson is going to talk about,

00:46:16.590 --> 00:46:20.496 which is some kind of like endovascular

00:46:20.496 --> 00:46:23.230 or surgical bypass to augment

00:46:23.230 --> 00:46:25.126 the carotid sacrifice.

00:46:25.126 --> 00:46:27.140 So again, this is what it sort

00:46:27.140 --> 00:46:28.110 of looks like in real life.

00:46:28.110 --> 00:46:29.643 This is what the balloon looks like

00:46:29.643 --> 00:46:31.009 and the common carotid artery,

00:46:31.010 --> 00:46:31.678 it's inflated.

00:46:31.678 --> 00:46:33.682 We generally inflate it for about

00:46:33.682 --> 00:46:36.514 25 to 30 minutes and then we test

00:46:36.514 --> 00:46:37.564 the patient clinically.

00:46:37.570 --> 00:46:38.662 With the balloon inflated,

00:46:38.662 --> 00:46:40.644 you can now see that injection of

NOTE Confidence: 0.857479084166667

00:46:40.644 --> 00:46:42.420 the right common carotid artery fills

NOTE Confidence: 0.857479084166667

00:46:42.420 --> 00:46:43.929 across this beautiful acom artery

NOTE Confidence: 0.857479084166667

00:46:43.929 --> 00:46:45.339 and you have beautiful symmetric

NOTE Confidence: 0.857479084166667

00:46:45.339 --> 00:46:47.234 filling of the left MCA territory.

NOTE Confidence: 0.857479084166667

00:46:47.234 --> 00:46:49.670 And here you also have very nice

NOTE Confidence: 0.857479084166667

00:46:49.742 --> 00:46:52.556 filling through a pcom artery of the

NOTE Confidence: 0.857479084166667

00:46:52.556 --> 00:46:54.967 internal product artery on the left side.

NOTE Confidence: 0.857479084166667

00:46:54.970 --> 00:46:58.290 And so this is a patient that passed

NOTE Confidence: 0.857479084166667

00:46:58.290 --> 00:47:01.863 on both clinical angiographic and

NOTE Confidence: 0.857479084166667

00:47:01.863 --> 00:47:04.506 hypotensive challenge grounds.

NOTE Confidence: 0.857479084166667

00:47:04.510 --> 00:47:07.918 So we would expect her rate of having.

NOTE Confidence: 0.857479084166667

00:47:07.920 --> 00:47:09.990 In a schema complication after

NOTE Confidence: 0.857479084166667

00:47:09.990 --> 00:47:12.060 therapeutic carotid sacrifice to be,

NOTE Confidence: 0.857479084166667

00:47:12.060 --> 00:47:14.060 you know, less than 4%.

NOTE Confidence: 0.857479084166667

00:47:14.060 --> 00:47:17.098 So that's the that's the sort of

NOTE Confidence: 0.857479084166667

00:47:17.100 --> 00:47:19.242 way to think about I think carotid

NOTE Confidence: 0.857479084166667

00:47:19.242 --> 00:47:20.853 sacrifice and how balloon test

NOTE Confidence: 0.857479084166667

00:47:20.853 --> 00:47:22.755 occlusion can can sort of help

NOTE Confidence: 0.857479084166667

00:47:22.755 --> 00:47:24.806 you figure some of this stuff out.

NOTE Confidence: 0.83666209

00:47:27.360 --> 00:47:28.500 That's great, Charles.

NOTE Confidence: 0.83666209

00:47:28.500 --> 00:47:30.020 Thank you so much.

NOTE Confidence: 0.83666209

00:47:30.020 --> 00:47:31.892 I think this is exactly the

NOTE Confidence: 0.83666209

00:47:31.892 --> 00:47:33.599 type of information that this

NOTE Confidence: 0.83666209

00:47:33.599 --> 00:47:35.864 audience was was looking for.

NOTE Confidence: 0.83666209

00:47:35.864 --> 00:47:39.511 And it's very enlightening to hear Yale's

NOTE Confidence: 0.83666209

00:47:39.511 --> 00:47:41.857 approach to this under your leadership,

NOTE Confidence: 0.83666209

00:47:41.860 --> 00:47:43.546 the, the, the the the three

NOTE Confidence: 0.83666209

00:47:43.546 --> 00:47:45.220 techniques that that you look for.

NOTE Confidence: 0.83666209

00:47:45.220 --> 00:47:46.616 There are two questions.

NOTE Confidence: 0.83666209

00:47:46.616 --> 00:47:48.710 Number one is do you involve

NOTE Confidence: 0.83666209

00:47:48.783 --> 00:47:50.955 anesthesia in these cases at all?

NOTE Confidence: 0.83666209

00:47:50.960 --> 00:47:52.276 You do say patients are wide awake,

NOTE Confidence: 0.83666209

00:47:52.280 --> 00:47:54.344 but can you just describe some of the

NOTE Confidence: 0.83666209

00:47:54.344 --> 00:47:55.330 anesthesia requirements for these?

NOTE Confidence: 0.718566611428571

00:47:55.680 --> 00:47:57.444 Yeah, it's important to have and and.

NOTE Confidence: 0.718566611428571

00:47:57.450 --> 00:47:58.766 Actually, my experience now

NOTE Confidence: 0.718566611428571

00:47:58.766 --> 00:48:01.040 having worked in a bunch of Umm,

NOTE Confidence: 0.718566611428571

00:48:01.040 --> 00:48:03.399 you know the the other hospitals in

NOTE Confidence: 0.718566611428571

00:48:03.399 --> 00:48:05.916 our health system outside of Yale New

NOTE Confidence: 0.718566611428571

00:48:05.916 --> 00:48:08.470 Haven Hospital that have angiography,

NOTE Confidence: 0.718566611428571

00:48:08.470 --> 00:48:10.910 the anesthesiologist there are

NOTE Confidence: 0.718566611428571

00:48:10.910 --> 00:48:13.130 usually outstanding because you

NOTE Confidence: 0.718566611428571

00:48:13.130 --> 00:48:15.602 know what you what you need is a.

NOTE Confidence: 0.718566611428571

00:48:15.610 --> 00:48:18.165 You do need to involve anesthesia and

NOTE Confidence: 0.718566611428571

00:48:18.165 --> 00:48:20.909 you need an anesthesia team that's

NOTE Confidence: 0.718566611428571

00:48:20.909 --> 00:48:24.041 accustomed to doing sort of awake

00:48:24.041 --> 00:48:26.280 interventions and manipulating blood

00:48:26.280 --> 00:48:30.270 pressure in an awake patient and not,

00:48:30.270 --> 00:48:32.657 you know, I think that very often

00:48:32.657 --> 00:48:35.137 my experience has been at Yale New

00:48:35.137 --> 00:48:37.554 Haven Hospital where I think we

00:48:37.554 --> 00:48:39.709 do potentially like more complex

00:48:39.709 --> 00:48:42.626 and like sicker patients that that

00:48:42.626 --> 00:48:45.481 the the there's definitely a bias.

00:48:45.481 --> 00:48:47.736 Towards putting people to sleep

00:48:47.736 --> 00:48:49.089 under general anesthetic.

00:48:49.090 --> 00:48:51.376 And so often when I when I go to

00:48:51.376 --> 00:48:53.468 the more community hospitals,

00:48:53.470 --> 00:48:54.640 people are actually very well

00:48:54.640 --> 00:48:56.389 versed in how to do this stuff.

00:48:56.390 --> 00:48:58.994 But you do need to involve anesthesia

00:48:58.994 --> 00:49:01.238 and we often have the patients

NOTE Confidence: 0.718566611428571

00:49:01.238 --> 00:49:03.511 deeper at the beginning for the

NOTE Confidence: 0.718566611428571

00:49:03.511 --> 00:49:05.671 puncture so it's not so painful

NOTE Confidence: 0.718566611428571

00:49:05.671 --> 00:49:08.316 and uncomfortable and and then we

NOTE Confidence: 0.718566611428571

00:49:08.316 --> 00:49:10.526 lighten the sedation throughout you

NOTE Confidence: 0.718566611428571

00:49:10.530 --> 00:49:12.888 know the subsequent minutes so that

NOTE Confidence: 0.718566611428571

00:49:12.888 --> 00:49:15.930 we can get that an examination so.

NOTE Confidence: 0.718566611428571

00:49:15.930 --> 00:49:18.310 If you have a patient that you're

NOTE Confidence: 0.718566611428571

00:49:18.310 --> 00:49:20.557 twilight state where they're sort of

NOTE Confidence: 0.718566611428571

00:49:20.557 --> 00:49:22.487 like agitated and not directable,

NOTE Confidence: 0.718566611428571

00:49:22.490 --> 00:49:24.632 that's not going to be a productive

NOTE Confidence: 0.718566611428571

00:49:24.632 --> 00:49:25.550 balloon test occlusion.

NOTE Confidence: 0.718566611428571

00:49:25.550 --> 00:49:27.125 And we unfortunately we've had

NOTE Confidence: 0.718566611428571

00:49:27.125 --> 00:49:29.110 cases that we've had to abort.

NOTE Confidence: 0.718566611428571

00:49:29.110 --> 00:49:31.539 You can always do a balloon test

NOTE Confidence: 0.718566611428571

00:49:31.539 --> 00:49:33.969 occlusion under a general anesthetic,

NOTE Confidence: 0.718566611428571

00:49:33.970 --> 00:49:36.076 and you can augment that with

NOTE Confidence: 0.718566611428571

00:49:36.076 --> 00:49:37.936 electrophysiology or you can decide

NOTE Confidence: 0.718566611428571

00:49:37.936 --> 00:49:39.901 that the angiographic criteria alone

NOTE Confidence: 0.718566611428571

00:49:39.901 --> 00:49:42.182 is sufficient that if you truly

NOTE Confidence: 0.718566611428571

00:49:42.182 --> 00:49:43.787 have something that looks like

NOTE Confidence: 0.718566611428571

00:49:43.787 --> 00:49:46.355 what's up on the screen now.

NOTE Confidence: 0.718566611428571

00:49:46.355 --> 00:49:48.495 That that's probably sufficient,

NOTE Confidence: 0.718566611428571

00:49:48.500 --> 00:49:49.424 but, you know,

NOTE Confidence: 0.718566611428571

00:49:49.424 --> 00:49:51.580 it's I think that the proofs in

NOTE Confidence: 0.718566611428571

00:49:51.652 --> 00:49:53.759 the pudding and the sense that if

NOTE Confidence: 0.718566611428571

00:49:53.759 --> 00:49:56.433 you have an awake patient you feel

NOTE Confidence: 0.718566611428571

00:49:56.433 --> 00:49:58.553 much better that they've tolerated

NOTE Confidence: 0.718566611428571

00:49:58.560 --> 00:50:00.228 this balloon test occlusion,

NOTE Confidence: 0.718566611428571

00:50:00.228 --> 00:50:02.313 but it's not always possible.

NOTE Confidence: 0.718566611428571

00:50:02.320 --> 00:50:02.920 So yeah,

NOTE Confidence: 0.718566611428571

00:50:02.920 --> 00:50:04.870 and asked me if I was needed

NOTE Confidence: 0.7369053896

00:50:05.080 --> 00:50:06.970 especially with that drop in the blood

NOTE Confidence: 0.7369053896

00:50:06.970 --> 00:50:08.946 pressure which is for us as surgeons

NOTE Confidence: 0.7369053896

00:50:08.946 --> 00:50:10.341 another little safeguard because it

NOTE Confidence: 0.7369053896

00:50:10.341 --> 00:50:12.216 can happen during these big surgery.

NOTE Confidence: 0.7369053896

00:50:12.220 --> 00:50:13.171 So that's great.

NOTE Confidence: 0.7369053896

00:50:13.171 --> 00:50:15.390 Second question has to do with the

NOTE Confidence: 0.7369053896

00:50:15.461 --> 00:50:17.575 risks of the test itself and what,

NOTE Confidence: 0.7369053896

00:50:17.580 --> 00:50:19.756 what do you tell your patients and is

NOTE Confidence: 0.7369053896

00:50:19.756 --> 00:50:22.022 it different in a patient who's been

NOTE Confidence: 0.7369053896

00:50:22.022 --> 00:50:23.682 radiated already has carotid disease,

NOTE Confidence: 0.7369053896

00:50:23.690 --> 00:50:26.175 you know and it is is versus

NOTE Confidence: 0.7369053896

00:50:26.175 --> 00:50:27.240 unirradiated Genova carotid,

NOTE Confidence: 0.7369053896

00:50:27.240 --> 00:50:28.830 what risk do you tell patients

NOTE Confidence: 0.7369053896

00:50:28.830 --> 00:50:29.890 about this test itself?

NOTE Confidence: 0.866438644285714

00:50:30.400 --> 00:50:32.304 So I think it's a great question.

NOTE Confidence: 0.866438644285714

00:50:32.310 --> 00:50:34.222 The real answer and and it for the

NOTE Confidence: 0.866438644285714

00:50:34.222 --> 00:50:36.221 surgeons of the artist it's intuitive is

NOTE Confidence: 0.866438644285714

00:50:36.221 --> 00:50:38.358 that like not every carotid is the same,

NOTE Confidence: 0.866438644285714

00:50:38.360 --> 00:50:40.428 not every thyroid cancer is the same, right.

NOTE Confidence: 0.866438644285714

00:50:40.428 --> 00:50:42.118 There's going to be nuances

NOTE Confidence: 0.866438644285714

00:50:42.118 --> 00:50:43.930 based on little technical detail.

NOTE Confidence: 0.866438644285714

00:50:43.930 --> 00:50:46.370 So if a person has like an impossible

NOTE Confidence: 0.866438644285714

00:50:46.370 --> 00:50:48.793 aortic arch that's full of calcium and

NOTE Confidence: 0.866438644285714

00:50:48.793 --> 00:50:51.420 has like radiation changes to his common

NOTE Confidence: 0.866438644285714

00:50:51.420 --> 00:50:53.465 carotid artery that's very friable,

NOTE Confidence: 0.866438644285714

00:50:53.470 --> 00:50:55.566 that might be a patient that you look

NOTE Confidence: 0.866438644285714

00:50:55.566 --> 00:50:58.367 at and say that the risk of doing the

NOTE Confidence: 0.866438644285714

00:50:58.367 --> 00:51:00.629 balloon test occlusion may not be warranted.

NOTE Confidence: 0.866438644285714

00:51:00.630 --> 00:51:02.020 You know that the complication

NOTE Confidence: 0.866438644285714

00:51:02.020 --> 00:51:03.132 rate sort of increases.

NOTE Confidence: 0.866438644285714

00:51:03.140 --> 00:51:05.666 Significantly, but for an average patient,

NOTE Confidence: 0.866438644285714

00:51:05.670 --> 00:51:08.010 I would say that we can do this with a

NOTE Confidence: 0.866438644285714

00:51:08.071 --> 00:51:10.610 less than 1% risk of having a stroke.

NOTE Confidence: 0.866438644285714

00:51:10.610 --> 00:51:11.554 Just as a comment,

NOTE Confidence: 0.866438644285714

00:51:11.554 --> 00:51:13.682 if anyone does this in the, you know,

NOTE Confidence: 0.866438644285714

00:51:13.682 --> 00:51:15.462 if there's like an interventionist

NOTE Confidence: 0.866438644285714

00:51:15.462 --> 00:51:17.260 in the in the crowd,

NOTE Confidence: 0.866438644285714

00:51:17.260 --> 00:51:19.600 it's often like very nice to put this balloon

NOTE Confidence: 0.866438644285714

00:51:19.600 --> 00:51:22.036 if you can in the internal carotid artery.

NOTE Confidence: 0.866438644285714

00:51:22.040 --> 00:51:23.605 Because after 30 minutes there

NOTE Confidence: 0.866438644285714

00:51:23.605 --> 00:51:25.962 might be clot in theory that can

NOTE Confidence: 0.866438644285714

00:51:25.962 --> 00:51:27.430 accumulate below the balloon.

NOTE Confidence: 0.866438644285714

00:51:27.430 --> 00:51:29.698 And so you can flush before

NOTE Confidence: 0.866438644285714

00:51:29.698 --> 00:51:31.617 deflating the balloon and sort

NOTE Confidence: 0.866438644285714

00:51:31.617 --> 00:51:33.927 of wash out any debris into the.

NOTE Confidence: 0.866438644285714

00:51:33.930 --> 00:51:35.163 External carotid artery,

NOTE Confidence: 0.866438644285714

00:51:35.163 --> 00:51:37.218 which isn't an eloquent territory.

NOTE Confidence: 0.866438644285714

00:51:37.220 --> 00:51:38.906 So that adds I think a

NOTE Confidence: 0.866438644285714

00:51:38.906 --> 00:51:40.500 level of safety and we do,

NOTE Confidence: 0.866438644285714

00:51:40.500 --> 00:51:42.005 we use that approach as well when

NOTE Confidence: 0.866438644285714

00:51:42.005 --> 00:51:43.339 we're looking at these patients.

NOTE Confidence: 0.644918293333333

00:51:44.730 --> 00:51:46.098 Just quick question,

NOTE Confidence: 0.644918293333333

00:51:46.098 --> 00:51:48.378 any differences between the TLR

NOTE Confidence: 0.644918293333333

00:51:48.378 --> 00:51:50.480 occlusion versus karate occlusion?

NOTE Confidence: 0.857463805

00:51:50.730 --> 00:51:51.934 That's a great question.

NOTE Confidence: 0.857463805

00:51:51.934 --> 00:51:54.439 And and I I talked a little bit

NOTE Confidence: 0.857463805

00:51:54.439 --> 00:51:56.637 about like in terms of like you

NOTE Confidence: 0.857463805

00:51:56.637 --> 00:51:58.767 know what the the internal carotid

NOTE Confidence: 0.857463805

00:51:58.767 --> 00:52:01.701 artery goes up on each side of the

NOTE Confidence: 0.857463805

00:52:01.701 --> 00:52:04.083 head and we'll supply that circle

NOTE Confidence: 0.857463805

00:52:04.083 --> 00:52:07.050 of Willis stool top individually.

NOTE Confidence: 0.857463805

00:52:07.050 --> 00:52:09.840 This is actually misleading because the
NOTE Confidence: 0.857463805

00:52:09.840 --> 00:52:12.602 vertebral artery fuses into the basilar
NOTE Confidence: 0.857463805

00:52:12.602 --> 00:52:14.706 artery as it comes along the skull.
NOTE Confidence: 0.857463805

00:52:14.710 --> 00:52:18.518 Place like near the brain stem and then
NOTE Confidence: 0.857463805

00:52:18.518 --> 00:52:21.538 divides again and so because of that
NOTE Confidence: 0.857463805

00:52:21.540 --> 00:52:24.486 taking a non dominant or codominant
NOTE Confidence: 0.857463805

00:52:24.486 --> 00:52:27.491 vertebral artery is much much better
NOTE Confidence: 0.857463805

00:52:27.491 --> 00:52:29.866 tolerated and probably does not
NOTE Confidence: 0.857463805

00:52:29.866 --> 00:52:33.467 require a test occlusion because of
NOTE Confidence: 0.857463805

00:52:33.467 --> 00:52:35.869 that anatomical configuration, right?
NOTE Confidence: 0.857463805

00:52:35.869 --> 00:52:38.341 Because of this fusion issue is that the
NOTE Confidence: 0.857463805

00:52:38.341 --> 00:52:40.629 one vertebral artery will then supply
NOTE Confidence: 0.857463805

00:52:40.629 --> 00:52:42.955 the basilar artery which will then
NOTE Confidence: 0.857463805

00:52:42.955 --> 00:52:45.398 supply the circle of Willis through both.
NOTE Confidence: 0.857463805

00:52:45.400 --> 00:52:47.722 PC's, and that's a nice feature
NOTE Confidence: 0.857463805

00:52:47.722 --> 00:52:50.140 where we get into issues is,

NOTE Confidence: 0.857463805

00:52:50.140 --> 00:52:53.318 and this happens occasionally when a tumor

NOTE Confidence: 0.857463805

00:52:53.318 --> 00:52:55.959 involves the dominant vertebral artery,

NOTE Confidence: 0.857463805

00:52:55.960 --> 00:52:59.362 this now becomes an issue and you can do

NOTE Confidence: 0.779755122857143

00:53:01.700 --> 00:53:04.136 a balloon test occlusion in that case.

NOTE Confidence: 0.779755122857143

00:53:04.140 --> 00:53:06.402 But often the deficits that we're

NOTE Confidence: 0.779755122857143

00:53:06.402 --> 00:53:08.367 looking for are more complicated

NOTE Confidence: 0.779755122857143

00:53:08.367 --> 00:53:10.671 in terms of like brain stem

NOTE Confidence: 0.779755122857143

00:53:10.671 --> 00:53:13.416 ischemia and it can be very scary

NOTE Confidence: 0.779755122857143

00:53:13.416 --> 00:53:15.316 to see somebody become frankly.

NOTE Confidence: 0.779755122857143

00:53:15.320 --> 00:53:16.940 Turned it on the table.

NOTE Confidence: 0.779755122857143

00:53:16.940 --> 00:53:19.428 And so often if a if a dominant

NOTE Confidence: 0.779755122857143

00:53:19.428 --> 00:53:20.680 vertebral arteries involved,

NOTE Confidence: 0.779755122857143

00:53:20.680 --> 00:53:22.400 we're talking about reconstructive

NOTE Confidence: 0.779755122857143

00:53:22.400 --> 00:53:24.120 strategies either with stenting

NOTE Confidence: 0.779755122857143

00:53:24.120 --> 00:53:25.908 or some sort of bypass.

NOTE Confidence: 0.95220999

00:53:28.870 --> 00:53:29.430 That's great.

NOTE Confidence: 0.95220999

00:53:29.430 --> 00:53:31.021 Thank you so much, Charles.

NOTE Confidence: 0.95220999

00:53:31.021 --> 00:53:32.905 Really appreciate you talking

NOTE Confidence: 0.95220999

00:53:32.905 --> 00:53:35.850 to all of us here today.

NOTE Confidence: 0.95220999

00:53:35.850 --> 00:53:37.410 If you want to stop sharing

NOTE Confidence: 0.95220999

00:53:37.410 --> 00:53:38.450 and introduce Doctor Conison,

NOTE Confidence: 0.95220999

00:53:38.450 --> 00:53:40.880 which is kind of the second

NOTE Confidence: 0.95220999

00:53:40.880 --> 00:53:42.782 part of redefining resectability

NOTE Confidence: 0.95220999

00:53:42.782 --> 00:53:45.512 and head neck cancer, you know,

NOTE Confidence: 0.95220999

00:53:45.512 --> 00:53:47.138 the three of us have definitely

NOTE Confidence: 0.95220999

00:53:47.138 --> 00:53:48.860 worked on cases together where,

NOTE Confidence: 0.95220999

00:53:48.860 --> 00:53:49.670 you know, we got to know,

NOTE Confidence: 0.95220999

00:53:49.670 --> 00:53:50.690 can we take the crowd,

NOTE Confidence: 0.95220999

00:53:50.690 --> 00:53:52.090 what's going to happen?

NOTE Confidence: 0.95220999

00:53:52.090 --> 00:53:53.490 And then Doctor Tonnison,

NOTE Confidence: 0.95220999

00:53:53.490 --> 00:53:55.810 who is a vascular surgeon here at Yale,

NOTE Confidence: 0.95220999

00:53:55.810 --> 00:53:57.910 is going to talk to us about,

NOTE Confidence: 0.95220999

00:53:57.910 --> 00:53:59.356 well, what what do you do?

NOTE Confidence: 0.95220999

00:53:59.360 --> 00:54:00.550 After we've taken the carotid

NOTE Confidence: 0.95220999

00:54:00.550 --> 00:54:02.046 artery and I think it's very

NOTE Confidence: 0.95220999

00:54:02.046 --> 00:54:03.558 critical that we we work together

NOTE Confidence: 0.95220999

00:54:03.558 --> 00:54:04.948 in surgeries head neck surgeon

NOTE Confidence: 0.95220999

00:54:04.948 --> 00:54:06.120 with the vascular surgeon.

NOTE Confidence: 0.95220999

00:54:06.120 --> 00:54:07.910 So Doctor Thomason please share

NOTE Confidence: 0.95220999

00:54:07.910 --> 00:54:10.100 your screen and take it away.

NOTE Confidence: 0.81334084962963

00:54:11.140 --> 00:54:13.235 Well, thanks. These two proceeding

NOTE Confidence: 0.81334084962963

00:54:13.235 --> 00:54:16.517 talks just remind me of why I initially

NOTE Confidence: 0.81334084962963

00:54:16.517 --> 00:54:19.100 wanted to be a neurosurgeon and and

NOTE Confidence: 0.81334084962963

00:54:19.174 --> 00:54:21.778 anyway now I do something much more,

NOTE Confidence: 0.81334084962963

00:54:21.780 --> 00:54:23.710 more boring vascular surgery.

NOTE Confidence: 0.81334084962963

00:54:23.710 --> 00:54:25.309 So thank you both.

NOTE Confidence: 0.81334084962963

00:54:25.309 --> 00:54:26.624 That was that was fantastic.

NOTE Confidence: 0.7322738575

00:54:30.070 --> 00:54:33.250 He's trying to share.

NOTE Confidence: 0.7322738575

00:54:33.250 --> 00:54:36.508 Ohh spoiler alert.

NOTE Confidence: 0.7322738575

00:54:36.510 --> 00:54:39.440 Trying to do the slideshow.

NOTE Confidence: 0.7322738575

00:54:39.440 --> 00:54:40.912 All right. All set.

NOTE Confidence: 0.7322738575

00:54:40.912 --> 00:54:42.752 Everyone can see and hear.

NOTE Confidence: 0.700412302

00:54:43.290 --> 00:54:44.780 It looks great. Thank you.

NOTE Confidence: 0.74752302675

00:54:44.830 --> 00:54:46.411 All right, amazing.

NOTE Confidence: 0.74752302675

00:54:46.411 --> 00:54:49.573 So I'm going to dovetail on

NOTE Confidence: 0.74752302675

00:54:49.573 --> 00:54:52.689 Charles's talk and go go into complex

NOTE Confidence: 0.74752302675

00:54:52.690 --> 00:54:54.970 carotid artery reconstruction,

NOTE Confidence: 0.74752302675

00:54:54.970 --> 00:54:57.590 particularly focusing on neck surgery,

NOTE Confidence: 0.74752302675

00:54:57.590 --> 00:54:59.006 of course, and I'll,

NOTE Confidence: 0.74752302675

00:54:59.006 --> 00:55:00.776 I'll go through all that.

NOTE Confidence: 0.901352003333333

00:55:03.600 --> 00:55:06.526 So I'm going to briefly define carotid

NOTE Confidence: 0.901352003333333

00:55:06.526 --> 00:55:08.899 artery reconstruction and the indications,

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NOTE Confidence: 0.901352003333333

00:55:08.900 --> 00:55:11.840 review some of the existing data,

NOTE Confidence: 0.901352003333333

00:55:11.840 --> 00:55:13.700 and discuss some of the techniques

NOTE Confidence: 0.901352003333333

00:55:13.700 --> 00:55:15.470 as well as conduit choices.

NOTE Confidence: 0.909665626666667

00:55:20.690 --> 00:55:22.448 But to take a step back,

NOTE Confidence: 0.909665626666667

00:55:22.450 --> 00:55:25.216 these are some of our standard

NOTE Confidence: 0.909665626666667

00:55:25.216 --> 00:55:26.599 carotid revascularization options.

NOTE Confidence: 0.909665626666667

00:55:26.600 --> 00:55:29.720 This is a much more common thing that

NOTE Confidence: 0.909665626666667

00:55:29.720 --> 00:55:33.449 that we deal with is vascular specialists

NOTE Confidence: 0.909665626666667

00:55:33.450 --> 00:55:36.390 to remove the plaque from a carotid

NOTE Confidence: 0.909665626666667

00:55:36.390 --> 00:55:37.990 artery for atherosclerotic disease.

NOTE Confidence: 0.909665626666667

00:55:37.990 --> 00:55:41.160 And this is what it looks like in a pictorial

NOTE Confidence: 0.909665626666667

00:55:41.237 --> 00:55:43.985 form and then in histological specimen.

NOTE Confidence: 0.909665626666667

00:55:43.990 --> 00:55:44.856 And similarly,

NOTE Confidence: 0.909665626666667

00:55:44.856 --> 00:55:47.887 there is a a different technique now,

NOTE Confidence: 0.909665626666667

00:55:47.890 --> 00:55:49.730 a very popular as well,

NOTE Confidence: 0.909665626666667

00:55:49.730 --> 00:55:50.948 trans carotid artery.

NOTE Confidence: 0.909665626666667

00:55:50.948 --> 00:55:53.384 Revascularization and and this is a

NOTE Confidence: 0.909665626666667

00:55:53.384 --> 00:55:55.964 used in order to insert a stent into

NOTE Confidence: 0.909665626666667

00:55:55.964 --> 00:55:58.055 the artery and here's the stenosis

NOTE Confidence: 0.909665626666667

00:55:58.055 --> 00:56:00.666 and the internal carotid here and you

NOTE Confidence: 0.909665626666667

00:56:00.670 --> 00:56:02.008 can actually see this little pocket.

NOTE Confidence: 0.909665626666667

00:56:02.010 --> 00:56:04.971 So this is an ulcerated stenosis and

NOTE Confidence: 0.909665626666667

00:56:04.971 --> 00:56:07.820 this artery is stented and as the

NOTE Confidence: 0.909665626666667

00:56:07.820 --> 00:56:10.190 stent is placed there's actually a

NOTE Confidence: 0.909665626666667

00:56:10.190 --> 00:56:13.105 system that reverses the blood flow to

NOTE Confidence: 0.909665626666667

00:56:13.105 --> 00:56:15.607 minimize the risk of plaque embolization.

NOTE Confidence: 0.909665626666667

00:56:15.610 --> 00:56:18.361 So I show these only because familiar

NOTE Confidence: 0.909665626666667

00:56:18.361 --> 00:56:21.298 familiarity of the with the carotid artery.

NOTE Confidence: 0.909665626666667

00:56:21.300 --> 00:56:24.490 Really largely comes with experiences

NOTE Confidence: 0.909665626666667

00:56:24.490 --> 00:56:26.404 with atherosclerotic disease,

NOTE Confidence: 0.909665626666667

00:56:26.410 --> 00:56:28.026 which is, you know,

NOTE Confidence: 0.909665626666667

00:56:28.026 --> 00:56:30.046 probably 100 times more common

NOTE Confidence: 0.909665626666667

00:56:30.046 --> 00:56:32.576 than what I'll be discussing in the

NOTE Confidence: 0.909665626666667

00:56:32.576 --> 00:56:34.810 rest of the rest of the talk here.

NOTE Confidence: 0.910034008888889

00:56:38.880 --> 00:56:40.736 So revascularization is usually

NOTE Confidence: 0.910034008888889

00:56:40.736 --> 00:56:42.592 dealing with atherosclerotic disease

NOTE Confidence: 0.910034008888889

00:56:42.592 --> 00:56:45.331 like I showed you in the carotid

NOTE Confidence: 0.910034008888889

00:56:45.331 --> 00:56:47.190 artery is generally left incite you.

NOTE Confidence: 0.910034008888889

00:56:47.190 --> 00:56:49.080 We don't remove chunks or parts of

NOTE Confidence: 0.910034008888889

00:56:49.138 --> 00:56:51.287 the carotid artery other than the the

NOTE Confidence: 0.910034008888889

00:56:51.287 --> 00:56:52.930 internal layers with an endarterectomy

NOTE Confidence: 0.910034008888889

00:56:52.930 --> 00:56:54.916 and with with the carotid stent,

NOTE Confidence: 0.910034008888889

00:56:54.920 --> 00:56:56.860 we're not removing anything,

NOTE Confidence: 0.910034008888889

00:56:56.860 --> 00:56:59.285 but the reconstruction refers to

NOTE Confidence: 0.910034008888889

00:56:59.285 --> 00:57:01.540 actually resecting full thickness of

NOTE Confidence: 0.910034008888889

00:57:01.540 --> 00:57:04.260 the artery wall that's damaged in some

NOTE Confidence: 0.910034008888889

00:57:04.260 --> 00:57:07.020 fashion or needs to be resected perhaps.

NOTE Confidence: 0.910034008888889

00:57:07.020 --> 00:57:08.703 For oncological reasons,

NOTE Confidence: 0.910034008888889

00:57:08.703 --> 00:57:11.508 the indications are quite different.

NOTE Confidence: 0.910034008888889

00:57:11.510 --> 00:57:13.286 Carotid revascularization procedures

NOTE Confidence: 0.910034008888889

00:57:13.286 --> 00:57:16.246 are designed to prevent stroke,

NOTE Confidence: 0.910034008888889

00:57:16.250 --> 00:57:17.790 and that's pretty much it.

NOTE Confidence: 0.910034008888889

00:57:17.790 --> 00:57:19.630 The indications for reconstruction

NOTE Confidence: 0.910034008888889

00:57:19.630 --> 00:57:21.010 are variable also,

NOTE Confidence: 0.910034008888889

00:57:21.010 --> 00:57:23.096 as I'll show you in the next.

NOTE Confidence: 0.910034008888889

00:57:23.100 --> 00:57:26.764 Slide revascularization, very common.

NOTE Confidence: 0.910034008888889

00:57:26.764 --> 00:57:28.631 Reconstruction? Not so much,

NOTE Confidence: 0.910034008888889

00:57:28.631 --> 00:57:30.216 and the techniques are different.

NOTE Confidence: 0.910034008888889

00:57:30.220 --> 00:57:31.996 Reconstruction will involve a

NOTE Confidence: 0.910034008888889

00:57:31.996 --> 00:57:34.660 vein graft or a PTFE graft,

NOTE Confidence: 0.910034008888889

00:57:34.660 --> 00:57:35.888 as I'll show you.

NOTE Confidence: 0.910034008888889

00:57:35.888 --> 00:57:37.423 And because of the complexity

NOTE Confidence: 0.910034008888889

00:57:37.423 --> 00:57:39.020 of the reconstructions,

NOTE Confidence: 0.910034008888889

00:57:39.020 --> 00:57:41.192 these are tend to be multidisciplinary

NOTE Confidence: 0.910034008888889

00:57:41.192 --> 00:57:43.499 teams and have a higher risk

NOTE Confidence: 0.910034008888889

00:57:43.499 --> 00:57:45.079 of cranial nerve injury.

NOTE Confidence: 0.822881618571429

00:57:50.370 --> 00:57:53.455 And so moving forward into

NOTE Confidence: 0.822881618571429

00:57:53.455 --> 00:57:54.689 carotid reconstruction,

NOTE Confidence: 0.822881618571429

00:57:54.690 --> 00:57:56.844 there are a variety of indications

NOTE Confidence: 0.822881618571429

00:57:56.844 --> 00:57:59.573 for this and really I was asked to

NOTE Confidence: 0.822881618571429

00:57:59.573 --> 00:58:01.846 talk about the last one because this

NOTE Confidence: 0.822881618571429

00:58:01.846 --> 00:58:04.066 of course coincides with what our.

NOTE Confidence: 0.822881618571429

00:58:04.070 --> 00:58:05.414 Oncological next surgeons do,

NOTE Confidence: 0.822881618571429

00:58:05.414 --> 00:58:08.222 but I'd be remiss if I didn't mention

NOTE Confidence: 0.822881618571429

00:58:08.222 --> 00:58:10.394 some of these other reasons because

NOTE Confidence: 0.822881618571429

00:58:10.394 --> 00:58:13.627 a lot of the information that we have

NOTE Confidence: 0.822881618571429

00:58:13.627 --> 00:58:15.683 about reconstruction for cancer is

NOTE Confidence: 0.822881618571429

00:58:15.683 --> 00:58:17.798 extrapolated from similar techniques that

NOTE Confidence: 0.822881618571429

00:58:17.798 --> 00:58:20.879 we use for these other other issues.

NOTE Confidence: 0.822881618571429

00:58:20.880 --> 00:58:21.867 So for example.

NOTE Confidence: 0.822881618571429

00:58:21.867 --> 00:58:24.557 This is a patient who has had a

NOTE Confidence: 0.822881618571429

00:58:24.557 --> 00:58:26.755 carotid stent and you can kind of

NOTE Confidence: 0.822881618571429

00:58:26.755 --> 00:58:29.359 see the outline of the stent here.

NOTE Confidence: 0.822881618571429

00:58:29.360 --> 00:58:31.442 And this patient has a severe

NOTE Confidence: 0.822881618571429

00:58:31.442 --> 00:58:34.052 in stent stenosis and you know,

NOTE Confidence: 0.822881618571429

00:58:34.052 --> 00:58:35.964 this can be treated.

NOTE Confidence: 0.822881618571429

00:58:35.970 --> 00:58:38.148 Charles might opt to treat this

NOTE Confidence: 0.822881618571429

00:58:38.148 --> 00:58:39.237 with a balloon,

NOTE Confidence: 0.822881618571429

00:58:39.240 --> 00:58:40.810 a repeat of balloon angioplasty

NOTE Confidence: 0.822881618571429

00:58:40.810 --> 00:58:42.380 and get a good result.

NOTE Confidence: 0.822881618571429

00:58:42.380 --> 00:58:44.252 But what if it keeps coming back or they're,

NOTE Confidence: 0.822881618571429

00:58:44.260 --> 00:58:44.894 you know,

NOTE Confidence: 0.822881618571429

00:58:44.894 --> 00:58:47.113 for some reason the patient can't have

NOTE Confidence: 0.822881618571429

00:58:47.113 --> 00:58:49.993 a balloon angioplasty of this area.

NOTE Confidence: 0.822881618571429

00:58:49.993 --> 00:58:53.010 OK well potentially you can actually resect.

NOTE Confidence: 0.822881618571429

00:58:53.010 --> 00:58:55.098 All of this and put in a vein

NOTE Confidence: 0.822881618571429

00:58:55.098 --> 00:58:56.419 graft or a bypass.

NOTE Confidence: 0.822881618571429

00:58:56.419 --> 00:58:58.890 So that's just an example of a

NOTE Confidence: 0.822881618571429

00:58:58.979 --> 00:59:02.509 recurrent disease, and here's a.

NOTE Confidence: 0.822881618571429

00:59:02.510 --> 00:59:05.910 A patient of mine from several years ago.

NOTE Confidence: 0.822881618571429

00:59:05.910 --> 00:59:08.304 This is a a 70 year old man who

NOTE Confidence: 0.822881618571429

00:59:08.304 --> 00:59:10.481 had a prior carotid endarterectomy

NOTE Confidence: 0.822881618571429

00:59:10.481 --> 00:59:13.719 for a high grade stenosis and then

NOTE Confidence: 0.822881618571429

00:59:13.719 --> 00:59:16.233 a couple of years later developed

NOTE Confidence: 0.822881618571429

00:59:16.233 --> 00:59:18.358 a recurrent high grade stenosis.

NOTE Confidence: 0.822881618571429

00:59:18.358 --> 00:59:20.962 And this is actually quite rare

NOTE Confidence: 0.822881618571429

00:59:20.962 --> 00:59:22.745 because karate endarterectomies tend

NOTE Confidence: 0.822881618571429

00:59:22.745 --> 00:59:25.685 to be quite durable in you know,

NOTE Confidence: 0.822881618571429

00:59:25.690 --> 00:59:27.770 90 plus percent of patients,

NOTE Confidence: 0.822881618571429

00:59:27.770 --> 00:59:30.458 but unfortunately not in this gentleman.

NOTE Confidence: 0.822881618571429

00:59:30.460 --> 00:59:32.476 And he actually had some organized.

NOTE Confidence: 0.822881618571429

00:59:32.480 --> 00:59:34.028 Rhombus on the inside of the

NOTE Confidence: 0.822881618571429

00:59:34.028 --> 00:59:35.470 carotid patch and just looked,

NOTE Confidence: 0.822881618571429

00:59:35.470 --> 00:59:36.424 you know,

NOTE Confidence: 0.822881618571429

00:59:36.424 --> 00:59:38.809 it looked somewhat terrifying on

NOTE Confidence: 0.822881618571429

00:59:38.809 --> 00:59:39.763 the ultrasound.

NOTE Confidence: 0.822881618571429

00:59:39.770 --> 00:59:42.073 And so after you know pretty extensive

NOTE Confidence: 0.822881618571429

00:59:42.073 --> 00:59:43.877 discussion he was concerned about

NOTE Confidence: 0.822881618571429

00:59:43.877 --> 00:59:46.133 stroke recurrence and I was concerned

NOTE Confidence: 0.822881618571429

00:59:46.133 --> 00:59:48.254 about that and we opted to do a

NOTE Confidence: 0.822881618571429

00:59:48.254 --> 00:59:50.250 a vein graft and so it's a little

NOTE Confidence: 0.822881618571429

00:59:50.250 --> 00:59:52.711 it's a little video here it just it

NOTE Confidence: 0.822881618571429

00:59:52.711 --> 00:59:54.800 basically just shows it pulsing but.

NOTE Confidence: 0.88282749125

00:59:59.560 --> 01:00:01.320 But you can see actually on the outside,

NOTE Confidence: 0.88282749125

01:00:01.320 --> 01:00:03.371 here's the edges of the the patch

NOTE Confidence: 0.88282749125

01:00:03.371 --> 01:00:05.531 and this that I had to open up

NOTE Confidence: 0.88282749125

01:00:05.531 --> 01:00:07.455 and and the vein graft goes up

NOTE Confidence: 0.88282749125

01:00:07.455 --> 01:00:09.060 from the proximal side here,

NOTE Confidence: 0.88282749125

01:00:09.060 --> 01:00:10.878 which is down towards the chest,

NOTE Confidence: 0.88282749125

01:00:10.880 --> 01:00:12.672 up towards the internal.

NOTE Confidence: 0.88282749125

01:00:12.672 --> 01:00:15.360 This is all internal carotid karada

NOTE Confidence: 0.88282749125

01:00:15.442 --> 01:00:17.908 up that the up at the top of the.

NOTE Confidence: 0.88282749125

01:00:17.910 --> 01:00:19.110 Top of the neck there.

NOTE Confidence: 0.909896930526316

01:00:24.790 --> 01:00:27.275 And so another situation that we may

NOTE Confidence: 0.909896930526316

01:00:27.275 --> 01:00:30.754 have to get into doing some sort of

NOTE Confidence: 0.909896930526316

01:00:30.754 --> 01:00:32.626 carotid repair or reconstruction,

NOTE Confidence: 0.909896930526316

01:00:32.630 --> 01:00:35.260 although not perhaps as as

NOTE Confidence: 0.909896930526316

01:00:35.260 --> 01:00:37.770 commonly is a carotid body tumor.

NOTE Confidence: 0.909896930526316

01:00:37.770 --> 01:00:39.658 And so I, I like to mention these

NOTE Confidence: 0.909896930526316

01:00:39.658 --> 01:00:41.550 because I'm interested in these and I,

NOTE Confidence: 0.909896930526316

01:00:41.550 --> 01:00:43.590 I I think they're very fascinated.

NOTE Confidence: 0.909896930526316

01:00:43.590 --> 01:00:45.558 I think a lot of us are fascinated

NOTE Confidence: 0.909896930526316

01:00:45.558 --> 01:00:46.998 with carotid body tumors because

NOTE Confidence: 0.909896930526316

01:00:46.998 --> 01:00:48.786 they have such a exotic pathology

NOTE Confidence: 0.909896930526316

01:00:48.786 --> 01:00:50.490 and they look very interesting

NOTE Confidence: 0.909896930526316

01:00:50.490 --> 01:00:52.175 under a microscope and they're.

NOTE Confidence: 0.909896930526316

01:00:52.180 --> 01:00:53.550 You know, they're just very

NOTE Confidence: 0.909896930526316

01:00:53.550 --> 01:00:54.646 fascinating on little tumors.

NOTE Confidence: 0.909896930526316

01:00:54.650 --> 01:00:57.598 Fortunately, they're rarely malignant.

NOTE Confidence: 0.909896930526316

01:00:57.600 --> 01:01:00.162 And this is from actually one of

NOTE Confidence: 0.909896930526316

01:01:00.162 --> 01:01:03.266 my my older one of my old partners

NOTE Confidence: 0.909896930526316

01:01:03.266 --> 01:01:06.020 Jeb Hallett did this 50 year old.

NOTE Confidence: 0.909896930526316

01:01:06.020 --> 01:01:08.150 50 year Mayo Clinic experience many

NOTE Confidence: 0.909896930526316

01:01:08.150 --> 01:01:11.242 years ago and it's really been a a

NOTE Confidence: 0.909896930526316

01:01:11.242 --> 01:01:12.846 landmark paper which categorized

NOTE Confidence: 0.909896930526316

01:01:12.846 --> 01:01:15.614 these tumors nicely into into the

NOTE Confidence: 0.909896930526316

01:01:15.614 --> 01:01:18.069 Shamblin state Shamblin stages here

NOTE Confidence: 0.909896930526316

01:01:18.069 --> 01:01:21.098 and kind of showed a correlation

NOTE Confidence: 0.909896930526316

01:01:21.098 --> 01:01:23.678 between these three levels of.

NOTE Confidence: 0.909896930526316

01:01:23.678 --> 01:01:26.810 Disease and the degree of complications

NOTE Confidence: 0.909896930526316

01:01:26.899 --> 01:01:29.314 that you can expect and as you

NOTE Confidence: 0.909896930526316

01:01:29.314 --> 01:01:32.038 can see in cross section here,

NOTE Confidence: 0.909896930526316

01:01:32.040 --> 01:01:34.539 Shamblin 1 tumor kind of sits between

NOTE Confidence: 0.909896930526316

01:01:34.539 --> 01:01:36.540 the internal and the external.

NOTE Confidence: 0.909896930526316

01:01:36.540 --> 01:01:38.717 And then a Shamblin 2 starts to

NOTE Confidence: 0.909896930526316

01:01:38.717 --> 01:01:40.960 impinge upon the vessels a little bit

NOTE Confidence: 0.909896930526316

01:01:40.960 --> 01:01:43.280 more and gets a little more dicey.

NOTE Confidence: 0.909896930526316

01:01:43.280 --> 01:01:44.498 And then a three, you know,

NOTE Confidence: 0.909896930526316

01:01:44.500 --> 01:01:46.772 it just basically is like, you know,

NOTE Confidence: 0.909896930526316

01:01:46.772 --> 01:01:48.848 is like a little fruit sitting

NOTE Confidence: 0.909896930526316

01:01:48.848 --> 01:01:50.699 inside the jello mold here.

NOTE Confidence: 0.909896930526316

01:01:50.700 --> 01:01:51.374 I mean,

NOTE Confidence: 0.909896930526316

01:01:51.374 --> 01:01:52.048 it's really,

NOTE Confidence: 0.909896930526316

01:01:52.048 --> 01:01:53.396 really encompassing the blood

NOTE Confidence: 0.909896930526316

01:01:53.396 --> 01:01:55.219 vessels and these are of course.

NOTE Confidence: 0.909896930526316

01:01:55.220 --> 01:01:58.685 The most difficult to manage and tend

NOTE Confidence: 0.909896930526316

01:01:58.685 --> 01:02:01.403 to involve cranial nerves and and

NOTE Confidence: 0.909896930526316

01:02:01.403 --> 01:02:05.106 may have a higher end do and have a

NOTE Confidence: 0.909896930526316

01:02:05.106 --> 01:02:07.956 higher risk of treating nerve palsy.

NOTE Confidence: 0.909896930526316

01:02:07.960 --> 01:02:10.200 But when it gets to carotid reconstructions,

NOTE Confidence: 0.909896930526316

01:02:10.200 --> 01:02:10.580 fortunately,

NOTE Confidence: 0.909896930526316

01:02:10.580 --> 01:02:12.860 most of these do not require

NOTE Confidence: 0.909896930526316

01:02:12.860 --> 01:02:14.000 a carotid reconstruction,

NOTE Confidence: 0.909896930526316

01:02:14.000 --> 01:02:16.514 and the rate of carotid reconstruction

NOTE Confidence: 0.909896930526316

01:02:16.514 --> 01:02:18.999 has gone down over over time,

NOTE Confidence: 0.909896930526316

01:02:19.000 --> 01:02:20.848 as I'll show you in the.

NOTE Confidence: 0.909896930526316

01:02:20.850 --> 01:02:24.100 More recent, more recent series,

NOTE Confidence: 0.909896930526316

01:02:24.100 --> 01:02:25.660 but in this older series they

NOTE Confidence: 0.909896930526316

01:02:25.660 --> 01:02:27.719 had to do a lateral suture,

NOTE Confidence: 0.909896930526316

01:02:27.720 --> 01:02:29.440 meaning just a simple suture

NOTE Confidence: 0.909896930526316

01:02:29.440 --> 01:02:31.926 repair in in about 9% of cases.

NOTE Confidence: 0.909896930526316

01:02:31.926 --> 01:02:34.224 And then some sort of little

NOTE Confidence: 0.909896930526316

01:02:34.224 --> 01:02:38.430 patch or or even a graft and 25%.

NOTE Confidence: 0.909896930526316

01:02:38.430 --> 01:02:39.489 Of these patients.

NOTE Confidence: 0.868715118

01:02:42.790 --> 01:02:44.390 And so more more recently,

NOTE Confidence: 0.868715118

01:02:44.390 --> 01:02:46.028 just a couple of months ago,

NOTE Confidence: 0.868715118

01:02:46.030 --> 01:02:49.174 this article from some of our

NOTE Confidence: 0.868715118

01:02:49.174 --> 01:02:52.007 colleagues in Mexico came out and

NOTE Confidence: 0.868715118

01:02:52.007 --> 01:02:54.521 this is the largest database of

NOTE Confidence: 0.868715118

01:02:54.521 --> 01:02:57.059 carotid body tumors that actually

NOTE Confidence: 0.868715118

01:02:57.059 --> 01:03:00.107 crosses 3 continents in 11 countries.

NOTE Confidence: 0.868715118

117

01:03:00.110 --> 01:03:02.726 And so there's a lot of information here.

NOTE Confidence: 0.868715118

01:03:02.730 --> 01:03:04.375 I I put up the balloon occlusion

NOTE Confidence: 0.868715118

01:03:04.375 --> 01:03:05.955 because I knew that the Charles

NOTE Confidence: 0.868715118

01:03:05.955 --> 01:03:07.330 will be talking about that.

NOTE Confidence: 0.868715118

01:03:07.330 --> 01:03:09.040 And they actually found that

NOTE Confidence: 0.868715118

01:03:09.040 --> 01:03:10.750 balloon occlusion was only done,

NOTE Confidence: 0.868715118

01:03:10.750 --> 01:03:13.674 only performed in about 22% of

NOTE Confidence: 0.868715118

01:03:13.674 --> 01:03:14.766 patients and interestingly.

NOTE Confidence: 0.868715118

01:03:14.766 --> 01:03:20.080 Only about 2% of those were positive and.

NOTE Confidence: 0.868715118

01:03:20.080 --> 01:03:22.593 And about a third of these were

NOTE Confidence: 0.868715118

01:03:22.593 --> 01:03:24.660 categorized as Shamblin 3 or the more,

NOTE Confidence: 0.868715118

01:03:24.660 --> 01:03:28.008 the more severe tumors.

NOTE Confidence: 0.868715118

01:03:28.010 --> 01:03:30.773 And you know what they what they did find

NOTE Confidence: 0.868715118

01:03:30.773 --> 01:03:33.196 though is that when the carotid artery.

NOTE Confidence: 0.868715118

01:03:33.200 --> 01:03:35.130 Is involved as it may,

NOTE Confidence: 0.868715118

01:03:35.130 --> 01:03:38.714 may likely be with more advanced tumors,

NOTE Confidence: 0.868715118

01:03:38.720 --> 01:03:41.100 the risk goes up and I think

NOTE Confidence: 0.868715118

01:03:41.100 --> 01:03:41.947 that's intuitive, right.

NOTE Confidence: 0.868715118

01:03:41.947 --> 01:03:43.724 So if you have to resect a part of the

NOTE Confidence: 0.868715118

01:03:43.724 --> 01:03:45.299 carotid artery in addition to the tumor,

NOTE Confidence: 0.868715118

01:03:45.300 --> 01:03:47.472 there's increased risk of

NOTE Confidence: 0.868715118

01:03:47.472 --> 01:03:49.644 blood loss and potentially.

NOTE Confidence: 0.868715118

01:03:49.650 --> 01:03:51.770 Stroke and cranial nerve problems.

NOTE Confidence: 0.868715118

01:03:51.770 --> 01:03:53.654 So the risk of stroke though

NOTE Confidence: 0.868715118

01:03:53.654 --> 01:03:54.910 ultimately was pretty low,

NOTE Confidence: 0.868715118

01:03:54.910 --> 01:03:56.400 but they did find that, you know,

NOTE Confidence: 0.868715118

01:03:56.400 --> 01:03:57.750 doing something else with the carotid,

NOTE Confidence: 0.868715118

01:03:57.750 --> 01:03:58.430 whether that's.

NOTE Confidence: 0.868715118

01:03:58.430 --> 01:04:00.470 A graft, or whether that's an

NOTE Confidence: 0.868715118

01:04:00.470 --> 01:04:02.019 endarterectomy or something else.

NOTE Confidence: 0.868715118

01:04:02.020 --> 01:04:04.996 That of course does elevate your.

NOTE Confidence: 0.868715118

01:04:05.000 --> 01:04:06.116 Risk of complications.

NOTE Confidence: 0.868715118

01:04:06.116 --> 01:04:06.488 Fortunately,

NOTE Confidence: 0.868715118

01:04:06.488 --> 01:04:08.348 most of the cranial nerve

NOTE Confidence: 0.868715118

01:04:08.348 --> 01:04:09.860 palsies were just temporary.

NOTE Confidence: 0.7053235775

01:04:13.700 --> 01:04:17.900 And so I take a little sidebar here just

NOTE Confidence: 0.7053235775

01:04:17.900 --> 01:04:20.100 to show about preoperative embolization.

NOTE Confidence: 0.7053235775

01:04:20.100 --> 01:04:23.075 I think the authors hopefully of the

NOTE Confidence: 0.7053235775

01:04:23.075 --> 01:04:25.452 capacity database here will maybe get

NOTE Confidence: 0.7053235775

01:04:25.452 --> 01:04:28.014 into the details a little bit more,

NOTE Confidence: 0.7053235775

01:04:28.020 --> 01:04:30.516 perhaps in future articles on embolization.

NOTE Confidence: 0.7053235775

01:04:30.520 --> 01:04:32.080 They really didn't touch on it

NOTE Confidence: 0.7053235775

01:04:32.080 --> 01:04:35.670 too much in this in this article.

NOTE Confidence: 0.7053235775

01:04:35.670 --> 01:04:38.547 We we've looked at a few cases

NOTE Confidence: 0.7053235775

01:04:38.547 --> 01:04:40.650 here at here at Yale.

NOTE Confidence: 0.7053235775

01:04:40.650 --> 01:04:44.227 One of my partners doctor on Missouri.

NOTE Confidence: 0.7053235775

01:04:44.230 --> 01:04:46.498 We published this little article here.

NOTE Confidence: 0.7053235775

01:04:46.500 --> 01:04:48.400 It's got some cute pictures,

NOTE Confidence: 0.7053235775

01:04:48.400 --> 01:04:50.514 but what this shows is that here's

NOTE Confidence: 0.7053235775

01:04:50.514 --> 01:04:52.835 a carotid body tumor and this is

NOTE Confidence: 0.7053235775

01:04:52.835 --> 01:04:54.515 the common carotid artery here,

NOTE Confidence: 0.7053235775

01:04:54.520 --> 01:04:56.090 and then the internal carotid

NOTE Confidence: 0.7053235775

01:04:56.090 --> 01:04:57.959 artery and the external with all

NOTE Confidence: 0.7053235775

01:04:57.959 --> 01:04:59.399 of the all of the branches,

NOTE Confidence: 0.7053235775

01:04:59.400 --> 01:05:01.050 the ascending pharyngeal

NOTE Confidence: 0.7053235775

01:05:01.050 --> 01:05:02.700 and etcetera etcetera.

NOTE Confidence: 0.7053235775

01:05:02.700 --> 01:05:05.444 And using these little micro coils of

NOTE Confidence: 0.7053235775

01:05:05.444 --> 01:05:08.017 platinum based coils to embolize all

NOTE Confidence: 0.7053235775

01:05:08.017 --> 01:05:10.217 of these little branches potentially

NOTE Confidence: 0.7053235775

01:05:10.220 --> 01:05:12.684 reduces your blood loss in the operating

NOTE Confidence: 0.7053235775

01:05:12.684 --> 01:05:15.468 room and can decrease the vascularity.

NOTE Confidence: 0.7053235775

01:05:15.470 --> 01:05:17.942 They have not yet been able to show

NOTE Confidence: 0.7053235775

01:05:17.942 --> 01:05:19.785 an association between that and

NOTE Confidence: 0.7053235775

01:05:19.785 --> 01:05:22.095 decreased risk of cranial nerve injury,

NOTE Confidence: 0.7053235775

01:05:22.100 --> 01:05:22.417 however.

NOTE Confidence: 0.7053235775

01:05:22.417 --> 01:05:24.002 Intuitively you would think that

NOTE Confidence: 0.7053235775

01:05:24.002 --> 01:05:25.600 that would be the case,

NOTE Confidence: 0.7053235775

01:05:25.600 --> 01:05:27.370 but I guess further a larger

NOTE Confidence: 0.7053235775

01:05:27.370 --> 01:05:28.550 studies will show that.

NOTE Confidence: 0.926120883333333

01:05:31.180 --> 01:05:33.820 And this is just an example.

NOTE Confidence: 0.926120883333333

01:05:33.820 --> 01:05:35.460 Of a Shamblin 2 tumor.

NOTE Confidence: 0.926120883333333

01:05:35.460 --> 01:05:38.616 So fortunately, this did not require

NOTE Confidence: 0.926120883333333

01:05:38.616 --> 01:05:40.720 a carotid body reconstruction.

NOTE Confidence: 0.926120883333333

01:05:40.720 --> 01:05:43.440 You can see in cross section here the

NOTE Confidence: 0.926120883333333

01:05:43.440 --> 01:05:45.270 internal carotid artery and some of

NOTE Confidence: 0.926120883333333

01:05:45.270 --> 01:05:47.480 the little branch up here and the big,

NOTE Confidence: 0.926120883333333

01:05:47.480 --> 01:05:48.916 big tumor right here.

NOTE Confidence: 0.926120883333333

01:05:48.916 --> 01:05:51.699 Hopefully I'm showing you this with my mouse.

01:05:51.700 --> 01:05:53.844 And then here you can see if you

01:05:53.844 --> 01:05:55.776 look closely, here's the the tumor,

01:05:55.776 --> 01:05:57.521 there's a little loop around

01:05:57.521 --> 01:05:59.240 the carotid artery here,

01:05:59.240 --> 01:06:01.792 and then we're coming across one of the

01:06:01.792 --> 01:06:03.939 little branches and this little guy here.

01:06:03.940 --> 01:06:05.550 This little coil, this little metal thing,

01:06:05.550 --> 01:06:06.744 you actually when you come across

01:06:06.744 --> 01:06:07.910 some of these little branches,

01:06:07.910 --> 01:06:09.470 the little coils just, you know,

01:06:09.470 --> 01:06:10.970 come out and and, you know,

01:06:10.970 --> 01:06:12.770 there they are and they don't

01:06:12.770 --> 01:06:13.970 really cause much inflammation,

01:06:13.970 --> 01:06:15.890 which is not really, really nice.

01:06:15.890 --> 01:06:18.235 And then here is the external carotid

01:06:18.235 --> 01:06:20.064 artery and here's the internal

NOTE Confidence: 0.926120883333333

01:06:20.064 --> 01:06:21.954 carotid artery and the common

NOTE Confidence: 0.926120883333333

01:06:21.954 --> 01:06:24.128 carotid artery with the yellow loop,

NOTE Confidence: 0.926120883333333

01:06:24.130 --> 01:06:26.510 the internal again with the red loop.

NOTE Confidence: 0.926120883333333

01:06:26.510 --> 01:06:28.262 And here's the tumor which it's

NOTE Confidence: 0.926120883333333

01:06:28.262 --> 01:06:29.626 almost been fully mobilized.

NOTE Confidence: 0.926120883333333

01:06:29.626 --> 01:06:31.566 It's almost ready to come,

NOTE Confidence: 0.926120883333333

01:06:31.570 --> 01:06:34.055 come popping out for our

NOTE Confidence: 0.926120883333333

01:06:34.055 --> 01:06:35.049 friendly pathologist.

NOTE Confidence: 0.926120883333333

01:06:35.050 --> 01:06:36.898 Uh, but uh, in this case,

NOTE Confidence: 0.926120883333333

01:06:36.900 --> 01:06:37.516 you know,

NOTE Confidence: 0.926120883333333

01:06:37.516 --> 01:06:39.056 this tumor could be mobilized

NOTE Confidence: 0.926120883333333

01:06:39.056 --> 01:06:41.052 and and no sutures actually had

NOTE Confidence: 0.926120883333333

01:06:41.052 --> 01:06:43.062 to be placed on the carotid.

NOTE Confidence: 0.926120883333333

01:06:43.070 --> 01:06:44.100 Artery itself.

NOTE Confidence: 0.869654188

01:06:46.760 --> 01:06:50.648 And so now moving into more of the

NOTE Confidence: 0.869654188

01:06:50.648 --> 01:06:52.880 details of carotid artery reconstruction.

NOTE Confidence: 0.869654188

01:06:52.880 --> 01:06:56.080 And this is a perhaps a nice little

NOTE Confidence: 0.869654188

01:06:56.080 --> 01:06:58.360 figure that demonstrates this very simply.

NOTE Confidence: 0.869654188

01:06:58.360 --> 01:07:00.320 You have to remove a chunk of the

NOTE Confidence: 0.869654188

01:07:00.320 --> 01:07:01.760 carotid artery and you have to

NOTE Confidence: 0.869654188

01:07:01.760 --> 01:07:03.470 replace it with some sort of graft,

NOTE Confidence: 0.869654188

01:07:03.470 --> 01:07:06.039 whether that's vein or a prosthetic graft.

NOTE Confidence: 0.869654188

01:07:06.040 --> 01:07:07.676 And in this situation,

NOTE Confidence: 0.869654188

01:07:07.676 --> 01:07:10.130 the external carotid artery is just

NOTE Confidence: 0.869654188

01:07:10.205 --> 01:07:13.309 ligated and that is tolerated quite well in

NOTE Confidence: 0.869654188

01:07:13.309 --> 01:07:16.360 this series of 41 patients over 17 years.

NOTE Confidence: 0.869654188

01:07:16.360 --> 01:07:17.054 So again.

NOTE Confidence: 0.869654188

01:07:17.054 --> 01:07:19.483 But this is not a common phenomenon,

NOTE Confidence: 0.869654188

01:07:19.490 --> 01:07:21.950 and this was done at UCLA.

NOTE Confidence: 0.869654188

01:07:21.950 --> 01:07:24.495 And this was published way back in 2008.

NOTE Confidence: 0.869654188

01:07:24.495 --> 01:07:27.345 They demonstrated all of these different

NOTE Confidence: 0.869654188

01:07:27.345 --> 01:07:29.860 indications for carotid reconstruction.

NOTE Confidence: 0.869654188

01:07:29.860 --> 01:07:31.164 You know, interestingly enough,

NOTE Confidence: 0.869654188

01:07:31.164 --> 01:07:31.816 again none,

NOTE Confidence: 0.869654188

01:07:31.820 --> 01:07:34.921 none for a cancer at least were

NOTE Confidence: 0.869654188

01:07:34.921 --> 01:07:36.850 were noted in this.

NOTE Confidence: 0.869654188

01:07:36.850 --> 01:07:38.530 A particular article.

NOTE Confidence: 0.9102382

01:07:43.530 --> 01:07:46.920 And then. We really have to think

NOTE Confidence: 0.9102382

01:07:46.920 --> 01:07:48.839 about the type of conduit we use.

NOTE Confidence: 0.9102382

01:07:48.840 --> 01:07:49.960 When I refer to conduit,

NOTE Confidence: 0.9102382

01:07:49.960 --> 01:07:51.514 I mean what are we replacing that

NOTE Confidence: 0.9102382

01:07:51.514 --> 01:07:53.287 part of the carotid artery with?

NOTE Confidence: 0.9102382

01:07:53.287 --> 01:07:56.095 Are we replacing it with a vein or

NOTE Confidence: 0.9102382

01:07:56.095 --> 01:07:58.400 a some sort of prosthetic graft?

NOTE Confidence: 0.9102382

01:07:58.400 --> 01:07:59.936 Those are pretty much the choices.

NOTE Confidence: 0.9102382

01:07:59.940 --> 01:08:01.150 You can use saphenous vein.

01:08:01.150 --> 01:08:02.833 You can use a deep vein from the leg,

01:08:02.840 --> 01:08:06.134 you can use a Dacron or a PTFE graft.

01:08:06.140 --> 01:08:08.234 Some people have actually used superficial

01:08:08.234 --> 01:08:09.948 femoral artery and then replaced

01:08:09.948 --> 01:08:12.020 the artery in the leg with a graft.

01:08:12.020 --> 01:08:13.637 OK, that's you know, you can use

01:08:13.637 --> 01:08:15.469 that too and I think you know the.

01:08:15.470 --> 01:08:16.910 The decision making is important,

01:08:16.910 --> 01:08:19.060 but here's an article from

01:08:19.060 --> 01:08:21.174 actually some former partners of

01:08:21.174 --> 01:08:23.646 mine up at Albany Medical Center,

01:08:23.650 --> 01:08:26.954 and they compare the types of conduits.

01:08:26.960 --> 01:08:28.488 With regards to patency,

01:08:28.488 --> 01:08:30.398 because really that that's really

01:08:30.398 --> 01:08:32.638 not determined in this particular

01:08:32.640 --> 01:08:36.240 location and they found very similar.

NOTE Confidence: 0.9102382

01:08:36.240 --> 01:08:39.795 Survival of the of the bypass over time.

NOTE Confidence: 0.9102382

01:08:39.800 --> 01:08:41.700 Again, most of these indications

NOTE Confidence: 0.9102382

01:08:41.700 --> 01:08:43.616 were not for cancer, though.

NOTE Confidence: 0.9102382

01:08:43.616 --> 01:08:47.322 This was for occlusive disease, for trauma.

NOTE Confidence: 0.9102382

01:08:47.322 --> 01:08:48.183 Infections.

NOTE Confidence: 0.9102382

01:08:48.183 --> 01:08:50.766 All the infections,

NOTE Confidence: 0.9102382

01:08:50.770 --> 01:08:52.080 of course, got vein grafts.

NOTE Confidence: 0.9102382

01:08:52.080 --> 01:08:54.114 Would not be appropriate to do

NOTE Confidence: 0.9102382

01:08:54.114 --> 01:08:56.210 a prosthetic in that situation.

NOTE Confidence: 0.9102382

01:08:56.210 --> 01:08:58.742 And then carotid aneurysms

NOTE Confidence: 0.9102382

01:08:58.742 --> 01:09:00.528 or pseudoaneurysms notably,

NOTE Confidence: 0.9102382

01:09:00.528 --> 01:09:03.118 they had a preponderance of

NOTE Confidence: 0.9102382

01:09:03.118 --> 01:09:04.580 prosthetic grafts in their series,

NOTE Confidence: 0.9102382

01:09:04.580 --> 01:09:05.285 which you know,

NOTE Confidence: 0.9102382

01:09:05.290 --> 01:09:09.350 clearly shows their favoritism for,

NOTE Confidence: 0.9102382

01:09:09.350 --> 01:09:12.140 for that there were no differences

NOTE Confidence: 0.9102382

01:09:12.140 --> 01:09:13.535 in the outcomes.

NOTE Confidence: 0.9102382

01:09:13.540 --> 01:09:14.060 Either.

NOTE Confidence: 0.870226098181818

01:09:18.340 --> 01:09:21.204 And so now we're getting into the discussion

NOTE Confidence: 0.870226098181818

01:09:21.204 --> 01:09:24.457 of advanced neck cancers and what is the role

NOTE Confidence: 0.870226098181818

01:09:24.457 --> 01:09:26.800 for carotid sacrifice and reconstruction.

NOTE Confidence: 0.870226098181818

01:09:26.800 --> 01:09:28.798 And I always like to put up a little

NOTE Confidence: 0.870226098181818

01:09:28.798 --> 01:09:30.519 rowing thing because I used to row,

NOTE Confidence: 0.870226098181818

01:09:30.520 --> 01:09:32.998 so I not always, but anyway,

NOTE Confidence: 0.870226098181818

01:09:33.000 --> 01:09:35.310 there it is because it's such a

NOTE Confidence: 0.870226098181818

01:09:35.310 --> 01:09:36.662 nice demonstration of teamwork.

NOTE Confidence: 0.870226098181818

01:09:36.662 --> 01:09:39.558 And I I apologize if I left somebody

NOTE Confidence: 0.870226098181818

01:09:39.558 --> 01:09:41.760 out here. I hope not, you know,

NOTE Confidence: 0.870226098181818

01:09:41.760 --> 01:09:45.600 but all of these specialists and.

NOTE Confidence: 0.870226098181818

01:09:45.600 --> 01:09:49.000 And caregivers are a part of the team

NOTE Confidence: 0.870226098181818

129

01:09:49.000 --> 01:09:52.108 that care for these patients with.

NOTE Confidence: 0.870226098181818

01:09:52.110 --> 01:09:53.658 Had neck cancer.

NOTE Confidence: 0.870226098181818

01:09:53.658 --> 01:09:56.182 So you know, I think one of the questions

NOTE Confidence: 0.870226098181818

01:09:56.182 --> 01:09:57.450 that I always ask is, you know,

NOTE Confidence: 0.870226098181818

01:09:57.450 --> 01:09:59.330 I can put the blood vessels back together,

NOTE Confidence: 0.870226098181818

01:09:59.330 --> 01:09:59.912 but you know,

NOTE Confidence: 0.870226098181818

01:09:59.912 --> 01:10:01.790 you guys help me out as this indicated.

NOTE Confidence: 0.870226098181818

01:10:01.790 --> 01:10:03.270 Is this the best treatment?

NOTE Confidence: 0.870226098181818

01:10:03.270 --> 01:10:04.578 Is radiation better?

NOTE Confidence: 0.870226098181818

01:10:04.578 --> 01:10:05.886 Is chemotherapy better?

NOTE Confidence: 0.870226098181818

01:10:05.890 --> 01:10:07.636 Is is this going to give

NOTE Confidence: 0.870226098181818

01:10:07.636 --> 01:10:09.190 the patient what they want?

NOTE Confidence: 0.870226098181818

01:10:09.190 --> 01:10:11.062 Is this going to give the patient a

NOTE Confidence: 0.870226098181818

01:10:11.062 --> 01:10:13.157 quality of life or are they going to have?

NOTE Confidence: 0.870226098181818

01:10:13.160 --> 01:10:15.208 You know a lot of morbidity from this

NOTE Confidence: 0.870226098181818

01:10:15.208 --> 01:10:17.327 and and what are the patients goals.

NOTE Confidence: 0.870226098181818

01:10:17.327 --> 01:10:20.103 So I think having that sort of discussion

NOTE Confidence: 0.870226098181818

01:10:20.103 --> 01:10:22.318 you know particularly with the.

NOTE Confidence: 0.870226098181818

01:10:22.320 --> 01:10:23.790 With the otolaryngologist

NOTE Confidence: 0.870226098181818

01:10:23.790 --> 01:10:25.750 and the medical oncologist,

NOTE Confidence: 0.870226098181818

01:10:25.750 --> 01:10:27.043 the radiation oncologist,

NOTE Confidence: 0.870226098181818

01:10:27.043 --> 01:10:29.198 particularly when it gets into

NOTE Confidence: 0.870226098181818

01:10:29.198 --> 01:10:30.560 these complex tumors,

NOTE Confidence: 0.870226098181818

01:10:30.560 --> 01:10:31.348 is really.

NOTE Confidence: 0.870226098181818

01:10:31.348 --> 01:10:33.712 Really essential so that we can

NOTE Confidence: 0.870226098181818

01:10:33.712 --> 01:10:35.973 present to the patient what we

NOTE Confidence: 0.870226098181818

01:10:35.973 --> 01:10:38.625 think are the pros and cons and

NOTE Confidence: 0.870226098181818

01:10:38.625 --> 01:10:41.005 expectations for recovery as well

NOTE Confidence: 0.870226098181818

01:10:41.005 --> 01:10:43.472 as the potential morbidity that the

NOTE Confidence: 0.870226098181818

01:10:43.472 --> 01:10:44.877 patient may may not anticipate.

NOTE Confidence: 0.857703049545455

01:10:49.180 --> 01:10:51.244 So, you know, my understanding of

NOTE Confidence: 0.857703049545455

01:10:51.244 --> 01:10:53.047 the indications for carotid sacrifice

NOTE Confidence: 0.857703049545455

01:10:53.047 --> 01:10:54.882 and reconstruction are that these

NOTE Confidence: 0.857703049545455

01:10:54.882 --> 01:10:57.140 are advanced head and neck cancers,

NOTE Confidence: 0.857703049545455

01:10:57.140 --> 01:10:59.498 particularly a squamous cell cancers and

NOTE Confidence: 0.857703049545455

01:10:59.498 --> 01:11:02.360 a few others in case or or at least a

NOTE Confidence: 0.857703049545455

01:11:02.360 --> 01:11:05.156 **** and can involve the carotid artery.

NOTE Confidence: 0.857703049545455

01:11:05.160 --> 01:11:08.202 And you know, oncologists and surgical

NOTE Confidence: 0.857703049545455

01:11:08.202 --> 01:11:11.128 oncologists need to get clean margins

NOTE Confidence: 0.857703049545455

01:11:11.128 --> 01:11:14.392 in order to be able to consider the.

NOTE Confidence: 0.857703049545455

01:11:14.400 --> 01:11:15.460 Resection successful,

NOTE Confidence: 0.857703049545455

01:11:15.460 --> 01:11:19.170 so peeling or shaving off the artery

NOTE Confidence: 0.857703049545455

01:11:19.170 --> 01:11:21.259 certainly I think is is done,

NOTE Confidence: 0.857703049545455

01:11:21.260 --> 01:11:23.878 but does have risk of leaving behind

NOTE Confidence: 0.857703049545455

01:11:23.878 --> 01:11:25.606 microscopic disease and I think

NOTE Confidence: 0.857703049545455

01:11:25.606 --> 01:11:27.496 in one series it was about 40%.

NOTE Confidence: 0.857703049545455

01:11:27.500 --> 01:11:29.859 Moreover, there is a risk of weakening

132

NOTE Confidence: 0.857703049545455

01:11:29.859 --> 01:11:32.173 the wall of the artery which can

NOTE Confidence: 0.857703049545455

01:11:32.173 --> 01:11:35.431 lead to the much feared complication

NOTE Confidence: 0.857703049545455

01:11:35.431 --> 01:11:38.539 of carotid blowout syndrome.

NOTE Confidence: 0.857703049545455

01:11:38.540 --> 01:11:39.944 So, you know,

NOTE Confidence: 0.857703049545455

01:11:39.944 --> 01:11:42.240 and then people talk about ligation,

NOTE Confidence: 0.857703049545455

01:11:42.240 --> 01:11:44.280 but as as doctor Matuk mentioned,

NOTE Confidence: 0.857703049545455

01:11:44.280 --> 01:11:46.156 I think that really has a high

NOTE Confidence: 0.857703049545455

01:11:46.156 --> 01:11:48.229 risk of a of a stroke,

NOTE Confidence: 0.857703049545455

01:11:48.229 --> 01:11:50.767 just plain old ligation and so.

NOTE Confidence: 0.84677259875

01:11:52.840 --> 01:11:55.006 We think about doing a reconstruction

NOTE Confidence: 0.84677259875

01:11:55.006 --> 01:11:57.649 and when we think about the patients

NOTE Confidence: 0.84677259875

01:11:57.649 --> 01:11:59.899 long term survival with regards to

NOTE Confidence: 0.84677259875

01:11:59.899 --> 01:12:02.380 the completeness of that resection.

NOTE Confidence: 0.84677259875

01:12:02.380 --> 01:12:05.040 The largest series I could find was

NOTE Confidence: 0.84677259875

01:12:05.040 --> 01:12:08.840 from 2015 fifty one patients with

NOTE Confidence: 0.84677259875

01:12:08.840 --> 01:12:11.576 carotid sacrifice and reconstruction

NOTE Confidence: 0.84677259875

01:12:11.576 --> 01:12:15.097 over 17 year period for swimming,

NOTE Confidence: 0.84677259875

01:12:15.100 --> 01:12:17.560 both primary and recurrent

NOTE Confidence: 0.84677259875

01:12:17.560 --> 01:12:19.405 squamous cell cancers.

NOTE Confidence: 0.84677259875

01:12:19.410 --> 01:12:22.630 And a pretty good results I I

NOTE Confidence: 0.84677259875

01:12:22.630 --> 01:12:27.900 think only two strokes and 82%.

NOTE Confidence: 0.84677259875

01:12:27.900 --> 01:12:30.950 Two year disease free survival.

NOTE Confidence: 0.896017275833333

01:12:33.890 --> 01:12:35.330 In this meta analysis,

NOTE Confidence: 0.896017275833333

01:12:35.330 --> 01:12:38.550 the results are a little bit more sobering.

NOTE Confidence: 0.896017275833333

01:12:38.550 --> 01:12:39.912 This meta analysis,

NOTE Confidence: 0.896017275833333

01:12:39.912 --> 01:12:42.636 I believe it's from gosh believe

NOTE Confidence: 0.896017275833333

01:12:42.636 --> 01:12:46.568 the Netherlands, published in 2000.

NOTE Confidence: 0.896017275833333

01:12:46.570 --> 01:12:50.122 18 and they reviewed, you know,

NOTE Confidence: 0.896017275833333

01:12:50.122 --> 01:12:51.306 really a heterogeneous group.

NOTE Confidence: 0.896017275833333

01:12:51.310 --> 01:12:53.166 So maybe not best for a meta analysis.

NOTE Confidence: 0.896017275833333

01:12:53.170 --> 01:12:54.328 But anyway, it was a review,

NOTE Confidence: 0.896017275833333

01:12:54.330 --> 01:12:57.296 and they looked at 24 studies published over,

NOTE Confidence: 0.896017275833333

01:12:57.296 --> 01:12:58.948 you know, several decades,

NOTE Confidence: 0.896017275833333

01:12:58.950 --> 01:13:01.644 so just a total of 357 patients.

NOTE Confidence: 0.896017275833333

01:13:01.644 --> 01:13:04.703 And these included the squamous cell cancers,

NOTE Confidence: 0.896017275833333

01:13:04.710 --> 01:13:08.826 some salivary cancers and thyroid cancers.

NOTE Confidence: 0.896017275833333

01:13:08.830 --> 01:13:10.584 Low mortality,

NOTE Confidence: 0.896017275833333

01:13:10.584 --> 01:13:16.365 3.6% and permanent stroke deficits were 3.6%.

NOTE Confidence: 0.896017275833333

01:13:16.365 --> 01:13:18.940 As well, a carotid blowout,

NOTE Confidence: 0.732518912333333

01:13:20.960 --> 01:13:22.412 1.4% and carotid blowout.

NOTE Confidence: 0.732518912333333

01:13:22.412 --> 01:13:24.947 I guess for the audience here just

NOTE Confidence: 0.732518912333333

01:13:24.947 --> 01:13:27.462 that refers to a, you know, you know,

NOTE Confidence: 0.732518912333333

01:13:27.462 --> 01:13:29.152 basically where the carotid artery,

NOTE Confidence: 0.732518912333333

01:13:29.160 --> 01:13:31.211 the wall is so weak that it

NOTE Confidence: 0.732518912333333

01:13:31.211 --> 01:13:32.660 begins bleeding and patient,

NOTE Confidence: 0.732518912333333

01:13:32.660 --> 01:13:34.680 you know, begins exsanguinating,

NOTE Confidence: 0.732518912333333

01:13:34.680 --> 01:13:38.310 which necessitates a urgent.

NOTE Confidence: 0.732518912333333

01:13:38.310 --> 01:13:41.590 A surgery, a covered stent can perhaps be

NOTE Confidence: 0.732518912333333

01:13:41.590 --> 01:13:45.426 used in that situation and in a in a pinch.

NOTE Confidence: 0.732518912333333

01:13:45.430 --> 01:13:47.586 And then they really noted that only

NOTE Confidence: 0.732518912333333

01:13:47.586 --> 01:13:49.946 in seven studies was it even mentioned

NOTE Confidence: 0.732518912333333

01:13:49.946 --> 01:13:52.004 the use of balloon occlusion testing.

NOTE Confidence: 0.732518912333333

01:13:52.010 --> 01:13:54.566 So that was really inconsistently used.

NOTE Confidence: 0.732518912333333

01:13:54.570 --> 01:13:55.350 And I really, you know,

NOTE Confidence: 0.732518912333333

01:13:55.350 --> 01:13:57.066 I really love the, the protocol

NOTE Confidence: 0.732518912333333

01:13:57.066 --> 01:13:58.500 that Doctor Matouk described here.

NOTE Confidence: 0.732518912333333

01:13:58.500 --> 01:13:59.296 That's just,

NOTE Confidence: 0.732518912333333

01:13:59.296 --> 01:14:01.684 I think it it sounds very

NOTE Confidence: 0.732518912333333

01:14:01.684 --> 01:14:03.689 comprehensive and and and elegant.

NOTE Confidence: 0.732518912333333

01:14:03.690 --> 01:14:06.510 The but the one year survival,

NOTE Confidence: 0.732518912333333

01:14:06.510 --> 01:14:07.880 you know, is pretty sobering

NOTE Confidence: 0.8755535075

01:14:10.550 --> 01:14:13.295 52.4%. It was a little better in the more

NOTE Confidence: 0.8755535075

01:14:13.295 --> 01:14:15.827 recent time period in this meta analysis.

NOTE Confidence: 0.843181245

01:14:19.900 --> 01:14:24.342 And so my old partner told me that his old

NOTE Confidence: 0.843181245

01:14:24.342 --> 01:14:26.350 mentor told him that an open blood vessel

NOTE Confidence: 0.843181245

01:14:26.403 --> 01:14:28.300 is better than a closed blood vessel.

NOTE Confidence: 0.843181245

01:14:28.300 --> 01:14:30.140 So like I carry around all these little,

NOTE Confidence: 0.843181245

01:14:30.140 --> 01:14:32.820 you know, words of wisdom from over the

NOTE Confidence: 0.843181245

01:14:32.820 --> 01:14:35.674 years and then repeat them as as need be.

NOTE Confidence: 0.843181245

01:14:35.680 --> 01:14:37.759 So this is one of the the things that

NOTE Confidence: 0.843181245

01:14:37.759 --> 01:14:39.872 stuck with me and I think, you know,

NOTE Confidence: 0.843181245

01:14:39.872 --> 01:14:42.098 that's of course not always true,

NOTE Confidence: 0.843181245

01:14:42.100 --> 01:14:44.098 but I think in this situation

NOTE Confidence: 0.843181245

01:14:44.098 --> 01:14:45.430 it probably is true.

NOTE Confidence: 0.843181245

01:14:45.430 --> 01:14:47.776 And so we think about reconstructing

NOTE Confidence: 0.843181245

01:14:47.776 --> 01:14:48.949 the carotid arteries.

NOTE Confidence: 0.843181245

01:14:48.950 --> 01:14:50.612 I mean, I don't think there's

NOTE Confidence: 0.843181245

01:14:50.612 --> 01:14:52.490 a ton of downside to doing it.

NOTE Confidence: 0.843181245

01:14:52.490 --> 01:14:55.046 You have to have good exposure,

NOTE Confidence: 0.843181245

01:14:55.050 --> 01:14:56.362 proximal and distal control.

NOTE Confidence: 0.843181245

01:14:56.362 --> 01:14:59.031 I wouldn't be a vascular surgeon if I

NOTE Confidence: 0.843181245

01:14:59.031 --> 01:15:00.963 didn't mention proximal and distal control,

NOTE Confidence: 0.843181245

01:15:00.970 --> 01:15:02.800 which refers to having clamps or

NOTE Confidence: 0.843181245

01:15:02.800 --> 01:15:04.967 control of your blood vessels so that

NOTE Confidence: 0.843181245

01:15:04.967 --> 01:15:07.025 they you don't lose control of them,

NOTE Confidence: 0.843181245

01:15:07.030 --> 01:15:09.438 so that you're able to control and

NOTE Confidence: 0.843181245

01:15:09.438 --> 01:15:12.010 manipulate both the inflow and the outflow.

NOTE Confidence: 0.843181245

01:15:12.010 --> 01:15:13.986 Coexisting atherosclerotic disease inside

NOTE Confidence: 0.843181245

01:15:13.986 --> 01:15:16.950 the carotid artery can be problematic.

NOTE Confidence: 0.843181245

01:15:16.950 --> 01:15:18.115 You certainly wouldn't want to

NOTE Confidence: 0.843181245

01:15:18.115 --> 01:15:20.064 place a clamp on a part of the

NOTE Confidence: 0.843181245

01:15:20.064 --> 01:15:21.522 blood vessel where it is diseased.

NOTE Confidence: 0.843181245

01:15:21.530 --> 01:15:22.934 And severe atherosclerotic disease

NOTE Confidence: 0.843181245

01:15:22.934 --> 01:15:25.040 would probably need to be managed

NOTE Confidence: 0.843181245

01:15:25.096 --> 01:15:27.106 a little bit differently than just

NOTE Confidence: 0.843181245

01:15:27.106 --> 01:15:28.790 a straightforward resection of the

NOTE Confidence: 0.843181245

01:15:28.790 --> 01:15:30.778 healthy part of the blood vessel that's,

NOTE Confidence: 0.843181245

01:15:30.780 --> 01:15:32.748 you know, involved with the tumor,

NOTE Confidence: 0.843181245

01:15:32.750 --> 01:15:34.190 the conduits of choice.

NOTE Confidence: 0.843181245

01:15:34.190 --> 01:15:36.554 I mentioned saphenous vein, femoral vein.

NOTE Confidence: 0.843181245

01:15:36.554 --> 01:15:40.930 I I like to use a Dacron or PTFE.

NOTE Confidence: 0.843181245

01:15:40.930 --> 01:15:43.408 This is a carotid. Clavian bypass here.

NOTE Confidence: 0.843181245

01:15:43.410 --> 01:15:46.138 We use Dacron or PTFE frequently in this

NOTE Confidence: 0.843181245

01:15:46.138 --> 01:15:49.516 sort of situation and it holds up quite well.

NOTE Confidence: 0.843181245

01:15:49.520 --> 01:15:51.816 There's a lot of evidence that shows at

NOTE Confidence: 0.843181245

01:15:51.816 --> 01:15:54.100 least for carotid subclavian bypasses,

NOTE Confidence: 0.843181245

01:15:54.100 --> 01:15:55.696 if I can extrapolate a little bit,

NOTE Confidence: 0.843181245

01:15:55.700 --> 01:15:55.969 again,

NOTE Confidence: 0.843181245

139

01:15:55.969 --> 01:15:57.852 which I think I have to given

NOTE Confidence: 0.843181245

01:15:57.852 --> 01:15:59.599 the rarity of these conditions.

NOTE Confidence: 0.843181245

01:15:59.600 --> 01:16:02.300 But we do some carotid subclavian

NOTE Confidence: 0.843181245

01:16:02.300 --> 01:16:04.647 bypasses quite frequently for things

NOTE Confidence: 0.843181245

01:16:04.647 --> 01:16:06.950 like thoracic aneurysms and dissections.

NOTE Confidence: 0.843181245

01:16:06.950 --> 01:16:10.100 And these bypasses have a very good

NOTE Confidence: 0.843181245

01:16:10.174 --> 01:16:12.510 longevity, probably because they're.

NOTE Confidence: 0.843181245

01:16:12.510 --> 01:16:14.598 Short and wide little, little bypass,

NOTE Confidence: 0.843181245

01:16:14.600 --> 01:16:16.357 which is kind of similar to what

NOTE Confidence: 0.843181245

01:16:16.357 --> 01:16:17.870 I'm talking about with carotids.

NOTE Confidence: 0.843181245

01:16:17.870 --> 01:16:18.910 If there's going to be,

NOTE Confidence: 0.843181245

01:16:18.910 --> 01:16:21.465 or if you if you can possibly

NOTE Confidence: 0.843181245

01:16:21.465 --> 01:16:22.560 anticipate oropharyngeal contamination,

NOTE Confidence: 0.843181245

01:16:22.560 --> 01:16:23.715 you would want to use a vein

NOTE Confidence: 0.843181245

01:16:23.715 --> 01:16:24.769 graft and not a prosthetic.

NOTE Confidence: 0.843181245

01:16:24.770 --> 01:16:27.410 Of course, shunting is really complex.

NOTE Confidence: 0.843181245

01:16:27.410 --> 01:16:27.786 I,

NOTE Confidence: 0.843181245

01:16:27.786 --> 01:16:29.666 I value the information from

NOTE Confidence: 0.843181245

01:16:29.666 --> 01:16:31.170 the balloon occlusion test,

NOTE Confidence: 0.843181245

01:16:31.170 --> 01:16:34.230 but there are additional considerations.

NOTE Confidence: 0.843181245

01:16:34.230 --> 01:16:36.150 Umm, it's also showing that,

NOTE Confidence: 0.843181245

01:16:36.150 --> 01:16:36.992 you know,

NOTE Confidence: 0.843181245

01:16:36.992 --> 01:16:38.676 surgeons who routinely shunt

NOTE Confidence: 0.843181245

01:16:38.676 --> 01:16:40.714 during carotid and daughter ectomy

NOTE Confidence: 0.843181245

01:16:40.714 --> 01:16:43.890 have a lower risk of shunting.

NOTE Confidence: 0.843181245

01:16:43.890 --> 01:16:45.630 Complications.

NOTE Confidence: 0.843181245

01:16:45.630 --> 01:16:48.144 And perhaps somebody who shunts selectively

NOTE Confidence: 0.843181245

01:16:48.144 --> 01:16:49.820 during a carotid endarterectomy.

NOTE Confidence: 0.843181245

01:16:49.820 --> 01:16:51.976 So there's some issues with kind of,

NOTE Confidence: 0.843181245

01:16:51.980 --> 01:16:52.904 you know, practice.

NOTE Confidence: 0.843181245

01:16:52.904 --> 01:16:54.136 I'm a routine shunter,

NOTE Confidence: 0.843181245

141

01:16:54.140 --> 01:16:56.436 but I think for something like replacing a,

NOTE Confidence: 0.843181245

01:16:56.440 --> 01:16:58.358 a segment of the common carotid artery,

NOTE Confidence: 0.843181245

01:16:58.360 --> 01:16:59.630 sometimes it can be more

NOTE Confidence: 0.843181245

01:16:59.630 --> 01:17:00.900 cumbersome to insert the shunt.

NOTE Confidence: 0.843181245

01:17:00.900 --> 01:17:02.676 You're going to use it for one anastomosis,

NOTE Confidence: 0.843181245

01:17:02.680 --> 01:17:03.635 you're going to take it

NOTE Confidence: 0.843181245

01:17:03.635 --> 01:17:04.399 out about halfway through.

NOTE Confidence: 0.843181245

01:17:04.400 --> 01:17:05.396 The other one,

NOTE Confidence: 0.843181245

01:17:05.396 --> 01:17:06.060 you know,

NOTE Confidence: 0.843181245

01:17:06.060 --> 01:17:08.535 it kind of adds a lot of time and

NOTE Confidence: 0.843181245

01:17:08.535 --> 01:17:10.319 complexity that you may or may not

NOTE Confidence: 0.774228663071429

01:17:10.320 --> 01:17:11.454 need to do.

NOTE Confidence: 0.774228663071429

01:17:11.454 --> 01:17:13.722 So the the decision for shunting

NOTE Confidence: 0.774228663071429

01:17:13.722 --> 01:17:16.028 is is really something to.

NOTE Confidence: 0.774228663071429

01:17:16.030 --> 01:17:19.618 That's really quite complex.

NOTE Confidence: 0.774228663071429

01:17:19.620 --> 01:17:21.532 Heparin is, you know,

NOTE Confidence: 0.774228663071429

01:17:21.532 --> 01:17:23.158 another staple of vascular surgery.

NOTE Confidence: 0.774228663071429

01:17:23.158 --> 01:17:24.880 And I think once you're manipulating

NOTE Confidence: 0.774228663071429

01:17:24.926 --> 01:17:26.630 those blood vessels and touching them,

NOTE Confidence: 0.774228663071429

01:17:26.630 --> 01:17:27.920 particularly if they,

NOTE Confidence: 0.774228663071429

01:17:27.920 --> 01:17:30.070 if they're healthy blood vessels,

NOTE Confidence: 0.774228663071429

01:17:30.070 --> 01:17:32.230 they can go into spasm in a healthy

NOTE Confidence: 0.774228663071429

01:17:32.230 --> 01:17:34.275 person or a younger person if

NOTE Confidence: 0.774228663071429

01:17:34.275 --> 01:17:36.075 they're not atherosclerotic and they

NOTE Confidence: 0.774228663071429

01:17:36.075 --> 01:17:38.737 can form thrombus and they're and

NOTE Confidence: 0.774228663071429

01:17:38.737 --> 01:17:40.525 they're pro thrombotic prothrombotic.

NOTE Confidence: 0.774228663071429

01:17:40.530 --> 01:17:42.110 So you know I like to give a little bit

NOTE Confidence: 0.774228663071429

01:17:42.158 --> 01:17:44.346 of Hepburn once you're kind of, you know,

NOTE Confidence: 0.774228663071429

01:17:44.346 --> 01:17:47.124 messing around with the blood vessels.

NOTE Confidence: 0.774228663071429

01:17:47.130 --> 01:17:48.408 And and these other things are,

NOTE Confidence: 0.774228663071429

01:17:48.410 --> 01:17:49.580 you know pretty standard I think,

NOTE Confidence: 0.774228663071429

01:17:49.580 --> 01:17:51.512 you know doing a muscle flap coverage

NOTE Confidence: 0.774228663071429

01:17:51.512 --> 01:17:53.397 if there's going to be not much

NOTE Confidence: 0.774228663071429

01:17:53.397 --> 01:17:54.897 tissue coverage over this area can

NOTE Confidence: 0.774228663071429

01:17:54.957 --> 01:17:56.749 really be a valuable asset as well.

NOTE Confidence: 0.774228663071429

01:17:56.750 --> 01:17:58.316 Certainly adds time to the case.

NOTE Confidence: 0.90472867

01:18:01.250 --> 01:18:03.350 So this is all about getting good

NOTE Confidence: 0.90472867

01:18:03.350 --> 01:18:05.109 exposure of the blood vessel.

NOTE Confidence: 0.90472867

01:18:05.110 --> 01:18:06.465 This is the left carotid

NOTE Confidence: 0.90472867

01:18:06.465 --> 01:18:07.762 artery here, of course.

NOTE Confidence: 0.90472867

01:18:07.762 --> 01:18:10.018 But what this demonstrates is that,

NOTE Confidence: 0.90472867

01:18:10.020 --> 01:18:11.244 you know, if you can't get

NOTE Confidence: 0.90472867

01:18:11.244 --> 01:18:12.410 proximal on the blood vessel,

NOTE Confidence: 0.90472867

01:18:12.410 --> 01:18:14.713 you can't get below where you need

NOTE Confidence: 0.90472867

01:18:14.713 --> 01:18:17.350 to get to get proximal control.

NOTE Confidence: 0.90472867

01:18:17.350 --> 01:18:20.142 You may need to have a sternotomy and

NOTE Confidence: 0.90472867

01:18:20.142 --> 01:18:22.542 call in our thoracic friends to help

NOTE Confidence: 0.90472867

01:18:22.542 --> 01:18:24.630 us out because the sternotomy right

NOTE Confidence: 0.90472867

01:18:24.688 --> 01:18:26.483 down the middle actually provides

NOTE Confidence: 0.90472867

01:18:26.483 --> 01:18:28.603 nice exposure of the carotid all

NOTE Confidence: 0.90472867

01:18:28.603 --> 01:18:30.430 the way down to the aortic arch,

NOTE Confidence: 0.90472867

01:18:30.430 --> 01:18:31.618 which is shown here.

NOTE Confidence: 0.90472867

01:18:31.618 --> 01:18:33.920 This is A and this is extrapolated

NOTE Confidence: 0.90472867

01:18:33.920 --> 01:18:36.160 from a a trauma textbook.

NOTE Confidence: 0.90472867

01:18:36.160 --> 01:18:37.093 But you know,

NOTE Confidence: 0.90472867

01:18:37.093 --> 01:18:38.648 the same principles and exposure

NOTE Confidence: 0.90472867

01:18:38.648 --> 01:18:40.460 apply to all of these things.

NOTE Confidence: 0.90472867

01:18:40.460 --> 01:18:42.116 Distal exposure, you know,

NOTE Confidence: 0.90472867

01:18:42.116 --> 01:18:44.600 that's something I would rely upon,

NOTE Confidence: 0.90472867

01:18:44.600 --> 01:18:45.890 my skull based.

NOTE Confidence: 0.90472867

01:18:45.890 --> 01:18:48.040 Surgeons to help out with.

NOTE Confidence: 0.91271046

01:18:50.540 --> 01:18:53.260 So I think this is my last slide.

NOTE Confidence: 0.91271046

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01:18:53.260 --> 01:18:55.717 This is a case with Doctor Mera,

NOTE Confidence: 0.91271046

01:18:55.720 --> 01:18:59.062 gentleman who had a recurrent recurrent

NOTE Confidence: 0.91271046

01:18:59.062 --> 01:19:01.825 squamous cell carcinoma with the

NOTE Confidence: 0.91271046

01:19:01.825 --> 01:19:04.723 tumor budding the carotid Umm and

NOTE Confidence: 0.91271046

01:19:04.723 --> 01:19:07.938 we resected the carotid artery.

NOTE Confidence: 0.91271046

01:19:07.940 --> 01:19:10.887 And then Doctor Merrick resected all the

NOTE Confidence: 0.91271046

01:19:10.887 --> 01:19:13.878 other stuff and and got clear margins,

NOTE Confidence: 0.91271046

01:19:13.880 --> 01:19:15.878 which is a great. You know,

NOTE Confidence: 0.91271046

01:19:15.880 --> 01:19:17.440 this involves some cranial nerves.

NOTE Confidence: 0.91271046

01:19:17.440 --> 01:19:20.905 He did have some dysphasia that resolved.

NOTE Confidence: 0.91271046

01:19:20.910 --> 01:19:23.260 Fortunately, after about a month

NOTE Confidence: 0.91271046

01:19:23.260 --> 01:19:25.610 and just just showing that.

NOTE Confidence: 0.91271046

01:19:25.610 --> 01:19:27.157 You know, everything we do is humbling.

NOTE Confidence: 0.91271046

01:19:27.160 --> 01:19:29.025 This gentleman's desire was to

NOTE Confidence: 0.91271046

01:19:29.025 --> 01:19:31.110 get to his daughter's wedding and

NOTE Confidence: 0.91271046

01:19:31.110 --> 01:19:33.350 to live long enough to do that.

NOTE Confidence: 0.91271046

01:19:33.350 --> 01:19:35.782 And he did, and he and he lived

NOTE Confidence: 0.91271046

01:19:35.782 --> 01:19:37.768 another 14 months after this.

NOTE Confidence: 0.91271046

01:19:37.770 --> 01:19:39.310 And so I think it it just,

NOTE Confidence: 0.91271046

01:19:39.310 --> 01:19:40.294 you know,

NOTE Confidence: 0.91271046

01:19:40.294 --> 01:19:43.505 goes back to what is the patient wanted

NOTE Confidence: 0.91271046

01:19:43.505 --> 01:19:45.572 and what is their experience going

NOTE Confidence: 0.91271046

01:19:45.572 --> 01:19:48.360 to be and how humbling it is to do

NOTE Confidence: 0.91271046

01:19:48.360 --> 01:19:52.960 these big operations and and realizing that.

NOTE Confidence: 0.91271046

01:19:52.960 --> 01:19:56.236 That we can't always cure everybody.

NOTE Confidence: 0.91271046

01:19:56.240 --> 01:19:56.750 Thank you.

NOTE Confidence: 0.869256388571429

01:19:59.050 --> 01:20:00.178 Thank you, Doctor Thomas.

NOTE Confidence: 0.869256388571429

01:20:00.178 --> 01:20:02.470 And that was a really great talk

NOTE Confidence: 0.869256388571429

01:20:02.470 --> 01:20:05.010 and really I think discuss a lot,

NOTE Confidence: 0.869256388571429

01:20:05.010 --> 01:20:07.426 but a lot of the complexities involved in

NOTE Confidence: 0.869256388571429

01:20:07.426 --> 01:20:09.490 the decision making about these cases,

NOTE Confidence: 0.869256388571429

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01:20:09.490 --> 01:20:11.275 which is really probably you know the

NOTE Confidence: 0.869256388571429

01:20:11.275 --> 01:20:12.810 technical aspects what we're discussing.

NOTE Confidence: 0.869256388571429

01:20:12.810 --> 01:20:14.856 But the decision making is also

NOTE Confidence: 0.869256388571429

01:20:14.856 --> 01:20:16.565 perhaps even more challenging once

NOTE Confidence: 0.869256388571429

01:20:16.565 --> 01:20:18.275 you've done some of these two

NOTE Confidence: 0.869256388571429

01:20:18.275 --> 01:20:20.435 questions and in fact I think you

NOTE Confidence: 0.869256388571429

01:20:20.435 --> 01:20:21.990 may have actually answered these,

NOTE Confidence: 0.869256388571429

01:20:21.990 --> 01:20:24.168 but so I'm going to go through them quickly.

NOTE Confidence: 0.869256388571429

01:20:24.170 --> 01:20:27.131 One of them was about the choice

NOTE Confidence: 0.869256388571429

01:20:27.131 --> 01:20:28.910 of graft material when.

NOTE Confidence: 0.869256388571429

01:20:28.910 --> 01:20:31.022 Even if there's or if it's

NOTE Confidence: 0.869256388571429

01:20:31.022 --> 01:20:32.078 a composite resection,

NOTE Confidence: 0.869256388571429

01:20:32.080 --> 01:20:34.243 so the oral cavity or France is

NOTE Confidence: 0.869256388571429

01:20:34.243 --> 01:20:36.010 involved with a carotid artery

NOTE Confidence: 0.869256388571429

01:20:36.010 --> 01:20:38.719 sacrifice and correct me if I'm wrong,

NOTE Confidence: 0.869256388571429

01:20:38.720 --> 01:20:40.260 but I think you said you prefer

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NOTE Confidence: 0.869256388571429

01:20:40.260 --> 01:20:42.509 to use vein grafts in that case as

NOTE Confidence: 0.869256388571429

01:20:42.509 --> 01:20:43.737 opposed to synthetic materials,

NOTE Confidence: 0.869256388571429

01:20:43.740 --> 01:20:44.250 is that

NOTE Confidence: 0.704103139375

01:20:44.720 --> 01:20:45.512 correct? I definitely.

NOTE Confidence: 0.704103139375

01:20:45.512 --> 01:20:47.807 So if there's going to be oral pharyngeal

NOTE Confidence: 0.704103139375

01:20:47.807 --> 01:20:49.797 contamination or you anticipate that,

NOTE Confidence: 0.704103139375

01:20:49.800 --> 01:20:52.170 then harvesting staff and Spain from

NOTE Confidence: 0.704103139375

01:20:52.170 --> 01:20:54.240 the leg would be a good choice.

NOTE Confidence: 0.704103139375

01:20:54.240 --> 01:20:55.722 On the other hand, sometimes that

NOTE Confidence: 0.704103139375

01:20:55.722 --> 01:20:57.459 vein is a little bit too small.

NOTE Confidence: 0.704103139375

01:20:57.460 --> 01:20:58.944 It's, you know, it could be 3/4.

NOTE Confidence: 0.704103139375

01:20:58.950 --> 01:21:00.612 Millimeters, and if you're going to

NOTE Confidence: 0.704103139375

01:21:00.612 --> 01:21:02.025 replace the common carotid artery

NOTE Confidence: 0.704103139375

01:21:02.025 --> 01:21:03.555 or something a little bit larger,

NOTE Confidence: 0.704103139375

01:21:03.560 --> 01:21:04.440 or the veins too small,

NOTE Confidence: 0.704103139375

01:21:04.440 --> 01:21:05.808 it may be better.

NOTE Confidence: 0.704103139375

01:21:05.808 --> 01:21:07.176 To use femoral vein,

NOTE Confidence: 0.704103139375

01:21:07.180 --> 01:21:08.965 you can use the deep femoral vein

NOTE Confidence: 0.704103139375

01:21:08.965 --> 01:21:10.544 and they're you know some side

NOTE Confidence: 0.704103139375

01:21:10.544 --> 01:21:12.068 effects of that but but usually

NOTE Confidence: 0.704103139375

01:21:12.068 --> 01:21:13.835 we can we can work around that.

NOTE Confidence: 0.704103139375

01:21:13.840 --> 01:21:15.288 So that's another alternative.

NOTE Confidence: 0.704103139375

01:21:15.288 --> 01:21:17.540 You could also use superficial

NOTE Confidence: 0.704103139375

01:21:17.540 --> 01:21:19.250 femoral artery provided that arteries

NOTE Confidence: 0.704103139375

01:21:19.250 --> 01:21:21.659 is healthy but I would not use

NOTE Confidence: 0.704103139375

01:21:21.659 --> 01:21:23.249 a prosthetic in that situation.

NOTE Confidence: 0.784040511764706

01:21:24.100 --> 01:21:26.732 And the second question had to do with

NOTE Confidence: 0.784040511764706

01:21:26.732 --> 01:21:28.944 flap coverage afterwards which you also

NOTE Confidence: 0.784040511764706

01:21:28.944 --> 01:21:31.059 did discuss but I'll just reiterate.

NOTE Confidence: 0.784040511764706

01:21:31.059 --> 01:21:33.057 So oftentimes when we are as

NOTE Confidence: 0.784040511764706

01:21:33.057 --> 01:21:35.272 head next surgeons at the point

01:21:35.272 --> 01:21:36.724 where we're talking about.

01:21:36.730 --> 01:21:37.612 Saccharin, carotid artery.

01:21:37.612 --> 01:21:39.376 It's not just a carotid artery.

01:21:39.380 --> 01:21:41.126 It's general cloud of mastoid muscle.

01:21:41.130 --> 01:21:42.666 It's, you know, basically, you know,

01:21:42.670 --> 01:21:43.846 sometimes the skin of the neck.

01:21:43.850 --> 01:21:47.756 And so there can be a very large soft

01:21:47.756 --> 01:21:50.760 tissue defect with a prosthetic.

01:21:50.760 --> 01:21:52.496 Graft in there, some type of graft,

01:21:52.500 --> 01:21:54.156 even a venous graft in there.

01:21:54.160 --> 01:21:55.713 And so I would say, yeah,

01:21:55.713 --> 01:21:58.071 we would would routinely use flop

01:21:58.071 --> 01:22:00.380 coverage in those cases of the

01:22:00.380 --> 01:22:02.883 pectoralis muscle flap is a great option,

01:22:02.883 --> 01:22:05.564 which is a a flap first described

01:22:05.564 --> 01:22:09.146 here at Yale as well in 1979 or 1980.

NOTE Confidence: 0.784040511764706

01:22:09.146 --> 01:22:11.756 So it's it's a great.

NOTE Confidence: 0.784040511764706

01:22:11.760 --> 01:22:12.712 Yeah, I think it's,

NOTE Confidence: 0.784040511764706

01:22:12.712 --> 01:22:14.140 it's very important all work together.

NOTE Confidence: 0.784040511764706

01:22:14.140 --> 01:22:15.128 Thank you very much,

NOTE Confidence: 0.784040511764706

01:22:15.128 --> 01:22:16.116 Doctor Thompson for that.

NOTE Confidence: 0.784040511764706

01:22:16.120 --> 01:22:18.064 I think it was a great follow up to

NOTE Confidence: 0.784040511764706

01:22:18.064 --> 01:22:19.877 Doctor Matouk's talk as well and just

NOTE Confidence: 0.784040511764706

01:22:19.880 --> 01:22:21.335 emphasizes the multidisciplinary

NOTE Confidence: 0.784040511764706

01:22:21.335 --> 01:22:23.950 team required for this. All right.

NOTE Confidence: 0.784040511764706

01:22:23.950 --> 01:22:24.620 Well, great.

NOTE Confidence: 0.784040511764706

01:22:24.620 --> 01:22:27.436 So our next talk is Doctor Bhatia.

NOTE Confidence: 0.784040511764706

01:22:27.436 --> 01:22:29.896 So if you want to,

NOTE Confidence: 0.784040511764706

01:22:29.900 --> 01:22:31.000 if you have stopped sharing,

NOTE Confidence: 0.784040511764706

01:22:31.000 --> 01:22:33.080 so Doctor Bhatia and hers get hers going.

NOTE Confidence: 0.784040511764706

01:22:33.080 --> 01:22:34.343 But redefining respectability

NOTE Confidence: 0.784040511764706

01:22:34.343 --> 01:22:37.290 and head neck cancer again is the

NOTE Confidence: 0.784040511764706

01:22:37.365 --> 01:22:39.237 topic of today's discussion.

NOTE Confidence: 0.784040511764706

01:22:39.240 --> 01:22:42.528 And an important part of that is induction.

NOTE Confidence: 0.784040511764706

01:22:42.530 --> 01:22:45.098 Therapy so I'm going to stop sharing and

NOTE Confidence: 0.784040511764706

01:22:45.098 --> 01:22:47.416 have Doctor Bhatia pull up her slides.

NOTE Confidence: 0.784040511764706

01:22:47.420 --> 01:22:49.310 Doctor Bhatia is an esteemed

NOTE Confidence: 0.784040511764706

01:22:49.310 --> 01:22:51.630 medical oncologist who works at Edna

NOTE Confidence: 0.784040511764706

01:22:51.630 --> 01:22:53.455 Cancer here and associate professor

NOTE Confidence: 0.784040511764706

01:22:53.455 --> 01:22:57.070 at Yale School of Medicine.

NOTE Confidence: 0.784040511764706

01:22:57.070 --> 01:22:57.400 Thank

NOTE Confidence: 0.5733074972

01:22:57.410 --> 01:22:59.630 you. Carol. Am I hurt? OK.

NOTE Confidence: 0.868190885454545

01:23:00.850 --> 01:23:01.765 Everything's good. We see our

NOTE Confidence: 0.868190885454545

01:23:01.765 --> 01:23:02.860 slides and we can hear you.

NOTE Confidence: 0.8803823625

01:23:04.430 --> 01:23:05.483 Good evening, everyone.

NOTE Confidence: 0.8803823625

01:23:05.483 --> 01:23:07.238 Thank you for the opportunity.

NOTE Confidence: 0.8803823625

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01:23:07.240 --> 01:23:08.508 Today I'll be reviewing

NOTE Confidence: 0.8803823625

01:23:08.508 --> 01:23:09.776 the role of induction,

NOTE Confidence: 0.8803823625

01:23:09.780 --> 01:23:12.240 systemic therapy and head neck cancers.

NOTE Confidence: 0.8803823625

01:23:12.240 --> 01:23:14.718 It's a very broad and evolving topic.

NOTE Confidence: 0.8803823625

01:23:14.720 --> 01:23:16.504 So you know, keeping the time in mind,

NOTE Confidence: 0.8803823625

01:23:16.510 --> 01:23:18.050 I'm going to breathe through

NOTE Confidence: 0.8803823625

01:23:18.050 --> 01:23:19.590 some of the slides here.

NOTE Confidence: 0.8803823625

01:23:19.590 --> 01:23:21.893 So you know, as I've been it's

NOTE Confidence: 0.8803823625

01:23:21.893 --> 01:23:23.290 been discussed extensively today,

NOTE Confidence: 0.8803823625

01:23:23.290 --> 01:23:24.626 definitive local treatment with

NOTE Confidence: 0.8803823625

01:23:24.626 --> 01:23:27.005 surgery obviously forms a key part of

NOTE Confidence: 0.8803823625

01:23:27.005 --> 01:23:28.605 curative intent treatment and head,

NOTE Confidence: 0.8803823625

01:23:28.610 --> 01:23:30.895 neck cancers, but sometimes can

NOTE Confidence: 0.8803823625

01:23:30.895 --> 01:23:32.723 be associated with morbidity,

NOTE Confidence: 0.8803823625

01:23:32.730 --> 01:23:33.663 loss of function,

NOTE Confidence: 0.8803823625

01:23:33.663 --> 01:23:35.840 especially when disease is in the vicinity

NOTE Confidence: 0.8803823625

01:23:35.896 --> 01:23:37.918 of critical structures like the tongue,

NOTE Confidence: 0.8803823625

01:23:37.920 --> 01:23:38.732 the larynx,

NOTE Confidence: 0.8803823625

01:23:38.732 --> 01:23:39.950 the orbit, etcetera.

NOTE Confidence: 0.8803823625

01:23:39.950 --> 01:23:42.044 And the integration of chemo into

NOTE Confidence: 0.8803823625

01:23:42.044 --> 01:23:44.399 the treatment plan has allowed to

NOTE Confidence: 0.8803823625

01:23:44.399 --> 01:23:46.191 formulate organ sparing surgery

NOTE Confidence: 0.8803823625

01:23:46.191 --> 01:23:47.983 or even radiation treatments.

NOTE Confidence: 0.8803823625

01:23:47.990 --> 01:23:49.640 So chemo is incorporated one of

NOTE Confidence: 0.8803823625

01:23:49.640 --> 01:23:51.050 three ways in treating head,

NOTE Confidence: 0.8803823625

01:23:51.050 --> 01:23:53.525 neck cancers either as induction

NOTE Confidence: 0.8803823625

01:23:53.525 --> 01:23:54.515 or neoadjuvant,

NOTE Confidence: 0.8803823625

01:23:54.520 --> 01:23:56.608 which is given prior to definitive

NOTE Confidence: 0.8803823625

01:23:56.608 --> 01:23:58.550 surgery or radiation or concurrently

NOTE Confidence: 0.8803823625

01:23:58.550 --> 01:24:00.980 with radiation as upfront treatment

NOTE Confidence: 0.8803823625

01:24:00.980 --> 01:24:02.924 or adjacently following surgery,

NOTE Confidence: 0.8803823625

01:24:02.930 --> 01:24:05.530 usually in combination with radiation.

NOTE Confidence: 0.8803823625

01:24:05.530 --> 01:24:08.484 Today's talk will focus on the clinical

NOTE Confidence: 0.8803823625

01:24:08.484 --> 01:24:11.019 utility of induction systemic therapy.

NOTE Confidence: 0.8803823625

01:24:11.020 --> 01:24:13.036 So the first trial probably that

NOTE Confidence: 0.8803823625

01:24:13.036 --> 01:24:14.898 showed the utility of sequential

NOTE Confidence: 0.8803823625

01:24:14.898 --> 01:24:16.698 chemo followed by radiation

NOTE Confidence: 0.8803823625

01:24:16.698 --> 01:24:18.498 as a surgical alternative.

NOTE Confidence: 0.8803823625

01:24:18.500 --> 01:24:20.340 Curative treatment treat creatively

NOTE Confidence: 0.8803823625

01:24:20.340 --> 01:24:23.100 treating larynx cancers was the VA

NOTE Confidence: 0.8803823625

01:24:23.174 --> 01:24:25.262 larix trial and patients who patients

NOTE Confidence: 0.8803823625

01:24:25.262 --> 01:24:28.440 got 2 cycles of Platinum 5A few induction.

NOTE Confidence: 0.8803823625

01:24:28.440 --> 01:24:30.379 Those that had at least a 50%

NOTE Confidence: 0.8803823625

01:24:30.380 --> 01:24:32.024 response to two cycles went on

NOTE Confidence: 0.8803823625

01:24:32.024 --> 01:24:34.208 to get a third cycle and then

NOTE Confidence: 0.8803823625

01:24:34.208 --> 01:24:36.254 radiation and surgery was used as

NOTE Confidence: 0.8803823625

01:24:36.254 --> 01:24:38.172 salvage for any residual disease

NOTE Confidence: 0.8803823625

01:24:38.172 --> 01:24:40.440 for patients on the experimental arm.

NOTE Confidence: 0.8803823625

01:24:40.440 --> 01:24:42.552 And there was no difference in

NOTE Confidence: 0.8803823625

01:24:42.552 --> 01:24:44.439 overall survival between the surgical

NOTE Confidence: 0.8803823625

01:24:44.439 --> 01:24:46.499 arm and the sequential induction

NOTE Confidence: 0.8803823625

01:24:46.499 --> 01:24:48.450 chemo followed by radiation arm.

NOTE Confidence: 0.8803823625

01:24:48.450 --> 01:24:50.160 But larynx preservation was able

NOTE Confidence: 0.8803823625

01:24:50.160 --> 01:24:52.976 to be achieved in about 64% of

NOTE Confidence: 0.8803823625

01:24:52.976 --> 01:24:55.188 patients versus obviously 0%

NOTE Confidence: 0.8803823625

01:24:55.190 --> 01:24:56.990 in the salvage surgery arm.

NOTE Confidence: 0.8803823625

01:24:56.990 --> 01:24:58.560 There were differences in the

NOTE Confidence: 0.8803823625

01:24:58.560 --> 01:25:00.603 patterns of failure with less distant

NOTE Confidence: 0.8803823625

01:25:00.603 --> 01:25:02.688 metastases with patients getting chemo,

NOTE Confidence: 0.8803823625

01:25:02.690 --> 01:25:05.138 but more local regional failures in

NOTE Confidence: 0.8803823625

01:25:05.138 --> 01:25:07.638 the chemo arm and similarly in Europe.

NOTE Confidence: 0.8803823625

01:25:07.638 --> 01:25:10.508 E RTC ran a phase three trial in

NOTE Confidence: 0.8803823625

01:25:10.508 --> 01:25:12.304 patients with locally advanced

NOTE Confidence: 0.8803823625

01:25:12.304 --> 01:25:14.601 hypopharynx cancer and which until

NOTE Confidence: 0.8803823625

01:25:14.601 --> 01:25:16.746 then required surgical resection of

NOTE Confidence: 0.8803823625

01:25:16.746 --> 01:25:19.242 the larynx and patients were randomized.

NOTE Confidence: 0.8803823625

01:25:19.242 --> 01:25:21.172 Again to either induction Platinum

NOTE Confidence: 0.8803823625

01:25:21.172 --> 01:25:23.688 5 FU followed by radiation for

NOTE Confidence: 0.8803823625

01:25:23.688 --> 01:25:25.420 complete responders versus surgery

NOTE Confidence: 0.8803823625

01:25:25.420 --> 01:25:27.436 followed by radiation and patients

NOTE Confidence: 0.8803823625

01:25:27.436 --> 01:25:29.718 with a partial or no response to

NOTE Confidence: 0.8803823625

01:25:29.718 --> 01:25:31.520 induction also underwent surgery.

NOTE Confidence: 0.8803823625

01:25:31.520 --> 01:25:33.970 Only complete responders got radiation.

NOTE Confidence: 0.8803823625

01:25:33.970 --> 01:25:35.618 The endpoints were progression

NOTE Confidence: 0.8803823625

01:25:35.618 --> 01:25:37.678 free and overall survival and

NOTE Confidence: 0.8803823625

01:25:37.678 --> 01:25:39.647 survival with a functional larynx.

NOTE Confidence: 0.8803823625

01:25:39.650 --> 01:25:41.600 Complete response was seen in over

NOTE Confidence: 0.8803823625

01:25:41.600 --> 01:25:43.837 half the patients on the induction

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NOTE Confidence: 0.8803823625

01:25:43.837 --> 01:25:46.022 arm and survival larynx preservation

NOTE Confidence: 0.8803823625

01:25:46.022 --> 01:25:47.704 distant metastatic rate while

NOTE Confidence: 0.8803823625

01:25:47.704 --> 01:25:49.528 all improved on the chemo arm,

NOTE Confidence: 0.8803823625

01:25:49.530 --> 01:25:51.330 so making that a new standard of care.

NOTE Confidence: 0.8803823625

01:25:51.330 --> 01:25:53.450 In Europe as well?

NOTE Confidence: 0.8803823625

01:25:53.450 --> 01:25:56.100 Subsequently 2 phase three trials

NOTE Confidence: 0.8803823625

01:25:56.100 --> 01:25:58.712 Tax 323 which was conducted in Europe

NOTE Confidence: 0.8803823625

01:25:58.712 --> 01:26:01.295 and Tax 324 which was conducted in

NOTE Confidence: 0.8803823625

01:26:01.295 --> 01:26:04.074 the US explored adding a third agent

NOTE Confidence: 0.8803823625

01:26:04.074 --> 01:26:06.516 as an induction regimen so attack

NOTE Confidence: 0.8803823625

01:26:06.516 --> 01:26:08.957 saying to platinum and five FU.

NOTE Confidence: 0.8803823625

01:26:08.960 --> 01:26:11.138 The primary endpoint for these trials

NOTE Confidence: 0.8803823625

01:26:11.138 --> 01:26:12.840 was progression free survival for

NOTE Confidence: 0.8803823625

01:26:12.840 --> 01:26:15.526 tax 323 and overall survival for tax

NOTE Confidence: 0.827628728181818

01:26:15.530 --> 01:26:17.925 324. There were minor differences

NOTE Confidence: 0.827628728181818

01:26:17.925 --> 01:26:20.990 in doses between the two trials.

NOTE Confidence: 0.827628728181818

01:26:20.990 --> 01:26:23.015 Both progression free and overall

NOTE Confidence: 0.827628728181818

01:26:23.015 --> 01:26:25.040 survival were improved with the

NOTE Confidence: 0.827628728181818

01:26:25.103 --> 01:26:26.471 addition of taxane compared

NOTE Confidence: 0.827628728181818

01:26:26.471 --> 01:26:28.523 to Platinum 5 if you alone.

NOTE Confidence: 0.827628728181818

01:26:28.530 --> 01:26:30.354 So this became the new standard

NOTE Confidence: 0.827628728181818

01:26:30.354 --> 01:26:31.570 of care induction regimen.

NOTE Confidence: 0.827628728181818

01:26:31.570 --> 01:26:33.999 As far as possible there were more

NOTE Confidence: 0.827628728181818

01:26:33.999 --> 01:26:35.836 toxicities with the addition of

NOTE Confidence: 0.827628728181818

01:26:35.836 --> 01:26:38.008 1/3 drug which is not surprising.

NOTE Confidence: 0.827628728181818

01:26:38.010 --> 01:26:40.050 So more neutropenia is more febrile.

NOTE Confidence: 0.827628728181818

01:26:40.050 --> 01:26:42.234 Neutropenia as or hospital

NOTE Confidence: 0.827628728181818

01:26:42.234 --> 01:26:44.418 admissions for some patients.

NOTE Confidence: 0.827628728181818

01:26:44.420 --> 01:26:46.706 So this is a difficult regimen

NOTE Confidence: 0.827628728181818

01:26:46.706 --> 01:26:48.946 in general for patients who are

NOTE Confidence: 0.827628728181818

01:26:48.946 --> 01:26:51.136 frail or elderly and tax 324 like

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NOTE Confidence: 0.827628728181818

01:26:51.136 --> 01:26:52.864 I mentioned similar trial but on

NOTE Confidence: 0.827628728181818

01:26:52.864 --> 01:26:54.833 in in the United States adding

NOTE Confidence: 0.827628728181818

01:26:54.833 --> 01:26:57.281 a taxane to platinum and five a

NOTE Confidence: 0.827628728181818

01:26:57.281 --> 01:26:59.246 few again improvement in overall

NOTE Confidence: 0.827628728181818

01:26:59.246 --> 01:27:01.145 and progression free survival but

NOTE Confidence: 0.827628728181818

01:27:01.145 --> 01:27:03.095 at a cost of more toxicities.

NOTE Confidence: 0.827628728181818

01:27:03.100 --> 01:27:05.158 So these this regimen the three drug

NOTE Confidence: 0.827628728181818

01:27:05.158 --> 01:27:07.322 taxane Platinum 5 FU is in general

NOTE Confidence: 0.827628728181818

01:27:07.322 --> 01:27:08.847 pretty unsuitable for frail and

NOTE Confidence: 0.827628728181818

01:27:08.847 --> 01:27:10.848 elderly patients we have to carefully.

NOTE Confidence: 0.827628728181818

01:27:10.850 --> 01:27:12.542 Like what kind of patient can

NOTE Confidence: 0.827628728181818

01:27:12.542 --> 01:27:13.388 tolerate this treatment?

NOTE Confidence: 0.033521146

01:27:15.450 --> 01:27:21.140 Umm. See? I'm sorry. Saturday.

NOTE Confidence: 0.767965279333333

01:27:25.220 --> 01:27:26.352 OK, sorry about that.

NOTE Confidence: 0.767965279333333

01:27:26.352 --> 01:27:28.690 So now that we knew that TPF the

NOTE Confidence: 0.767965279333333

01:27:28.690 --> 01:27:30.713 taxane Platinum 5 if you the three

NOTE Confidence: 0.767965279333333

01:27:30.713 --> 01:27:32.589 drug combination was a better

NOTE Confidence: 0.767965279333333

01:27:32.589 --> 01:27:34.875 induction regimen than Platinum 5 FU.

NOTE Confidence: 0.767965279333333

01:27:34.880 --> 01:27:36.644 The GORTEX trial was a European

NOTE Confidence: 0.767965279333333

01:27:36.644 --> 01:27:38.589 trial that sought to compare the

NOTE Confidence: 0.767965279333333

01:27:38.589 --> 01:27:40.369 two regimens for their larynx

NOTE Confidence: 0.767965279333333

01:27:40.369 --> 01:27:42.344 preserving ability in patients with

NOTE Confidence: 0.767965279333333

01:27:42.344 --> 01:27:44.040 larynx and hypopharynx cancers.

NOTE Confidence: 0.767965279333333

01:27:44.040 --> 01:27:45.993 So if you remember the VA larynx

NOTE Confidence: 0.767965279333333

01:27:45.993 --> 01:27:47.470 trial compared just use platinum

NOTE Confidence: 0.767965279333333

01:27:47.470 --> 01:27:48.925 five if he was induction.

NOTE Confidence: 0.767965279333333

01:27:48.930 --> 01:27:52.763 This trial used taxane Platinum 5

NOTE Confidence: 0.767965279333333

01:27:52.763 --> 01:27:55.128 FU 220 patients were randomized.

NOTE Confidence: 0.767965279333333

01:27:55.130 --> 01:27:57.245 With larynx and hypopharynx cancers

NOTE Confidence: 0.767965279333333

01:27:57.245 --> 01:27:59.917 where surgery would require our total

NOTE Confidence: 0.767965279333333

01:27:59.917 --> 01:28:02.387 laryngectomy and responders to induction,

NOTE Confidence: 0.767965279333333

01:28:02.390 --> 01:28:05.036 chemo went on to get 70 degree of radiation

NOTE Confidence: 0.767965279333333

01:28:05.036 --> 01:28:07.548 with or without concurrent chemotherapy.

NOTE Confidence: 0.767965279333333

01:28:07.550 --> 01:28:09.656 Non responders went on to get

NOTE Confidence: 0.767965279333333

01:28:09.656 --> 01:28:11.491 salvage surgery followed by radiation

NOTE Confidence: 0.767965279333333

01:28:11.491 --> 01:28:12.967 plus or minus chemo.

NOTE Confidence: 0.767965279333333

01:28:12.970 --> 01:28:15.304 And although Cytopenias were again seen

NOTE Confidence: 0.767965279333333

01:28:15.304 --> 01:28:17.870 more frequently in the three drug arm,

NOTE Confidence: 0.767965279333333

01:28:17.870 --> 01:28:20.310 in the taxane Platinum 5 FU more patients

NOTE Confidence: 0.767965279333333

01:28:20.310 --> 01:28:22.773 were able to have objective responses

NOTE Confidence: 0.767965279333333

01:28:22.773 --> 01:28:24.565 and achieve larynx preservation.

NOTE Confidence: 0.767965279333333

01:28:24.570 --> 01:28:25.870 So this became a preferred.

NOTE Confidence: 0.767965279333333

01:28:25.870 --> 01:28:27.310 Measurement for induction even

NOTE Confidence: 0.767965279333333

01:28:27.310 --> 01:28:29.110 for these patients and although

NOTE Confidence: 0.767965279333333

01:28:29.110 --> 01:28:31.483 I won't be showing the data or

NOTE Confidence: 0.767965279333333

01:28:31.483 --> 01:28:32.787 discussing those slides here,

NOTE Confidence: 0.767965279333333

01:28:32.790 --> 01:28:35.597 but we do use induction chemo at

NOTE Confidence: 0.767965279333333

01:28:35.597 --> 01:28:37.774 our institution as an approach

NOTE Confidence: 0.767965279333333

01:28:37.774 --> 01:28:40.014 for chemo selection for T4

NOTE Confidence: 0.767965279333333

01:28:40.014 --> 01:28:42.460 larynx patients to help improve,

NOTE Confidence: 0.767965279333333

01:28:42.460 --> 01:28:44.458 to help improve patient selection for

NOTE Confidence: 0.767965279333333

01:28:44.458 --> 01:28:47.111 those that would respond to radiation and

NOTE Confidence: 0.767965279333333

01:28:47.111 --> 01:28:48.799 ultimately recover laryngeal function.

NOTE Confidence: 0.767965279333333

01:28:48.800 --> 01:28:50.410 This practice comes from the

NOTE Confidence: 0.767965279333333

01:28:50.410 --> 01:28:51.698 University of Michigan experience,

NOTE Confidence: 0.767965279333333

01:28:51.700 --> 01:28:54.577 which was able to improve the larynx

NOTE Confidence: 0.767965279333333

01:28:54.577 --> 01:28:56.579 preservation rate from 40 to 50%.

NOTE Confidence: 0.767965279333333

01:28:56.580 --> 01:28:59.130 With chemo radiation up front versus

NOTE Confidence: 0.767965279333333

01:28:59.130 --> 01:29:01.279 chemo selection followed by chemoradiation

NOTE Confidence: 0.767965279333333

01:29:01.279 --> 01:29:03.897 then it went up closer to 60%.

NOTE Confidence: 0.767965279333333

01:29:03.900 --> 01:29:06.564 Although the role of induction was

NOTE Confidence: 0.767965279333333

01:29:06.564 --> 01:29:08.340 established for organ preservation,

NOTE Confidence: 0.767965279333333

01:29:08.340 --> 01:29:10.092 what really remained unclear at this

NOTE Confidence: 0.767965279333333

01:29:10.092 --> 01:29:12.493 point was how it improved survival when

NOTE Confidence: 0.767965279333333

01:29:12.493 --> 01:29:14.453 compared to chemo radiation alone.

NOTE Confidence: 0.767965279333333

01:29:14.460 --> 01:29:16.320 And the Spanish trial attempted to

NOTE Confidence: 0.767965279333333

01:29:16.320 --> 01:29:17.964 answer this question by randomizing

NOTE Confidence: 0.767965279333333

01:29:17.964 --> 01:29:20.393 patients to one of three treatment arms.

NOTE Confidence: 0.767965279333333

01:29:20.400 --> 01:29:22.507 So they either got chemo radiation alone

NOTE Confidence: 0.767965279333333

01:29:22.507 --> 01:29:24.885 or the two drug induction followed by

NOTE Confidence: 0.767965279333333

01:29:24.885 --> 01:29:27.660 chemo radiation or the three drug induction.

NOTE Confidence: 0.767965279333333

01:29:27.660 --> 01:29:29.100 Followed by chemoradiation.

NOTE Confidence: 0.767965279333333

01:29:29.100 --> 01:29:31.500 There were no significant differences

NOTE Confidence: 0.767965279333333

01:29:31.500 --> 01:29:33.605 between progression free time to

NOTE Confidence: 0.767965279333333

01:29:33.605 --> 01:29:35.405 treatment failure or overall survival.

NOTE Confidence: 0.767965279333333

01:29:35.410 --> 01:29:36.790 Across the three arms,

NOTE Confidence: 0.767965279333333

01:29:36.790 --> 01:29:38.170 the plants have flattened,

NOTE Confidence: 0.767965279333333

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01:29:38.170 --> 01:29:40.662 doses were high and almost half the

NOTE Confidence: 0.767965279333333

01:29:40.662 --> 01:29:42.926 patients were unable to complete the

NOTE Confidence: 0.767965279333333

01:29:42.926 --> 01:29:45.551 treatment as was indicated in the protocol.

NOTE Confidence: 0.767965279333333

01:29:45.560 --> 01:29:47.600 Subsequently, there were other trials.

NOTE Confidence: 0.767965279333333

01:29:47.600 --> 01:29:49.210 I'm probably going to skip all the

NOTE Confidence: 0.767965279333333

01:29:49.210 --> 01:29:51.340 data in it, but the D side trial,

NOTE Confidence: 0.767965279333333

01:29:51.340 --> 01:29:52.960 the paradigm trial,

NOTE Confidence: 0.767965279333333

01:29:52.960 --> 01:29:55.120 and the tremplin trial,

NOTE Confidence: 0.767965279333333

01:29:55.120 --> 01:29:57.540 all of them compared induction

NOTE Confidence: 0.767965279333333

01:29:57.540 --> 01:29:59.960 chemo followed by chemo radiation

NOTE Confidence: 0.767965279333333

01:30:00.043 --> 01:30:02.239 versus chemo radiation alone.

NOTE Confidence: 0.767965279333333

01:30:02.240 --> 01:30:04.058 And although some of them were

NOTE Confidence: 0.767965279333333

01:30:04.058 --> 01:30:05.632 underpowered to detect a difference

NOTE Confidence: 0.767965279333333

01:30:05.632 --> 01:30:07.450 in the two arms because they

NOTE Confidence: 0.767965279333333

01:30:07.450 --> 01:30:09.300 didn't meet the planned accrual,

NOTE Confidence: 0.767965279333333

01:30:09.300 --> 01:30:11.911 in general there was no difference in

NOTE Confidence: 0.767965279333333

01:30:11.911 --> 01:30:13.923 survival between induction followed by

NOTE Confidence: 0.767965279333333

01:30:13.923 --> 01:30:16.413 chemo radiation versus chemo radiation alone.

NOTE Confidence: 0.767965279333333

01:30:16.420 --> 01:30:18.030 So although it's a great

NOTE Confidence: 0.767965279333333

01:30:18.030 --> 01:30:19.318 strategy for organ preservation,

NOTE Confidence: 0.767965279333333

01:30:19.320 --> 01:30:21.474 it doesn't really add meaning to

NOTE Confidence: 0.767965279333333

01:30:21.474 --> 01:30:23.327 patients where your your outcomes

NOTE Confidence: 0.767965279333333

01:30:23.327 --> 01:30:25.791 with cure are pretty high and no

NOTE Confidence: 0.767965279333333

01:30:25.791 --> 01:30:27.858 critical organ is at risk with

NOTE Confidence: 0.767965279333333

01:30:27.858 --> 01:30:29.150 chemo radiation up front.

NOTE Confidence: 0.786345469411765

01:30:32.260 --> 01:30:34.070 Subsequently, there was a meta

NOTE Confidence: 0.786345469411765

01:30:34.070 --> 01:30:36.276 analysis of TPLF in India as

NOTE Confidence: 0.786345469411765

01:30:36.276 --> 01:30:38.214 used as induction from 5 trials,

NOTE Confidence: 0.786345469411765

01:30:38.220 --> 01:30:41.250 which included about 1700 patients and

NOTE Confidence: 0.786345469411765

01:30:41.250 --> 01:30:44.924 although TPF decreased the hazard for depth

NOTE Confidence: 0.786345469411765

01:30:44.924 --> 01:30:47.544 progression free and distant disease.

NOTE Confidence: 0.786345469411765

01:30:47.550 --> 01:30:49.461 You know, in terms of how it

01:30:49.461 --> 01:30:50.630 compared to Chemoradiation alone,

01:30:50.630 --> 01:30:53.950 similar similar patterns of findings.

01:30:53.950 --> 01:30:55.670 The absolute survival benefit was

01:30:55.670 --> 01:30:58.015 very comparable to what was reported

01:30:58.015 --> 01:30:59.707 with concurrent chemoradiation,

01:30:59.710 --> 01:31:02.941 and May in fact lead to even inferior local

01:31:02.941 --> 01:31:05.788 regional control compared to CHEMORADIA-TION.

01:31:05.790 --> 01:31:07.842 There were also concerns about patients

01:31:07.842 --> 01:31:10.440 being actually able to start and complete

01:31:10.440 --> 01:31:12.004 definitive radiation following induction

01:31:12.004 --> 01:31:14.537 in the meta analysis with the TPF's,

01:31:14.537 --> 01:31:16.322 only 73% of patients were

01:31:16.322 --> 01:31:17.750 able to initiate subsequent.

01:31:17.750 --> 01:31:18.065 Party.

01:31:18.065 --> 01:31:20.270 So about 1/4 of patients cannot and

NOTE Confidence: 0.786345469411765

01:31:20.270 --> 01:31:23.069 only half of them were able to get

NOTE Confidence: 0.786345469411765

01:31:23.069 --> 01:31:24.473 the plan concurrent chemotherapy.

NOTE Confidence: 0.786345469411765

01:31:24.480 --> 01:31:26.760 Again highlighting just the need for

NOTE Confidence: 0.786345469411765

01:31:26.760 --> 01:31:28.610 careful patient selection in terms

NOTE Confidence: 0.786345469411765

01:31:28.610 --> 01:31:30.714 of who might be able to tolerate a

NOTE Confidence: 0.786345469411765

01:31:30.714 --> 01:31:32.982 long course of induction followed

NOTE Confidence: 0.786345469411765

01:31:32.982 --> 01:31:34.437 by concurrent chemoradiation.

NOTE Confidence: 0.786345469411765

01:31:34.440 --> 01:31:36.330 So given the significant tolerability

NOTE Confidence: 0.786345469411765

01:31:36.330 --> 01:31:38.530 concerns that we see with TPF,

NOTE Confidence: 0.786345469411765

01:31:38.530 --> 01:31:40.695 ECOG studied and alternative induction

NOTE Confidence: 0.786345469411765

01:31:40.695 --> 01:31:43.234 regimen of Carbo Taxol cetuximab which

NOTE Confidence: 0.786345469411765

01:31:43.234 --> 01:31:45.411 is a weekly treatment just six weeks

NOTE Confidence: 0.786345469411765

01:31:45.411 --> 01:31:48.106 and done and followed by the same regimen.

NOTE Confidence: 0.786345469411765

01:31:48.110 --> 01:31:49.160 Concurrent with radiation,

NOTE Confidence: 0.786345469411765

01:31:49.160 --> 01:31:52.040 but at lower doses of the chemo drugs.

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NOTE Confidence: 0.786345469411765

01:31:52.040 --> 01:31:53.775 And although it hasn't been

NOTE Confidence: 0.786345469411765

01:31:53.775 --> 01:31:55.163 compared head-to-head with TPF,

NOTE Confidence: 0.786345469411765

01:31:55.170 --> 01:31:57.420 which still remains the gold standard,

NOTE Confidence: 0.786345469411765

01:31:57.420 --> 01:31:59.585 the three-year overall and event

NOTE Confidence: 0.786345469411765

01:31:59.585 --> 01:32:01.750 free survival were very similar

NOTE Confidence: 0.786345469411765

01:32:01.821 --> 01:32:04.095 with this regimen compared to TPF

NOTE Confidence: 0.786345469411765

01:32:04.095 --> 01:32:06.289 and contrasting to the TPF data,

NOTE Confidence: 0.786345469411765

01:32:06.290 --> 01:32:08.712 90% of patients were actually able to

NOTE Confidence: 0.786345469411765

01:32:08.712 --> 01:32:10.360 complete subsequent chemo radiation,

NOTE Confidence: 0.786345469411765

01:32:10.360 --> 01:32:12.022 making it a very attractive option

NOTE Confidence: 0.786345469411765

01:32:12.022 --> 01:32:13.630 for elderly and frail patients.

NOTE Confidence: 0.786345469411765

01:32:13.630 --> 01:32:15.422 So we tend to use this regimen

NOTE Confidence: 0.786345469411765

01:32:15.422 --> 01:32:16.974 actually quite a bit and have

NOTE Confidence: 0.786345469411765

01:32:16.974 --> 01:32:18.426 had quite a bit of success.

NOTE Confidence: 0.786345469411765

01:32:18.430 --> 01:32:21.130 As an alternative to TPF.

NOTE Confidence: 0.786345469411765

01:32:21.130 --> 01:32:21.716 And finally,

NOTE Confidence: 0.786345469411765

01:32:21.716 --> 01:32:24.515 I'm just going to run through some of the

NOTE Confidence: 0.786345469411765

01:32:24.515 --> 01:32:26.837 other indications where we do induction

NOTE Confidence: 0.786345469411765

01:32:26.837 --> 01:32:28.830 chemotherapy with head neck cancers.

NOTE Confidence: 0.786345469411765

01:32:28.830 --> 01:32:30.828 The nasopharynx cancer is is a

NOTE Confidence: 0.786345469411765

01:32:30.828 --> 01:32:33.262 definite where we offer induction or

NOTE Confidence: 0.786345469411765

01:32:33.262 --> 01:32:35.342 adjuvant chemotherapy in addition

NOTE Confidence: 0.786345469411765

01:32:35.342 --> 01:32:36.902 to concurrent chemoradiation.

NOTE Confidence: 0.786345469411765

01:32:36.910 --> 01:32:39.678 And that data comes from this meta analysis,

NOTE Confidence: 0.786345469411765

01:32:39.680 --> 01:32:41.730 which actually showed an improvement

NOTE Confidence: 0.786345469411765

01:32:41.730 --> 01:32:44.246 in survival for both concurrent chemo

NOTE Confidence: 0.786345469411765

01:32:44.246 --> 01:32:46.436 radiation and concurrent followed by

NOTE Confidence: 0.786345469411765

01:32:46.436 --> 01:32:48.635 adjuvant chemo radiation with adjuvant

NOTE Confidence: 0.786345469411765

01:32:48.635 --> 01:32:51.119 chemo actually adding an incremental benefit.

NOTE Confidence: 0.786345469411765

01:32:51.120 --> 01:32:53.142 When compared to concurrent alone and

NOTE Confidence: 0.786345469411765

01:32:53.142 --> 01:32:55.380 in addition to this meta analysis,

NOTE Confidence: 0.786345469411765

01:32:55.380 --> 01:32:57.744 there have been multiple randomized trials

NOTE Confidence: 0.786345469411765

01:32:57.744 --> 01:32:59.320 comparing different induction regimens,

NOTE Confidence: 0.786345469411765

01:32:59.320 --> 01:33:02.405 whether it be TPDF or gemcitabine, cisplatin.

NOTE Confidence: 0.786345469411765

01:33:02.405 --> 01:33:04.780 All of these trials come

NOTE Confidence: 0.786345469411765

01:33:04.780 --> 01:33:06.680 from EBV positive patients.

NOTE Confidence: 0.786345469411765

01:33:06.680 --> 01:33:09.020 And in general, there's an improvement

NOTE Confidence: 0.786345469411765

01:33:09.020 --> 01:33:10.580 in recurrence free survival,

NOTE Confidence: 0.786345469411765

01:33:10.580 --> 01:33:11.882 failure, free survival,

NOTE Confidence: 0.786345469411765

01:33:11.882 --> 01:33:13.618 overall survival with the

NOTE Confidence: 0.786345469411765

01:33:13.618 --> 01:33:14.920 addition of chemotherapy.

NOTE Confidence: 0.786345469411765

01:33:14.920 --> 01:33:16.060 So as a community,

NOTE Confidence: 0.786345469411765

01:33:16.060 --> 01:33:17.770 we all just strongly believe that

NOTE Confidence: 0.786345469411765

01:33:17.833 --> 01:33:19.663 induction or adjuvant chemo in

NOTE Confidence: 0.786345469411765

01:33:19.663 --> 01:33:21.127 addition to concurrent chemo.

NOTE Confidence: 0.786345469411765

01:33:21.130 --> 01:33:23.090 Radiation as a survival benefit

NOTE Confidence: 0.786345469411765

01:33:23.090 --> 01:33:25.050 and nasopharynx cancers and this

NOTE Confidence: 0.786345469411765

01:33:25.118 --> 01:33:27.020 is the current standard of care

NOTE Confidence: 0.786345469411765

01:33:27.020 --> 01:33:29.292 in HPV disease induction.

NOTE Confidence: 0.786345469411765

01:33:29.292 --> 01:33:29.860 Platinum,

NOTE Confidence: 0.786345469411765

01:33:29.860 --> 01:33:31.966 taxane and cetuximab were used as

NOTE Confidence: 0.786345469411765

01:33:31.966 --> 01:33:33.777 a means to subsequently deescalate

NOTE Confidence: 0.786345469411765

01:33:33.777 --> 01:33:35.841 radiation doses to 54 Gray instead

NOTE Confidence: 0.786345469411765

01:33:35.841 --> 01:33:38.420 of 70 Gray for responders and their

NOTE Confidence: 0.786345469411765

01:33:38.420 --> 01:33:40.634 primary endpoint for this trial was

NOTE Confidence: 0.786345469411765

01:33:40.640 --> 01:33:43.310 two year progression free survival.

NOTE Confidence: 0.786345469411765

01:33:43.310 --> 01:33:45.770 70% of patients achieved primary

NOTE Confidence: 0.786345469411765

01:33:45.770 --> 01:33:48.230 site complete response and two

NOTE Confidence: 0.740191026666667

01:33:48.316 --> 01:33:50.930 year PFS and OS were 96% each for

NOTE Confidence: 0.740191026666667

01:33:50.930 --> 01:33:53.030 patients who had not high risk.

NOTE Confidence: 0.740191026666667

01:33:53.030 --> 01:33:54.230 So less than T4,

NOTE Confidence: 0.740191026666667

01:33:54.230 --> 01:33:55.730 less than bilateral neck disease,

NOTE Confidence: 0.740191026666667

01:33:55.730 --> 01:33:57.984 less than 10 pack your smoking history,

NOTE Confidence: 0.740191026666667

01:33:57.990 --> 01:33:59.538 and significantly fewer patients

NOTE Confidence: 0.740191026666667

01:33:59.538 --> 01:34:01.860 had dysphagia to solids or impaired

NOTE Confidence: 0.740191026666667

01:34:01.924 --> 01:34:04.090 nutrition at 12 months post treatment.

NOTE Confidence: 0.740191026666667

01:34:04.090 --> 01:34:06.450 So this is as a de escalation strategy

NOTE Confidence: 0.740191026666667

01:34:06.450 --> 01:34:09.167 worthy of further investigation and is being

NOTE Confidence: 0.740191026666667

01:34:09.167 --> 01:34:11.910 moved through the ECOG community right now.

NOTE Confidence: 0.740191026666667

01:34:11.910 --> 01:34:14.358 Induction chemo also is fairly well

NOTE Confidence: 0.740191026666667

01:34:14.358 --> 01:34:15.990 established and locally advanced

NOTE Confidence: 0.740191026666667

01:34:16.050 --> 01:34:17.777 paranasal sinus cancer, especially

NOTE Confidence: 0.740191026666667

01:34:17.777 --> 01:34:20.206 those that involve close to the orbit.

NOTE Confidence: 0.740191026666667

01:34:20.210 --> 01:34:21.599 And there's retrospective

NOTE Confidence: 0.740191026666667

01:34:21.599 --> 01:34:23.680 data from about 123 patients,

NOTE Confidence: 0.740191026666667

01:34:23.680 --> 01:34:27.170 most of which had T4 disease at MD Anderson.

NOTE Confidence: 0.740191026666667

01:34:27.170 --> 01:34:30.000 These patients had a 63% response rate,

NOTE Confidence: 0.740191026666667

174

01:34:30.000 --> 01:34:33.030 81% orbit preservation rate and very

NOTE Confidence: 0.740191026666667

01:34:33.030 --> 01:34:35.828 encouraging overall survival for the cohort.

NOTE Confidence: 0.740191026666667

01:34:35.830 --> 01:34:37.618 Likewise for sinonasal

NOTE Confidence: 0.740191026666667

01:34:37.618 --> 01:34:38.810 undifferentiated cancers,

NOTE Confidence: 0.740191026666667

01:34:38.810 --> 01:34:40.290 which is another very aggressive

NOTE Confidence: 0.740191026666667

01:34:40.290 --> 01:34:42.070 type of sinonasal cancers we have.

NOTE Confidence: 0.740191026666667

01:34:42.070 --> 01:34:44.260 Retrospective data that showed almost

NOTE Confidence: 0.740191026666667

01:34:44.260 --> 01:34:46.670 a 70% response rate to induction

NOTE Confidence: 0.740191026666667

01:34:46.670 --> 01:34:48.246 platinum etoposide with responders

NOTE Confidence: 0.740191026666667

01:34:48.246 --> 01:34:50.258 doing better with subsequent chemo

NOTE Confidence: 0.740191026666667

01:34:50.258 --> 01:34:51.814 radiation and non responders

NOTE Confidence: 0.740191026666667

01:34:51.814 --> 01:34:53.758 doing better with pelvic surgery.

NOTE Confidence: 0.740191026666667

01:34:53.760 --> 01:34:55.356 So it serves a dual purpose,

NOTE Confidence: 0.740191026666667

01:34:55.360 --> 01:34:57.664 one of improving outcomes and two

NOTE Confidence: 0.740191026666667

01:34:57.664 --> 01:34:59.200 of actually selecting patients

NOTE Confidence: 0.740191026666667

01:34:59.260 --> 01:35:01.738 that might do better with surgery

NOTE Confidence: 0.740191026666667

01:35:01.738 --> 01:35:02.977 afterwards versus radiation.

NOTE Confidence: 0.740191026666667

01:35:02.980 --> 01:35:03.734 And lastly,

NOTE Confidence: 0.740191026666667

01:35:03.734 --> 01:35:05.619 immunotherapy has been looked at

NOTE Confidence: 0.740191026666667

01:35:05.619 --> 01:35:07.582 recently as an induction regimen

NOTE Confidence: 0.740191026666667

01:35:07.582 --> 01:35:09.880 in patients with high risk oral

NOTE Confidence: 0.740191026666667

01:35:09.880 --> 01:35:11.739 cavity HPV negative tumors.

NOTE Confidence: 0.740191026666667

01:35:11.740 --> 01:35:13.300 This was a small prospectively.

NOTE Confidence: 0.740191026666667

01:35:13.300 --> 01:35:15.210 Treated cohort from Dana Farber,

NOTE Confidence: 0.740191026666667

01:35:15.210 --> 01:35:17.429 36 patients who got a single dose

NOTE Confidence: 0.740191026666667

01:35:17.429 --> 01:35:19.130 of Pembroke prior to surgery.

NOTE Confidence: 0.740191026666667

01:35:19.130 --> 01:35:20.810 The treatment was safe.

NOTE Confidence: 0.740191026666667

01:35:20.810 --> 01:35:23.950 You know there were no surgical delays,

NOTE Confidence: 0.740191026666667

01:35:23.950 --> 01:35:25.695 post-op radiation or chemo radiation

NOTE Confidence: 0.740191026666667

01:35:25.695 --> 01:35:28.165 were done as a standard of care

NOTE Confidence: 0.740191026666667

01:35:28.165 --> 01:35:29.825 based on pathology and adjuvant.

NOTE Confidence: 0.740191026666667

01:35:29.830 --> 01:35:32.245 Pembroke was also used in high risk

NOTE Confidence: 0.740191026666667

01:35:32.245 --> 01:35:34.007 patients with positive margins or

NOTE Confidence: 0.740191026666667

01:35:34.007 --> 01:35:36.005 extranodal extension and grade 3 or

NOTE Confidence: 0.740191026666667

01:35:36.005 --> 01:35:38.128 4 adverse events or delay of surgery

NOTE Confidence: 0.740191026666667

01:35:38.128 --> 01:35:40.874 did not occur like I said and the one

NOTE Confidence: 0.740191026666667

01:35:40.874 --> 01:35:43.320 year relapse rate for this high risk.

NOTE Confidence: 0.740191026666667

01:35:43.320 --> 01:35:44.870 Cohort was actually really good.

NOTE Confidence: 0.740191026666667

01:35:44.870 --> 01:35:46.806 It was only about 16% versus

NOTE Confidence: 0.740191026666667

01:35:46.806 --> 01:35:48.386 what we expect to see,

NOTE Confidence: 0.740191026666667

01:35:48.390 --> 01:35:50.190 which is about 30 to 40%

NOTE Confidence: 0.740191026666667

01:35:50.190 --> 01:35:53.150 in high risk patients.

NOTE Confidence: 0.740191026666667

01:35:53.150 --> 01:35:55.286 They also classified pathologic

NOTE Confidence: 0.740191026666667

01:35:55.286 --> 01:35:59.107 tumor response by grade and PTR 2

NOTE Confidence: 0.740191026666667

01:35:59.107 --> 01:36:02.263 was actually the highest degree of

NOTE Confidence: 0.740191026666667

01:36:02.263 --> 01:36:04.690 pathologic tumor response over 50%,

NOTE Confidence: 0.740191026666667

01:36:04.690 --> 01:36:06.578 which was seen in almost 1/4 of the

NOTE Confidence: 0.740191026666667

01:36:06.578 --> 01:36:08.639 patients on this trial with just that

NOTE Confidence: 0.740191026666667

01:36:08.639 --> 01:36:10.240 single dose of immunotherapy, preop.

NOTE Confidence: 0.740191026666667

01:36:10.240 --> 01:36:12.830 And another quarter of almost 1/4 of

NOTE Confidence: 0.740191026666667

01:36:12.830 --> 01:36:15.497 patients had a minor pathologic response,

NOTE Confidence: 0.740191026666667

01:36:15.500 --> 01:36:17.412 so 25 to 50%,

NOTE Confidence: 0.740191026666667

01:36:17.412 --> 01:36:19.802 which is also not insignificant.

NOTE Confidence: 0.740191026666667

01:36:19.810 --> 01:36:21.594 And then another group,

NOTE Confidence: 0.740191026666667

01:36:21.594 --> 01:36:22.486 the radiation.

NOTE Confidence: 0.740191026666667

01:36:22.490 --> 01:36:24.884 Group at Dana Farber also looked at

NOTE Confidence: 0.740191026666667

01:36:24.884 --> 01:36:27.661 an EVO versus ibinabo as induction for

NOTE Confidence: 0.740191026666667

01:36:27.661 --> 01:36:30.175 again high risk oral cavity tumors.

NOTE Confidence: 0.740191026666667

01:36:30.180 --> 01:36:32.448 Although some patients did have adverse

NOTE Confidence: 0.740191026666667

01:36:32.448 --> 01:36:35.157 events with the Nivo and IPI plus nivo,

NOTE Confidence: 0.740191026666667

01:36:35.160 --> 01:36:36.918 there were no surgical delays again.

NOTE Confidence: 0.740191026666667

01:36:36.920 --> 01:36:37.616 In addition,

NOTE Confidence: 0.740191026666667

01:36:37.616 --> 01:36:39.356 there wasn't evidence of response

NOTE Confidence: 0.740191026666667

01:36:39.356 --> 01:36:40.400 in both arms.

NOTE Confidence: 0.740191026666667

01:36:40.400 --> 01:36:42.938 Major responses over 90% were seen

NOTE Confidence: 0.740191026666667

01:36:42.938 --> 01:36:45.719 in four of these 29 patients,

NOTE Confidence: 0.740191026666667

01:36:45.720 --> 01:36:47.456 three in the Nivo plus IPI arm

NOTE Confidence: 0.740191026666667

01:36:47.456 --> 01:36:49.479 and one in the NIEVO alone arm.

NOTE Confidence: 0.740191026666667

01:36:49.480 --> 01:36:51.256 Again together these data just suggests

NOTE Confidence: 0.740191026666667

01:36:51.256 --> 01:36:53.110 that there is clinical tolerability.

NOTE Confidence: 0.740191026666667

01:36:53.110 --> 01:36:55.255 And possibly effectiveness for neoadjuvant

NOTE Confidence: 0.740191026666667

01:36:55.255 --> 01:36:57.400 immunotherapy alone in a small

NOTE Confidence: 0.845275909411765

01:36:57.462 --> 01:36:59.206 proportion of patients which

NOTE Confidence: 0.845275909411765

01:36:59.206 --> 01:37:00.514 are carefully selected.

NOTE Confidence: 0.845275909411765

01:37:00.520 --> 01:37:03.028 Finally, just to summarize the indications

NOTE Confidence: 0.845275909411765

01:37:03.028 --> 01:37:05.327 for induction chemo and head and

NOTE Confidence: 0.845275909411765

01:37:05.327 --> 01:37:07.559 neck that we tend to use at spinal,

NOTE Confidence: 0.845275909411765

01:37:07.560 --> 01:37:09.370 we broadly categorize these as

NOTE Confidence: 0.845275909411765

01:37:09.370 --> 01:37:10.818 fairly definitive for induction

NOTE Confidence: 0.845275909411765

01:37:10.818 --> 01:37:13.002 and those were induction can be

NOTE Confidence: 0.845275909411765

01:37:13.002 --> 01:37:14.414 considered at our institution.

NOTE Confidence: 0.845275909411765

01:37:14.420 --> 01:37:16.835 We almost always consider induction for T4,

NOTE Confidence: 0.845275909411765

01:37:16.840 --> 01:37:18.510 larynx and hypopharynx cancer patients

NOTE Confidence: 0.845275909411765

01:37:18.510 --> 01:37:21.382 to select out those that would be most

NOTE Confidence: 0.845275909411765

01:37:21.382 --> 01:37:22.910 appropriate for organ preservation

NOTE Confidence: 0.845275909411765

01:37:22.910 --> 01:37:24.640 without with definitive radiation.

NOTE Confidence: 0.845275909411765

01:37:24.640 --> 01:37:26.776 And we also recommended for nasopharynx,

NOTE Confidence: 0.845275909411765

01:37:26.780 --> 01:37:29.304 paranasal sinus and sinonasal

NOTE Confidence: 0.845275909411765

01:37:29.304 --> 01:37:30.566 undifferentiated cancers.

NOTE Confidence: 0.845275909411765

01:37:30.570 --> 01:37:32.886 It is worth considering induction for

NOTE Confidence: 0.845275909411765

01:37:32.886 --> 01:37:34.430 highly symptomatic patients where

NOTE Confidence: 0.845275909411765

01:37:34.492 --> 01:37:36.287 rapid tumor shrinkage is desired.

NOTE Confidence: 0.845275909411765

01:37:36.290 --> 01:37:37.451 So for instance,

NOTE Confidence: 0.845275909411765

01:37:37.451 --> 01:37:39.386 for airway protection for bleeding,

NOTE Confidence: 0.845275909411765

01:37:39.390 --> 01:37:41.430 we also consider it when we

NOTE Confidence: 0.845275909411765

01:37:41.430 --> 01:37:42.790 suspect early metastatic disease

NOTE Confidence: 0.845275909411765

01:37:42.847 --> 01:37:45.055 to assess response prior to more

NOTE Confidence: 0.845275909411765

01:37:45.055 --> 01:37:46.527 definitive surgery or radiation.

NOTE Confidence: 0.845275909411765

01:37:46.530 --> 01:37:47.224 And finally,

NOTE Confidence: 0.845275909411765

01:37:47.224 --> 01:37:49.306 immunotherapy as an induction is really

NOTE Confidence: 0.845275909411765

01:37:49.306 --> 01:37:51.009 for carefully selected patients.

NOTE Confidence: 0.845275909411765

01:37:51.010 --> 01:37:52.546 Like I said, high risk PD,

NOTE Confidence: 0.845275909411765

01:37:52.550 --> 01:37:54.812 one positive and preferably within the

NOTE Confidence: 0.845275909411765

01:37:54.812 --> 01:37:57.334 context of a clinical trial since the

NOTE Confidence: 0.845275909411765

01:37:57.334 --> 01:38:00.361 data really is very early in terms of how.

NOTE Confidence: 0.845275909411765

01:38:00.361 --> 01:38:02.885 Motions do with neoadjuvant

NOTE Confidence: 0.845275909411765

01:38:02.885 --> 01:38:04.840 immunotherapy and that's all I have.

NOTE Confidence: 0.845275909411765

01:38:04.840 --> 01:38:06.346 Thank you for your attention and

NOTE Confidence: 0.845275909411765

01:38:06.346 --> 01:38:08.130 be happy to take any questions.

NOTE Confidence: 0.720665317875

01:38:10.120 --> 01:38:12.040 Thank you doctor Batcha.

NOTE Confidence: 0.720665317875

01:38:12.040 --> 01:38:13.960 That was a great,

NOTE Confidence: 0.720665317875

01:38:13.960 --> 01:38:15.640 efficient overview of induction,

NOTE Confidence: 0.720665317875

01:38:15.640 --> 01:38:18.160 chemotherapy and head and neck cancer.

NOTE Confidence: 0.720665317875

01:38:18.160 --> 01:38:19.608 There is one question.

NOTE Confidence: 0.849776535714286

01:38:22.370 --> 01:38:25.849 When? You present this option to patients,

NOTE Confidence: 0.849776535714286

01:38:25.850 --> 01:38:28.208 it seems like almost like magic.

NOTE Confidence: 0.849776535714286

01:38:28.210 --> 01:38:30.926 Oh, you can give me some medicine,

NOTE Confidence: 0.849776535714286

01:38:30.930 --> 01:38:33.282 and the surgery that the surgeon just told

NOTE Confidence: 0.849776535714286

01:38:33.282 --> 01:38:35.562 me about could be less morbid or have

NOTE Confidence: 0.849776535714286

01:38:35.562 --> 01:38:37.808 a higher chance of getting it all out.

NOTE Confidence: 0.849776535714286

01:38:37.810 --> 01:38:39.694 But when you see these patients

NOTE Confidence: 0.849776535714286

01:38:39.694 --> 01:38:40.950 and to discuss induction,

NOTE Confidence: 0.849776535714286

01:38:40.950 --> 01:38:41.844 chemotherapy, what are,

NOTE Confidence: 0.849776535714286

01:38:41.844 --> 01:38:44.708 what do you tell them are some of the risks,

NOTE Confidence: 0.849776535714286

01:38:44.710 --> 01:38:46.310 why? It's not just why,

NOTE Confidence: 0.849776535714286

01:38:46.310 --> 01:38:48.172 why we're not just doing it in

NOTE Confidence: 0.849776535714286

01:38:48.172 --> 01:38:49.570 everybody in every situation.

NOTE Confidence: 0.849776535714286

01:38:49.570 --> 01:38:50.466 Well, how do you,

NOTE Confidence: 0.849776535714286

01:38:50.466 --> 01:38:51.586 how do you counsel patients

NOTE Confidence: 0.849776535714286

01:38:51.586 --> 01:38:52.560 about the use of this?

NOTE Confidence: 0.824339286666667

01:38:53.870 --> 01:38:56.330 I'm pretty upfront about what the

NOTE Confidence: 0.824339286666667

01:38:56.330 --> 01:38:58.436 odds of response, what the odds of

NOTE Confidence: 0.824339286666667

01:38:58.436 --> 01:38:59.750 tumor progression are going to be.

NOTE Confidence: 0.824339286666667

01:38:59.750 --> 01:39:01.532 So across the board we see

NOTE Confidence: 0.824339286666667

01:39:01.532 --> 01:39:03.776 about 70 to 80% of patients in

NOTE Confidence: 0.824339286666667

01:39:03.776 --> 01:39:05.184 general responding to inductions.

NOTE Confidence: 0.824339286666667

01:39:05.190 --> 01:39:08.106 So the odds are high but it's not 100%.

NOTE Confidence: 0.824339286666667

01:39:08.110 --> 01:39:10.270 So that's what I clarify right at the get go.

NOTE Confidence: 0.824339286666667

01:39:10.270 --> 01:39:12.819 There is a 20 to 30% risk that the

NOTE Confidence: 0.824339286666667

01:39:12.819 --> 01:39:14.877 disease might either not shrink or

183

NOTE Confidence: 0.824339286666667

01:39:14.877 --> 01:39:16.637 actually progress with induction and

NOTE Confidence: 0.824339286666667

01:39:16.637 --> 01:39:19.150 that may risk surgery in the future.

NOTE Confidence: 0.824339286666667

01:39:19.150 --> 01:39:20.893 So you know where surgery is an

NOTE Confidence: 0.824339286666667

01:39:20.893 --> 01:39:22.614 option now and we're trying to

NOTE Confidence: 0.824339286666667

01:39:22.614 --> 01:39:24.139 shrink it to preserve organs.

NOTE Confidence: 0.824339286666667

01:39:24.140 --> 01:39:26.415 We may lose that window for surgery.

NOTE Confidence: 0.824339286666667

01:39:26.420 --> 01:39:27.782 Now we of course do try

NOTE Confidence: 0.824339286666667

01:39:27.782 --> 01:39:28.690 to minimize that risk.

NOTE Confidence: 0.824339286666667

01:39:28.690 --> 01:39:29.252 You know,

NOTE Confidence: 0.824339286666667

01:39:29.252 --> 01:39:30.657 we're clinically following them closely.

NOTE Confidence: 0.824339286666667

01:39:30.660 --> 01:39:33.040 If I have any doubts about progression,

NOTE Confidence: 0.824339286666667

01:39:33.040 --> 01:39:35.200 I do get scans pretty frequently.

NOTE Confidence: 0.824339286666667

01:39:35.200 --> 01:39:37.232 So we do scans like almost every three

NOTE Confidence: 0.824339286666667

01:39:37.232 --> 01:39:39.692 to four weeks with induction if we have

NOTE Confidence: 0.824339286666667

01:39:39.692 --> 01:39:41.540 any doubts about a lack of response.

NOTE Confidence: 0.824339286666667

01:39:41.540 --> 01:39:44.060 But that is something I counsel

NOTE Confidence: 0.824339286666667

01:39:44.060 --> 01:39:45.740 patients on pretty extensively.

NOTE Confidence: 0.824339286666667

01:39:45.740 --> 01:39:47.696 You know, they're obviously for those

NOTE Confidence: 0.824339286666667

01:39:47.696 --> 01:39:49.960 that are standing to lose an eye now,

NOTE Confidence: 0.824339286666667

01:39:49.960 --> 01:39:50.494 you know,

NOTE Confidence: 0.824339286666667

01:39:50.494 --> 01:39:52.096 hopefully that if it doesn't shrink,

NOTE Confidence: 0.824339286666667

01:39:52.100 --> 01:39:53.535 they still stand to lose an eye.

NOTE Confidence: 0.824339286666667

01:39:53.540 --> 01:39:54.540 So a lot of them.

NOTE Confidence: 0.824339286666667

01:39:54.540 --> 01:39:56.515 Will actually agree to induction

NOTE Confidence: 0.824339286666667

01:39:56.515 --> 01:39:59.396 if they have that little chance of

NOTE Confidence: 0.824339286666667

01:39:59.396 --> 01:40:02.308 preserving the eye or preserving the larynx.

NOTE Confidence: 0.824339286666667

01:40:02.310 --> 01:40:03.147 But, you know,

NOTE Confidence: 0.824339286666667

01:40:03.147 --> 01:40:05.380 I I'm pretty forthright about what I say,

NOTE Confidence: 0.824339286666667

01:40:05.380 --> 01:40:07.060 and I do tell them that, you know,

NOTE Confidence: 0.824339286666667

01:40:07.060 --> 01:40:08.542 some of them will tell me afterwards, oh,

NOTE Confidence: 0.824339286666667

01:40:08.542 --> 01:40:10.096 we've responded so nicely to an induction.

NOTE Confidence: 0.824339286666667

01:40:10.100 --> 01:40:11.300 Do we even need the surgery?

NOTE Confidence: 0.824339286666667

01:40:11.300 --> 01:40:11.548 So,

NOTE Confidence: 0.824339286666667

01:40:11.548 --> 01:40:12.044 you know,

NOTE Confidence: 0.824339286666667

01:40:12.044 --> 01:40:13.780 I'm clear about induction is as a

NOTE Confidence: 0.824339286666667

01:40:13.836 --> 01:40:16.158 means to get to surgery or get to radiation.

NOTE Confidence: 0.824339286666667

01:40:16.160 --> 01:40:18.566 It's not going to replace eventually

NOTE Confidence: 0.824339286666667

01:40:18.566 --> 01:40:20.170 needing that surgery anyway.

NOTE Confidence: 0.82624432

01:40:22.440 --> 01:40:23.391 That's really great.

NOTE Confidence: 0.82624432

01:40:23.391 --> 01:40:25.610 Thank you for clarifying that you want

NOTE Confidence: 0.82624432

01:40:25.665 --> 01:40:27.597 to stop sharing and share my screen.

NOTE Confidence: 0.82624432

01:40:27.600 --> 01:40:30.468 So I think this that what you just presented,

NOTE Confidence: 0.82624432

01:40:30.470 --> 01:40:33.251 Dr Bhatti is just a great example of the

NOTE Confidence: 0.82624432

01:40:33.251 --> 01:40:35.338 need for multidisciplinary management

NOTE Confidence: 0.82624432

01:40:35.338 --> 01:40:38.173 of these patients and discussion.

NOTE Confidence: 0.82624432

01:40:38.180 --> 01:40:39.176 I mean, you know,

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01:40:39.176 --> 01:40:40.670 you'll take phone calls from me

NOTE Confidence: 0.82624432

01:40:40.721 --> 01:40:42.371 about patients that were considering

NOTE Confidence: 0.82624432

01:40:42.371 --> 01:40:44.380 induction and I think you're right.

NOTE Confidence: 0.82624432

01:40:44.380 --> 01:40:46.054 As a surgeon, what we want to know is,

NOTE Confidence: 0.82624432

01:40:46.060 --> 01:40:47.028 well, if he doesn't,

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01:40:47.028 --> 01:40:49.439 if this patient he or she does not respond,

NOTE Confidence: 0.82624432

01:40:49.440 --> 01:40:50.676 if it progresses,

NOTE Confidence: 0.82624432

01:40:50.676 --> 01:40:52.736 what's the worst case scenario?

NOTE Confidence: 0.82624432

01:40:52.740 --> 01:40:54.660 And as you pointed out if you know

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01:40:54.660 --> 01:40:56.270 we're already going to take their

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01:40:56.270 --> 01:40:57.890 carotid artery and it progresses a

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01:40:57.940 --> 01:40:59.710 little you know we're already prepared

NOTE Confidence: 0.82624432

01:40:59.710 --> 01:41:01.745 for that over saving and I we're

NOTE Confidence: 0.82624432

01:41:01.745 --> 01:41:04.177 going to take ways and we have some

NOTE Confidence: 0.82624432

01:41:04.177 --> 01:41:06.337 progression towards the the eye you

NOTE Confidence: 0.82624432

01:41:06.337 --> 01:41:08.867 know what do we lose by trying induction.

NOTE Confidence: 0.82624432

01:41:08.867 --> 01:41:10.312 I think those are the discussions

NOTE Confidence: 0.82624432

01:41:10.312 --> 01:41:12.435 that we have in our tumor boards and

NOTE Confidence: 0.82624432

01:41:12.435 --> 01:41:14.179 it's not always so clear cut and as

NOTE Confidence: 0.82624432

01:41:14.179 --> 01:41:16.118 you point out I think the patients

NOTE Confidence: 0.82624432

01:41:16.118 --> 01:41:17.970 need to understand the risks involved.

NOTE Confidence: 0.82624432

01:41:17.970 --> 01:41:19.670 So thank you very much.

NOTE Confidence: 0.82624432

01:41:19.670 --> 01:41:21.924 I wanted to thank all of our

NOTE Confidence: 0.82624432

01:41:21.924 --> 01:41:23.920 presenters here on talking about.

NOTE Confidence: 0.82624432

01:41:23.920 --> 01:41:26.064 Redefining Resectability and head

NOTE Confidence: 0.82624432

01:41:26.064 --> 01:41:28.500 neck cancers, as you can see,

NOTE Confidence: 0.82624432

01:41:28.500 --> 01:41:31.128 we do need to work as a team with

NOTE Confidence: 0.82624432

01:41:31.128 --> 01:41:31.932 our neurosurgery colleagues,

NOTE Confidence: 0.82624432

01:41:31.940 --> 01:41:33.764 vascular surgery colleagues and

NOTE Confidence: 0.82624432

01:41:33.764 --> 01:41:35.588 of course the multidisciplinary

NOTE Confidence: 0.82624432

01:41:35.588 --> 01:41:37.319 head neck cancer team.

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01:41:37.320 --> 01:41:39.910 So thank you to all our presenters

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01:41:39.910 --> 01:41:42.907 and I really appreciate that we are.

NOTE Confidence: 0.82624432

01:41:42.910 --> 01:41:43.794 Pretty much on time,

NOTE Confidence: 0.82624432

01:41:43.794 --> 01:41:44.678 not too far behind,

NOTE Confidence: 0.82624432

01:41:44.680 --> 01:41:46.160 so thank you all very much and thank

NOTE Confidence: 0.82624432

01:41:46.160 --> 01:41:47.836 you for the attendees for all joining.

NOTE Confidence: 0.82624432

01:41:47.840 --> 01:41:50.767 This will be posted at yalecancercenter.org

NOTE Confidence: 0.82624432

01:41:50.767 --> 01:41:53.476 and will be emailed to the many

NOTE Confidence: 0.82624432

01:41:53.476 --> 01:41:55.480 people who registered as well.

NOTE Confidence: 0.82624432

01:41:55.480 --> 01:41:57.450 Thank you so much.

NOTE Confidence: 0.82624432

01:41:57.450 --> 01:41:57.850 Thank you.

NOTE Confidence: 0.48713689

01:41:57.860 --> 01:42:00.000 So thank you. Thank you.