WEBVTT

NOTE duration:"00:56:09"

NOTE recognizability:0.781

NOTE language:en-us

NOTE Confidence: 0.929807766

00:00:00.000 --> 00:00:01.616 Thank you for coming.

NOTE Confidence: 0.929807766

00:00:01.616 --> 00:00:04.040 I'm happy introduce two speakers today.

NOTE Confidence: 0.929807766

00:00:04.040 --> 00:00:08.324 Our first speaker is Doctor Ehud Mendel.

NOTE Confidence: 0.929807766

00:00:08.330 --> 00:00:10.208 Who is executive Vice chair professor

NOTE Confidence: 0.929807766

00:00:10.208 --> 00:00:12.042 of neurosurgery here and director of

NOTE Confidence: 0.929807766

00:00:12.042 --> 00:00:13.890 the Spine and I called you program.

NOTE Confidence: 0.929807766

00:00:13.890 --> 00:00:15.852 He actually joined Yale recently in

NOTE Confidence: 0.929807766

00:00:15.852 --> 00:00:18.235 September of this year where he came

NOTE Confidence: 0.929807766

00:00:18.235 --> 00:00:20.263 from the Wechsler Wexner Medical Center,

NOTE Confidence: 0.929807766

00:00:20.270 --> 00:00:22.314 the Ohio State University,

NOTE Confidence: 0.929807766

00:00:22.314 --> 00:00:24.869 and the James Cancer Hospital.

NOTE Confidence: 0.929807766

00:00:24.870 --> 00:00:26.580 He received his medal called degree

NOTE Confidence: 0.929807766

00:00:26.580 --> 00:00:27.720 from Louisiana State University

NOTE Confidence: 0.929807766

00:00:27.771 --> 00:00:29.176 School of Medicine and further

NOTE Confidence: 0.929807766

00:00:29.176 --> 00:00:30.581 clinical training at the University

NOTE Confidence: 0.929807766

00:00:30.629 --> 00:00:32.087 of South Carolina and the University

NOTE Confidence: 0.929807766

00:00:32.087 --> 00:00:33.516 of Florida School of Medicine.

NOTE Confidence: 0.929807766

00:00:33.516 --> 00:00:36.708 And his team has pioneered new surgical

NOTE Confidence: 0.929807766

00:00:36.708 --> 00:00:39.397 techniques to reconstruct the spine

NOTE Confidence: 0.929807766

00:00:39.397 --> 00:00:42.434 following surgery to remove spinal tumors,

NOTE Confidence: 0.929807766

00:00:42.434 --> 00:00:43.862 including advancing minimally

NOTE Confidence: 0.929807766

00:00:43.862 --> 00:00:45.810 invasive neurological spinal surgery.

NOTE Confidence: 0.929807766

00:00:45.810 --> 00:00:47.790 So it's a great pleasure to welcome you to

NOTE Confidence: 0.929807766

00:00:47.790 --> 00:00:50.020 Yale and to your first grand rounds here.

NOTE Confidence: 0.814022121363636

00:00:50.510 --> 00:00:52.706 Thank you, but I appreciate the

NOTE Confidence: 0.814022121363636

00:00:52.706 --> 00:00:55.004 opportunity to give this talk and I

NOTE Confidence: 0.814022121363636

00:00:55.004 --> 00:00:57.510 want to thank all of you and Renee too,

NOTE Confidence: 0.814022121363636

00:00:57.510 --> 00:00:59.736 and make this arrangement for me.

NOTE Confidence: 0.814022121363636

00:00:59.740 --> 00:01:03.670 So I really wanted to.

NOTE Confidence: 0.814022121363636

00:01:03.670 --> 00:01:06.435 Talk about these Sid topic did it?

NOTE Confidence: 0.814022121363636

00:01:06.440 --> 00:01:09.303 I've been very passionate about over many

NOTE Confidence: 0.814022121363636

00:01:09.303 --> 00:01:12.029 years and that's the surgical management

NOTE Confidence: 0.814022121363636

00:01:12.029 --> 00:01:15.038 of patients with spine tumors. So.

NOTE Confidence: 0.814022121363636

00:01:15.038 --> 00:01:19.434 Uhm? Let's see how well this forward.

NOTE Confidence: 0.613959866666667

00:01:22.110 --> 00:01:22.800 Would you rather.

NOTE Confidence: 0.7690019

00:01:25.610 --> 00:01:26.160 Arrows.

NOTE Confidence: 0.892182161

00:01:29.950 --> 00:01:31.906 OK, so when we talk about

NOTE Confidence: 0.892182161

00:01:31.906 --> 00:01:33.210 patients with spine tumors,

NOTE Confidence: 0.892182161

00:01:33.210 --> 00:01:35.646 we're talking about two kinds of patients.

NOTE Confidence: 0.892182161

00:01:35.650 --> 00:01:38.530 Population patients with primary

NOTE Confidence: 0.892182161

00:01:38.530 --> 00:01:41.330 spine tumors means the tumor is

NOTE Confidence: 0.892182161

00:01:41.330 --> 00:01:43.030 growing directly from the bone

NOTE Confidence: 0.892182161

00:01:43.030 --> 00:01:44.899 itself within the spine itself.

NOTE Confidence: 0.892182161

00:01:44.900 --> 00:01:46.688 These are primary bone

NOTE Confidence: 0.892182161

00:01:46.688 --> 00:01:48.923 tumors coming from the spine.

NOTE Confidence: 0.892182161

00:01:48.930 --> 00:01:51.602 The most common type of tumors are patients

NOTE Confidence: 0.892182161

00:01:51.602 --> 00:01:54.553 who have ministered disease to the spine,

NOTE Confidence: 0.892182161

00:01:54.553 --> 00:01:56.308 and those are two very

NOTE Confidence: 0.892182161

00:01:56.308 --> 00:01:57.800 different patient population.

NOTE Confidence: 0.892182161

00:01:57.800 --> 00:01:59.455 The primary tumor growing from

NOTE Confidence: 0.892182161

00:01:59.455 --> 00:02:02.030 within the bone of the spine versus

NOTE Confidence: 0.892182161

00:02:02.030 --> 00:02:03.738 the metastatic spine tumors.

NOTE Confidence: 0.892182161

00:02:03.740 --> 00:02:04.984 The goal is different.

NOTE Confidence: 0.892182161

00:02:04.984 --> 00:02:06.850 The adjuvant therapy is different and

NOTE Confidence: 0.892182161

00:02:06.911 --> 00:02:08.987 the surgical options are very different.

NOTE Confidence: 0.892182161

00:02:08.990 --> 00:02:12.020 So the goal for primary tumors are really

NOTE Confidence: 0.892182161

00:02:12.020 --> 00:02:14.130 to try and cure the patient of the disease.

NOTE Confidence: 0.892182161

00:02:14.130 --> 00:02:15.838 The idea is to try and get

NOTE Confidence: 0.892182161

00:02:15.838 --> 00:02:17.170 this tumor out of there.

NOTE Confidence: 0.892182161

00:02:17.170 --> 00:02:19.270 It's the only side of disease,

NOTE Confidence: 0.892182161

00:02:19.270 --> 00:02:21.830 and the idea is to get a tumor out without

NOTE Confidence: 0.892182161

00:02:21.894 --> 00:02:24.029 interfering with the tumor capsule.

NOTE Confidence: 0.892182161

00:02:24.030 --> 00:02:26.352 So the idea is that if you take the

NOTE Confidence: 0.892182161

00:02:26.352 --> 00:02:28.764 tumor out in one piece without really

NOTE Confidence: 0.892182161

00:02:28.764 --> 00:02:30.660 breaking into the tumor itself,

NOTE Confidence: 0.892182161

00:02:30.660 --> 00:02:32.850 there is a potential of curing

NOTE Confidence: 0.892182161

00:02:32.850 --> 00:02:34.310 the patient of cancer.

NOTE Confidence: 0.892182161

00:02:34.310 --> 00:02:36.809 And sometimes, even if it's not feasible,

NOTE Confidence: 0.892182161

00:02:36.810 --> 00:02:39.020 the idea is to at least give him long term.

NOTE Confidence: 0.892182161

00:02:39.020 --> 00:02:39.361 Survival.

NOTE Confidence: 0.892182161

00:02:39.361 --> 00:02:41.066 When you're dealing with patients

NOTE Confidence: 0.892182161

00:02:41.066 --> 00:02:42.430 with menist attic disease,

NOTE Confidence: 0.892182161

00:02:42.430 --> 00:02:44.698 which is the most common issue,

NOTE Confidence: 0.892182161

00:02:44.700 --> 00:02:46.902 then you're really dealing more with

NOTE Confidence: 0.892182161

00:02:46.902 --> 00:02:48.730 palliation and quality of life.

NOTE Confidence: 0.892182161

00:02:48.730 --> 00:02:51.030 The Advent therapy is different

NOTE Confidence: 0.892182161

00:02:51.030 --> 00:02:53.330 for those two patient populations.

NOTE Confidence: 0.892182161

00:02:53.330 --> 00:02:55.346 Multiple agile in therapy,

NOTE Confidence: 0.892182161

00:02:55.346 --> 00:02:58.370 options for patient with metastatic disease.

NOTE Confidence: 0.892182161

00:02:58.370 --> 00:03:00.758 You can come in.

NOTE Confidence: 0.892182161

00:03:00.760 --> 00:03:03.856 And the primary ones, it's it's very limited.

NOTE Confidence: 0.892182161

00:03:03.860 --> 00:03:05.445 Surgical techniques are also very

NOTE Confidence: 0.892182161

00:03:05.445 --> 00:03:07.630 different to those two patient population,

NOTE Confidence: 0.892182161

00:03:07.630 --> 00:03:10.276 and I'm going to talk about both of them.

NOTE Confidence: 0.892182161

00:03:10.280 --> 00:03:11.822 I'm going to talk first about

NOTE Confidence: 0.892182161

00:03:11.822 --> 00:03:12.850 the metastatic spine tumors,

NOTE Confidence: 0.892182161

00:03:12.850 --> 00:03:14.880 because these are the most

NOTE Confidence: 0.892182161

00:03:14.880 --> 00:03:16.098 common patient population.

NOTE Confidence: 0.892182161

00:03:16.100 --> 00:03:18.636 So there is about 1.2 million new cancer

NOTE Confidence: 0.892182161

00:03:18.636 --> 00:03:20.989 cases per year in the United States.

NOTE Confidence: 0.892182161

00:03:20.990 --> 00:03:24.797 But more than half a million deaths per year.

NOTE Confidence: 0.892182161

00:03:24.800 --> 00:03:27.110 It's a major cause of death is

NOTE Confidence: 0.892182161

00:03:27.110 --> 00:03:29.420 complication due to metastatic disease,

NOTE Confidence: 0.892182161

00:03:29.420 --> 00:03:31.660 and if you look at this patient population,

NOTE Confidence: 0.892182161

00:03:31.660 --> 00:03:33.109 the skeletal system,

NOTE Confidence: 0.892182161

00:03:33.109 --> 00:03:36.007 the spine is the third most

NOTE Confidence: 0.892182161

00:03:36.010 --> 00:03:38.686 common site of disease after it

NOTE Confidence: 0.892182161

00:03:38.686 --> 00:03:41.459 spread to the lung and liver.

NOTE Confidence: 0.892182161

00:03:41.460 --> 00:03:43.819 And the spinal column is the most

NOTE Confidence: 0.892182161

00:03:43.819 --> 00:03:46.279 common sites of skeletal metastases.

NOTE Confidence: 0.892182161

00:03:46.280 --> 00:03:49.059 So third of this third patient population,

NOTE Confidence: 0.892182161

00:03:49.060 --> 00:03:49.584 the spine,

NOTE Confidence: 0.892182161

00:03:49.584 --> 00:03:51.680 is a is the most common place for

NOTE Confidence: 0.892182161

00:03:51.745 --> 00:03:53.944 it to end up with and as many as

NOTE Confidence: 0.892182161

00:03:53.944 --> 00:03:56.240 90% of cancer patients will have

NOTE Confidence: 0.892182161

00:03:56.240 --> 00:03:57.840 spinal metastases at autopsy.

NOTE Confidence: 0.892182161

00:03:57.840 --> 00:04:00.420 Studies and out of those 90%,

NOTE Confidence: 0.892182161

00:04:00.420 --> 00:04:03.206 ten to 30% of this patient cancer

NOTE Confidence: 0.892182161

00:04:03.206 --> 00:04:06.110 patient will suffer from symptoms.

NOTE Confidence: 0.892182161

00:04:06.110 --> 00:04:07.360 Symptomatic symptom,

NOTE Confidence: 0.892182161

00:04:07.360 --> 00:04:08.350 symptomatic spinal Mets,

NOTE Confidence: 0.892182161

00:04:08.350 --> 00:04:10.660 or whether they have severe pain or

NOTE Confidence: 0.892182161

00:04:10.718 --> 00:04:12.808 whether they're presenting with their.

NOTE Confidence: 0.892182161

00:04:12.810 --> 00:04:15.058 Significant or logical issues?

NOTE Confidence: 0.892182161

00:04:15.058 --> 00:04:16.744 The primary tumor,

NOTE Confidence: 0.892182161

00:04:16.750 --> 00:04:18.626 the other group that I've talked about

NOTE Confidence: 0.892182161

00:04:18.626 --> 00:04:20.409 a very different patient population.

NOTE Confidence: 0.892182161

00:04:20.410 --> 00:04:22.090 These are very unique tumors.

NOTE Confidence: 0.892182161

00:04:22.090 --> 00:04:23.370 They're growing typically from

NOTE Confidence: 0.892182161

00:04:23.370 --> 00:04:25.680 with the bone itself of the spine,

NOTE Confidence: 0.892182161

00:04:25.680 --> 00:04:27.810 and these are the osteoid osteomas,

NOTE Confidence: 0.892182161

00:04:27.810 --> 00:04:29.866 the osteoblastoma giant cell

NOTE Confidence: 0.892182161

00:04:29.866 --> 00:04:31.913 tumor aneurysm bounces, kodamas,

NOTE Confidence: 0.892182161

00:04:31.913 --> 00:04:32.416 chondrosarcoma,

NOTE Confidence: 0.892182161

00:04:32.416 --> 00:04:33.422 Ewing sarcomas,

NOTE Confidence: 0.892182161

00:04:33.422 --> 00:04:36.440 and medical ecology should deal with

NOTE Confidence: 0.750648214545454

00:04:36.513 --> 00:04:38.667 these type of patients are very

NOTE Confidence: 0.750648214545454

00:04:38.667 --> 00:04:40.830 familiar with this type of tumors.

NOTE Confidence: 0.750648214545454

00:04:40.830 --> 00:04:43.260 So when we think about surgeries

NOTE Confidence: 0.750648214545454

00:04:43.260 --> 00:04:44.880 on this patient population,

NOTE Confidence: 0.750648214545454

00:04:44.880 --> 00:04:47.256 we have to keep in mind whether this

NOTE Confidence: 0.750648214545454

00:04:47.256 --> 00:04:49.044 patient population that we're dealing with,

NOTE Confidence: 0.750648214545454

00:04:49.050 --> 00:04:50.529 especially the patient

NOTE Confidence: 0.750648214545454

00:04:50.529 --> 00:04:52.008 with metastatic disease.

NOTE Confidence: 0.750648214545454

00:04:52.010 --> 00:04:53.950 They are typically immuno compromised.

NOTE Confidence: 0.750648214545454

00:04:53.950 --> 00:04:56.742 They have decreased white blood cell count so

NOTE Confidence: 0.750648214545454

00:04:56.742 --> 00:04:59.605 they have higher risk of post op infection,

NOTE Confidence: 0.750648214545454

00:04:59.610 --> 00:05:01.210 high risk of bad infection.

NOTE Confidence: 0.750648214545454

00:05:01.210 --> 00:05:03.508 They have lack of fever response.

NOTE Confidence: 0.750648214545454

00:05:03.510 --> 00:05:05.988 They have lack of appeal cytosis.

NOTE Confidence: 0.750648214545454

00:05:05.990 --> 00:05:07.862 There are sometimes issues with these

NOTE Confidence: 0.750648214545454

00:05:07.862 --> 00:05:09.444 patients get cement injection into

NOTE Confidence: 0.750648214545454

00:05:09.444 --> 00:05:10.879 broken vertebraes those can get.

NOTE Confidence: 0.750648214545454

00:05:10.880 --> 00:05:11.604 Easily infected,

NOTE Confidence: 0.750648214545454

00:05:11.604 --> 00:05:14.500 which turns out to be a big problem.

NOTE Confidence: 0.750648214545454

00:05:14.500 --> 00:05:17.517 Their nutritional status is not that great.

NOTE Confidence: 0.750648214545454

00:05:17.520 --> 00:05:19.858 They lose a lot of weight there.

NOTE Confidence: 0.750648214545454

00:05:19.860 --> 00:05:21.520 They've increased catabolic state,

NOTE Confidence: 0.750648214545454

00:05:21.520 --> 00:05:24.479 decrease intake their serum of human is low,

NOTE Confidence: 0.750648214545454

00:05:24.480 --> 00:05:27.427 and so you have to think about

NOTE Confidence: 0.750648214545454

00:05:27.427 --> 00:05:28.690 preoperative nutritional support.

NOTE Confidence: 0.750648214545454

00:05:28.690 --> 00:05:30.986 They are typically on steroids to supplement

NOTE Confidence: 0.750648214545454

00:05:30.986 --> 00:05:33.438 some of the agents that they are on,

NOTE Confidence: 0.750648214545454

00:05:33.440 --> 00:05:35.828 which obviously leads to a multitude

NOTE Confidence: 0.750648214545454

00:05:35.828 --> 00:05:37.570 of side effects related to the

NOTE Confidence: 0.750648214545454

00:05:37.570 --> 00:05:38.910 steroids that are listed over

NOTE Confidence: 0.750648214545454

00:05:38.959 --> 00:05:40.366 here and for the sake of time.

NOTE Confidence: 0.750648214545454

00:05:40.370 --> 00:05:41.862 I'm not going to.

NOTE Confidence: 0.750648214545454

00:05:41.862 --> 00:05:43.354 And go over it.

NOTE Confidence: 0.750648214545454

00:05:43.360 --> 00:05:46.062 They are a lot of patients are

NOTE Confidence: 0.750648214545454

00:05:46.062 --> 00:05:47.725 coagulopathic with Trump cytopenia

NOTE Confidence: 0.750648214545454

00:05:47.725 --> 00:05:49.890 they may not be ambulatory,

NOTE Confidence: 0.750648214545454

00:05:49.890 --> 00:05:51.670 so they've increased for DVTS.

NOTE Confidence: 0.750648214545454

00:05:51.670 --> 00:05:53.658 So you have to think if you're

NOTE Confidence: 0.750648214545454

00:05:53.658 --> 00:05:55.286 doing surgeries on these patients

NOTE Confidence: 0.750648214545454

00:05:55.286 --> 00:05:57.799 or sometimes if you don't about DVD

NOTE Confidence: 0.750648214545454

00:05:57.799 --> 00:05:59.320 prophylaxis for these patients.

NOTE Confidence: 0.750648214545454

00:05:59.320 --> 00:06:01.105 And if you end up thinking about

NOTE Confidence: 0.750648214545454

00:06:01.105 --> 00:06:02.380 operating in these patients,

NOTE Confidence: 0.750648214545454

00:06:02.380 --> 00:06:04.820 some of these tumors are very vascular tumor,

NOTE Confidence: 0.750648214545454

00:06:04.820 --> 00:06:06.488 which means significant blood

NOTE Confidence: 0.750648214545454

00:06:06.488 --> 00:06:08.573 loss during the surgery itself.

NOTE Confidence: 0.750648214545454

00:06:08.580 --> 00:06:11.020 If you think about the primary bond tumor,

NOTE Confidence: 0.750648214545454

00:06:11.020 --> 00:06:12.568 you know the aneurysmal bone cyst,

NOTE Confidence: 0.750648214545454

00:06:12.570 --> 00:06:14.202 the giant cell tumor,

NOTE Confidence: 0.750648214545454

00:06:14.202 --> 00:06:15.834 the Himanshu Himanshu Paracetomol.

NOTE Confidence: 0.750648214545454

00:06:15.840 --> 00:06:18.480 These are known to be super vascular tumors,

NOTE Confidence: 0.750648214545454

00:06:18.480 --> 00:06:20.111 and as you get in there and

NOTE Confidence: 0.750648214545454

00:06:20.111 --> 00:06:21.359 start removing this tumor out,

NOTE Confidence: 0.750648214545454

00:06:21.360 --> 00:06:23.410 you encounter significant blood loss.

NOTE Confidence: 0.750648214545454

00:06:23.410 --> 00:06:23.948 In essence,

NOTE Confidence: 0.750648214545454

00:06:23.948 --> 00:06:26.100 any tumor that has the word him in

NOTE Confidence: 0.750648214545454

00:06:26.162 --> 00:06:28.410 it you have to worry about a very

NOTE Confidence: 0.750648214545454

00:06:28.410 --> 00:06:29.910 vascular tumor during surgery.

NOTE Confidence: 0.750648214545454

00:06:29.910 --> 00:06:31.534 And these are just the primary tumors.

NOTE Confidence: 0.750648214545454

00:06:31.540 --> 00:06:33.304 If you talk about the metastatic patients,

NOTE Confidence: 0.750648214545454

00:06:33.310 --> 00:06:34.870 the renal circle cinemas there,

NOTE Confidence: 0.750648214545454

00:06:34.870 --> 00:06:35.974 potassium, local cinema,

NOTE Confidence: 0.750648214545454

00:06:35.974 --> 00:06:36.710 the thyroid,

NOTE Confidence: 0.750648214545454

00:06:36.710 --> 00:06:39.065 the pheochromocytoma are also highly

NOTE Confidence: 0.750648214545454

00:06:39.065 --> 00:06:42.322 vascular tumors and you have to anticipate

NOTE Confidence: 0.750648214545454

00:06:42.322 --> 00:06:45.626 it as you're planning on getting these out.

NOTE Confidence: 0.750648214545454

00:06:45.630 --> 00:06:46.836 So in addition,

NOTE Confidence: 0.750648214545454

00:06:46.836 --> 00:06:49.248 and you thinking about all those

NOTE Confidence: 0.750648214545454

00:06:49.248 --> 00:06:51.708 issues on this patient population.

NOTE Confidence: 0.750648214545454

00:06:51.710 --> 00:06:54.314 Sometimes you have to think about

NOTE Confidence: 0.750648214545454

00:06:54.314 --> 00:06:56.481 wound closure and the reason is

NOTE Confidence: 0.750648214545454

00:06:56.481 --> 00:06:58.203 because sometimes the tumors is large,

NOTE Confidence: 0.750648214545454

00:06:58.210 --> 00:06:59.782 which leaves significant defects.

NOTE Confidence: 0.750648214545454

00:06:59.782 --> 00:07:02.612 Sometimes there is a risk of just

NOTE Confidence: 0.750648214545454

00:07:02.612 --> 00:07:04.642 the increase age they altered

NOTE Confidence: 0.750648214545454

00:07:04.642 --> 00:07:06.774 immune system capsia patients have

NOTE Confidence: 0.750648214545454

00:07:06.774 --> 00:07:08.550 been radiated on chemotherapy,

NOTE Confidence: 0.750648214545454

00:07:08.550 --> 00:07:11.294 so their wounds don't heal as well,

NOTE Confidence: 0.750648214545454

00:07:11.300 --> 00:07:13.760 and so they'll active won't

NOTE Confidence: 0.750648214545454

00:07:13.760 --> 00:07:16.220 breakdown or infection is higher.

NOTE Confidence: 0.750648214545454

00:07:16.220 --> 00:07:18.632 And so these are all the

NOTE Confidence: 0.750648214545454

00:07:18.632 --> 00:07:20.240 issues that gets into,

NOTE Confidence: 0.750648214545454

00:07:20.240 --> 00:07:20.840 you know,

NOTE Confidence: 0.750648214545454

00:07:20.840 --> 00:07:22.940 when do you need to start thinking

NOTE Confidence: 0.750648214545454

00:07:22.940 --> 00:07:24.743 about the wound issues when it

NOTE Confidence: 0.750648214545454

00:07:24.743 --> 00:07:26.850 comes to home closure and so plastic

NOTE Confidence: 0.750648214545454

00:07:26.918 --> 00:07:28.822 surgery becomes to be a very good

NOTE Confidence: 0.750648214545454

00:07:28.822 --> 00:07:30.835 friend of us when it comes to

NOTE Confidence: 0.750648214545454

00:07:30.835 --> 00:07:32.539 ability to close this wound and

NOTE Confidence: 0.744148268888889

00:07:32.540 --> 00:07:34.775 minimize the post op complication

NOTE Confidence: 0.744148268888889

00:07:34.775 --> 00:07:36.563 related to home closure.

NOTE Confidence: 0.744148268888889

00:07:36.570 --> 00:07:37.760 And this is just some of the

NOTE Confidence: 0.744148268888889

00:07:37.760 --> 00:07:38.480 issues we're dealing with.

NOTE Confidence: 0.744148268888889

00:07:38.480 --> 00:07:41.003 Here is a patient with sarcoma soft

NOTE Confidence: 0.744148268888889

00:07:41.003 --> 00:07:43.121 tissue tumor that invaded all the

NOTE Confidence: 0.744148268888889

00:07:43.121 --> 00:07:45.976 tissues of the spine so we can take this.

NOTE Confidence: 0.744148268888889

00:07:45.980 --> 00:07:48.437 Out, but clearly we need our plastic

NOTE Confidence: 0.744148268888889

00:07:48.437 --> 00:07:50.470 care colleagues to be able to

NOTE Confidence: 0.744148268888889

00:07:50.470 --> 00:07:52.300 deal with these types of tumors.

NOTE Confidence: 0.744148268888889

00:07:52.300 --> 00:07:53.698 And as we remove him out,

NOTE Confidence: 0.744148268888889

00:07:53.700 --> 00:07:55.916 it's not just about how to remove it,

NOTE Confidence: 0.744148268888889

00:07:55.920 --> 00:07:58.936 but planning on once the tumor is removed,

NOTE Confidence: 0.744148268888889

00:07:58.940 --> 00:08:00.536 how to be able to close it.

NOTE Confidence: 0.744148268888889

00:08:00.540 --> 00:08:04.103 So these are a lot of these cases tends

NOTE Confidence: 0.744148268888889

00:08:04.103 --> 00:08:06.018 to be multidisciplinary in nature.

NOTE Confidence: 0.744148268888889

00:08:06.020 --> 00:08:08.099 In the with the ability to remove

NOTE Confidence: 0.744148268888889

00:08:08.099 --> 00:08:10.145 the tumor and then the ability to

NOTE Confidence: 0.744148268888889

00:08:10.145 --> 00:08:12.474 do some sort of flap to be able

NOTE Confidence: 0.744148268888889

00:08:12.474 --> 00:08:13.738 to close these wounds.

NOTE Confidence: 0.744148268888889

00:08:13.740 --> 00:08:15.072 Sometimes you're dealing with

NOTE Confidence: 0.744148268888889

00:08:15.072 --> 00:08:16.404 a very large tumors.

NOTE Confidence: 0.744148268888889

00:08:16.410 --> 00:08:18.366 This is a large stake of

NOTE Confidence: 0.744148268888889

00:08:18.366 --> 00:08:19.670 Chordoma with big reconstruction.

NOTE Confidence: 0.744148268888889

00:08:19.670 --> 00:08:20.059 Again,

NOTE Confidence: 0.744148268888889

00:08:20.059 --> 00:08:22.393 gotta rely and plan on plastic

NOTE Confidence: 0.744148268888889

00:08:22.393 --> 00:08:24.579 closure to close these wounds,

NOTE Confidence: 0.744148268888889

00:08:24.580 --> 00:08:26.532 so I wanted to go over some cases

NOTE Confidence: 0.744148268888889

00:08:26.532 --> 00:08:28.337 just to kind of give you the.

NOTE Confidence: 0.744148268888889

00:08:28.340 --> 00:08:30.865 Run over the meal patient

NOTE Confidence: 0.744148268888889

00:08:30.865 --> 00:08:32.380 population that eyes,

NOTE Confidence: 0.744148268888889

00:08:32.380 --> 00:08:35.831 spine tumor person and deal with in

NOTE Confidence: 0.744148268888889

00:08:35.831 --> 00:08:38.080 a commonly and let's just take these

NOTE Confidence: 0.744148268888889

00:08:38.080 --> 00:08:39.587 cases and what's unique about the

NOTE Confidence: 0.744148268888889

00:08:39.587 --> 00:08:41.195 cases I'm going to show you is that

NOTE Confidence: 0.744148268888889

00:08:41.195 --> 00:08:42.727 they are all presenting the same,

NOTE Confidence: 0.744148268888889

00:08:42.730 --> 00:08:44.520 so these are patients are

NOTE Confidence: 0.744148268888889

00:08:44.520 --> 00:08:45.952 presenting with back pain.

NOTE Confidence: 0.744148268888889

00:08:45.960 --> 00:08:47.878 Here is a patient with multiple myeloma.

NOTE Confidence: 0.744148268888889

00:08:47.880 --> 00:08:49.260 Is 57 years old,

NOTE Confidence: 0.744148268888889

00:08:49.260 --> 00:08:52.923 has some pain in the back going to the

NOTE Confidence: 0.744148268888889

00:08:52.923 --> 00:08:55.935 legs already get maximum pain medications.

NOTE Confidence: 0.744148268888889

00:08:55.940 --> 00:08:57.734 Biopsy revealed multiple

NOTE Confidence: 0.744148268888889

00:08:57.734 --> 00:08:59.528 myeloma already underwent.

NOTE Confidence: 0.744148268888889

00:08:59.530 --> 00:09:01.845 Radiation stem stem cell transplantation

NOTE Confidence: 0.744148268888889

00:09:01.845 --> 00:09:03.697 still have progressive disease

NOTE Confidence: 0.744148268888889

00:09:03.697 --> 00:09:05.707 and is not logically intact,

NOTE Confidence: 0.744148268888889

00:09:05.710 --> 00:09:07.294 so this is very common in

NOTE Confidence: 0.744148268888889

00:09:07.294 --> 00:09:08.350 the multiple myeloma ward,

NOTE Confidence: 0.744148268888889

00:09:08.350 --> 00:09:10.065 where patients come in and they have

NOTE Confidence: 0.744148268888889

00:09:10.065 --> 00:09:11.989 back pain and you can see right here.

NOTE Confidence: 0.744148268888889

00:09:11.990 --> 00:09:13.621 Here's the MRI and you can see

NOTE Confidence: 0.744148268888889

00:09:13.621 --> 00:09:15.120 there's a fracture of the vertebrae

NOTE Confidence: 0.744148268888889

00:09:15.120 --> 00:09:16.370 in the lumbar spine here,

NOTE Confidence: 0.744148268888889

00:09:16.370 --> 00:09:18.350 so there's a broken vertebra

NOTE Confidence: 0.744148268888889

00:09:18.350 --> 00:09:20.330 related to the multiple myeloma,

NOTE Confidence: 0.744148268888889

00:09:20.330 --> 00:09:21.989 and so we get called and said,

NOTE Confidence: 0.744148268888889

00:09:21.990 --> 00:09:23.230 can you do something here?

NOTE Confidence: 0.744148268888889

00:09:23.230 --> 00:09:24.818 What can you do?

NOTE Confidence: 0.744148268888889

00:09:24.818 --> 00:09:26.406 You're the second case,

NOTE Confidence: 0.744148268888889

00:09:26.410 --> 00:09:29.610 presenting the same way, patient.

NOTE Confidence: 0.744148268888889

00:09:29.610 --> 00:09:31.074 It can't be back.

NOTE Confidence: 0.744148268888889

00:09:31.074 --> 00:09:32.904 Pain has metastatic renal cell

NOTE Confidence: 0.744148268888889

00:09:32.904 --> 00:09:34.633 carcinoma and you can see here

NOTE Confidence: 0.744148268888889

00:09:34.633 --> 00:09:36.559 the MRI kind of look the same.

NOTE Confidence: 0.744148268888889

00:09:36.560 --> 00:09:38.210 There is a metastatic lesion here.

NOTE Confidence: 0.744148268888889

00:09:38.210 --> 00:09:41.150 At L1 is a little bit of a fracture here.

NOTE Confidence: 0.744148268888889

00:09:41.150 --> 00:09:44.070 Maybe even new fracture at T 12 here,

NOTE Confidence: 0.744148268888889

00:09:44.070 --> 00:09:46.140 but the presentation is the same.

NOTE Confidence: 0.744148268888889

00:09:46.140 --> 00:09:47.910 The location of the tumor is

NOTE Confidence: 0.744148268888889

00:09:47.910 --> 00:09:49.520 in exactly the same place.

NOTE Confidence: 0.744148268888889

00:09:49.520 --> 00:09:51.760 The patient has no no logical deficit,

NOTE Confidence: 0.744148268888889

00:09:51.760 --> 00:09:52.750 just back pain.

NOTE Confidence: 0.744148268888889

00:09:52.750 --> 00:09:54.070 The only difference between

NOTE Confidence: 0.744148268888889

00:09:54.070 --> 00:09:56.346 those two cases is that the first

NOTE Confidence: 0.744148268888889

00:09:56.346 --> 00:09:57.574 case was multiple myeloma.

NOTE Confidence: 0.744148268888889

00:09:57.580 --> 00:10:00.436 The second case was a renal cell carcinoma.

NOTE Confidence: 0.744148268888889

00:10:00.440 --> 00:10:02.528 Are we going to treat it the same,

NOTE Confidence: 0.744148268888889

00:10:02.530 --> 00:10:04.985 or is the tumor biology

NOTE Confidence: 0.744148268888889

00:10:04.985 --> 00:10:06.949 dictate the treatment option?

NOTE Confidence: 0.744148268888889

00:10:06.950 --> 00:10:09.502 Here's a third case on a 52 year

NOTE Confidence: 0.744148268888889

00:10:09.502 --> 00:10:11.740 old again or logically intact.

NOTE Confidence: 0.744148268888889

00:10:11.740 --> 00:10:14.434 Just having back pain has a

NOTE Confidence: 0.744148268888889

00:10:14.434 --> 00:10:15.781 diagnosis of chondrosarcoma

NOTE Confidence: 0.744148268888889

00:10:15.781 --> 00:10:17.929 based on a CT guided biopsy,

NOTE Confidence: 0.744148268888889

00:10:17.930 --> 00:10:19.940 and you can see right here

NOTE Confidence: 0.744148268888889

00:10:19.940 --> 00:10:21.280 in other lumbar fracture.

NOTE Confidence: 0.659837787142857

00:10:21.280 --> 00:10:23.345 The first two cases were lumbar fracture.

NOTE Confidence: 0.659837787142857

00:10:23.350 --> 00:10:25.450 Multiple myeloma renal cell carcinoma.

NOTE Confidence: 0.659837787142857

00:10:25.450 --> 00:10:28.306 Here is a chondrosarcoma with a lumbar

NOTE Confidence: 0.659837787142857

00:10:28.306 --> 00:10:30.804 fracture right here at L4 representing

NOTE Confidence: 0.659837787142857

00:10:30.804 --> 00:10:33.198 exactly the same with back pain.

NOTE Confidence: 0.659837787142857

00:10:33.200 --> 00:10:35.684 So should we treat that tumor the same way?

NOTE Confidence: 0.659837787142857

00:10:35.690 --> 00:10:37.760 With reading the multiple myeloma adrenal.

NOTE Confidence: 0.659837787142857

00:10:37.760 --> 00:10:38.690 Tell casino.

NOTE Confidence: 0.659837787142857

00:10:38.690 --> 00:10:42.260 Here is a case 68 year old with thymic

NOTE Confidence: 0.659837787142857

00:10:42.260 --> 00:10:44.390 carcinoma coming in at the seed.

NOTE Confidence: 0.659837787142857

00:10:44.390 --> 00:10:46.010 Already radiation and you can

NOTE Confidence: 0.659837787142857

00:10:46.010 --> 00:10:48.209 see right here at T11 and T12.

NOTE Confidence: 0.659837787142857

00:10:48.210 --> 00:10:50.310 There's lesions right here at those

NOTE Confidence: 0.659837787142857

00:10:50.310 --> 00:10:52.566 two variables which may be a little

NOTE Confidence: 0.659837787142857

00:10:52.566 --> 00:10:54.498 bit of a fracture right here again.

NOTE Confidence: 0.659837787142857

00:10:54.498 --> 00:10:56.586 Tarako lumbar junction location is about

NOTE Confidence: 0.659837787142857

00:10:56.586 --> 00:10:59.528 the same, but the different type of cancer.

NOTE Confidence: 0.659837787142857

00:10:59.530 --> 00:11:02.701 So the question that we always asking

NOTE Confidence: 0.659837787142857

00:11:02.701 --> 00:11:05.890 ourselves all these cases require surgery,

NOTE Confidence: 0.659837787142857

00:11:05.890 --> 00:11:08.674 does their differences in the tumors or the

NOTE Confidence: 0.659837787142857

00:11:08.674 --> 00:11:11.020 tumor biology really makes a difference?

NOTE Confidence: 0.659837787142857

00:11:11.020 --> 00:11:13.372 And which approach should we take to

NOTE Confidence: 0.659837787142857

00:11:13.372 --> 00:11:16.169 treat and help these patient populations?

NOTE Confidence: 0.659837787142857

00:11:16.170 --> 00:11:18.450 And when it comes to my job as a surgeon

NOTE Confidence: 0.659837787142857

00:11:18.510 --> 00:11:20.450 dealing with these patients there,

NOTE Confidence: 0.659837787142857

00:11:20.450 --> 00:11:22.565 only these are the four options that I have.

NOTE Confidence: 0.659837787142857

00:11:22.570 --> 00:11:25.290 I can do what we call an intralesional

NOTE Confidence: 0.659837787142857

00:11:25.290 --> 00:11:27.275 resection where we enter the tumor

NOTE Confidence: 0.659837787142857

00:11:27.275 --> 00:11:29.129 with piece meal the tumor out.

NOTE Confidence: 0.659837787142857

00:11:29.130 --> 00:11:32.232 We take the tumor out in peace, mealing it.

NOTE Confidence: 0.659837787142857

00:11:32.232 --> 00:11:35.116 That's the intralesional component.

NOTE Confidence: 0.659837787142857

00:11:35.120 --> 00:11:37.379 We can do what we call an unblocker section,

NOTE Confidence: 0.659837787142857

00:11:37.380 --> 00:11:39.543 where in one piece we take the

NOTE Confidence: 0.659837787142857

00:11:39.543 --> 00:11:40.470 tumor out without.

NOTE Confidence: 0.659837787142857

00:11:40.470 --> 00:11:41.998 Interrupting the terminal capsule.

NOTE Confidence: 0.659837787142857

00:11:41.998 --> 00:11:44.820 We don't necessarily have to do surgery.

NOTE Confidence: 0.659837787142857

00:11:44.820 --> 00:11:46.640 We can do just chemotherapy,

NOTE Confidence: 0.659837787142857

00:11:46.640 --> 00:11:47.520 immunotherapy,

NOTE Confidence: 0.659837787142857

00:11:47.520 --> 00:11:49.280 conventional radiation,

NOTE Confidence: 0.659837787142857

00:11:49.280 --> 00:11:51.920 or stereotactic radiosurgery.

NOTE Confidence: 0.659837787142857

00:11:51.920 --> 00:11:53.528 Or sometimes we can just inject

NOTE Confidence: 0.659837787142857

00:11:53.528 --> 00:11:55.873 some end into the vertebrae just to

NOTE Confidence: 0.659837787142857

00:11:55.873 --> 00:11:57.497 restore some mechanical stability,

NOTE Confidence: 0.659837787142857

00:11:57.500 --> 00:11:58.996 which is minimally invasive.

NOTE Confidence: 0.659837787142857

00:11:58.996 --> 00:12:01.938 So I wanted to show you some specific

NOTE Confidence: 0.659837787142857

00:12:01.938 --> 00:12:04.304 cases because the four cases that I

NOTE Confidence: 0.659837787142857

00:12:04.304 --> 00:12:06.592 showed there are presented with the

NOTE Confidence: 0.659837787142857

00:12:06.592 --> 00:12:08.532 neurological non or logical deficit,

NOTE Confidence: 0.659837787142857

00:12:08.540 --> 00:12:12.768 which always increase the level of concern.

NOTE Confidence: 0.659837787142857

00:12:12.770 --> 00:12:15.206 But when they do have a neurological

NOTE Confidence: 0.659837787142857

00:12:15.206 --> 00:12:16.919 deficit and things becomes even

NOTE Confidence: 0.659837787142857

00:12:16.919 --> 00:12:19.343 more urgent as to what can be done,

NOTE Confidence: 0.659837787142857

00:12:19.350 --> 00:12:21.843 here is a 23 year old patient who comes

NOTE Confidence: 0.659837787142857

00:12:21.843 --> 00:12:24.709 in stood up complaining of some weakness.

NOTE Confidence: 0.659837787142857

00:12:24.710 --> 00:12:26.229 And when you look at the exam,

NOTE Confidence: 0.659837787142857

00:12:26.230 --> 00:12:27.724 the exam shows a little bit

NOTE Confidence: 0.659837787142857

00:12:27.724 --> 00:12:29.050 of weakness in her legs.

NOTE Confidence: 0.659837787142857

00:12:29.050 --> 00:12:30.568 Four out of five strength in

NOTE Confidence: 0.659837787142857

00:12:30.568 --> 00:12:31.580 both of her legs.

NOTE Confidence: 0.659837787142857

00:12:31.580 --> 00:12:34.766 And here is an MRI which showed 9 broken.

NOTE Confidence: 0.659837787142857

00:12:34.770 --> 00:12:36.945 There is severe tumor compressing

NOTE Confidence: 0.659837787142857

00:12:36.945 --> 00:12:39.670 the back of the spinal canal.

NOTE Confidence: 0.659837787142857

00:12:39.670 --> 00:12:41.320 Pressing this power code and

NOTE Confidence: 0.659837787142857

00:12:41.320 --> 00:12:43.353 unfortunately here she's in the emergency

NOTE Confidence: 0.659837787142857

00:12:43.353 --> 00:12:45.285 room and there is no diagnosis.

NOTE Confidence: 0.659837787142857

00:12:45.290 --> 00:12:48.390 We do not know what this looks like a tumor,

NOTE Confidence: 0.659837787142857

00:12:48.390 --> 00:12:50.280 but she presented the emergency room

NOTE Confidence: 0.659837787142857

00:12:50.280 --> 00:12:52.668 and this is what the MRI looks like

NOTE Confidence: 0.659837787142857

00:12:52.670 --> 00:12:54.819 and the question is what to do,

NOTE Confidence: 0.659837787142857

00:12:54.820 --> 00:12:56.368 and that's where we get called.

NOTE Confidence: 0.659837787142857

00:12:56.370 --> 00:12:56.665 Then.

NOTE Confidence: 0.659837787142857

00:12:56.665 --> 00:12:58.140 The unfortunate thing here is

NOTE Confidence: 0.659837787142857

00:12:58.140 --> 00:12:59.954 that unlike the first four cases

NOTE Confidence: 0.659837787142857

00:12:59.954 --> 00:13:01.394 where we knew the diagnosis,

NOTE Confidence: 0.659837787142857

00:13:01.400 --> 00:13:03.664 which can help us dictate what to do

NOTE Confidence: 0.659837787142857

00:13:03.670 --> 00:13:05.406 here we are faced with the situation.

NOTE Confidence: 0.659837787142857

00:13:05.410 --> 00:13:08.344 With a patient presenting with cord

NOTE Confidence: 0.659837787142857

00:13:08.344 --> 00:13:11.074 compression with mild weakness in the

NOTE Confidence: 0.659837787142857

00:13:11.074 --> 00:13:13.404 legs but no diagnosis and so here is

NOTE Confidence: 0.659837787142857

00:13:13.404 --> 00:13:15.883 some of the views you can see on the

NOTE Confidence: 0.659837787142857

00:13:15.883 --> 00:13:17.543 axial cut severe cord compression,

NOTE Confidence: 0.7114232525

00:13:17.550 --> 00:13:18.612 the podis squashed.

NOTE Confidence: 0.7114232525

00:13:18.612 --> 00:13:21.090 There's a lot of tumor around the

NOTE Confidence: 0.7114232525

00:13:21.161 --> 00:13:23.590 vertebral body and but the patient is

NOTE Confidence: 0.7114232525

00:13:23.590 --> 00:13:26.110 a very minimal weakness in her legs.

NOTE Confidence: 0.7114232525

00:13:26.110 --> 00:13:28.828 And so these patients here is the CAT scan

NOTE Confidence: 0.7114232525

00:13:28.828 --> 00:13:31.618 shows mild compression fracture at T9 and

NOTE Confidence: 0.7114232525

00:13:31.618 --> 00:13:33.930 no surgical consultation was requested.

NOTE Confidence: 0.7114232525

00:13:33.930 --> 00:13:36.194 And the question is should that each patient

NOTE Confidence: 0.7114232525

00:13:36.194 --> 00:13:38.587 be taken emergently to the operating room?

NOTE Confidence: 0.7114232525

00:13:38.590 --> 00:13:40.998 Because there is a little bit of

NOTE Confidence: 0.7114232525

00:13:40.998 --> 00:13:43.690 weakness in the legs but no diagnosis.

NOTE Confidence: 0.7114232525

00:13:43.690 --> 00:13:46.003 We don't know what it is or wait on

NOTE Confidence: 0.7114232525

00:13:46.003 --> 00:13:48.185 the surgery trying to establish a

NOTE Confidence: 0.7114232525

00:13:48.185 --> 00:13:50.435 diagnosis and based on the diagnosis

NOTE Confidence: 0.7114232525

00:13:50.435 --> 00:13:52.745 make a decision of what to do.

NOTE Confidence: 0.7114232525

00:13:52.750 --> 00:13:54.840 And so on. This case, the patient.

NOTE Confidence: 0.7114232525

00:13:54.840 --> 00:13:57.605 Make that accommodation by the nose surgeon.

NOTE Confidence: 0.7114232525

00:13:57.610 --> 00:13:59.714 On call was to take the patient to

NOTE Confidence: 0.7114232525

00:13:59.714 --> 00:14:01.388 surgery and do a decompression.

NOTE Confidence: 0.7114232525

00:14:01.390 --> 00:14:03.853 And so I Laminectomy was done and

NOTE Confidence: 0.7114232525

00:14:03.853 --> 00:14:04.768 you can see right here.

NOTE Confidence: 0.7114232525

00:14:04.770 --> 00:14:06.604 The back of the spine is removed.

NOTE Confidence: 0.7114232525

00:14:06.610 --> 00:14:08.266 The canal has been opened up.

NOTE Confidence: 0.7114232525

00:14:08.270 --> 00:14:09.758 You can see right here on

NOTE Confidence: 0.7114232525

00:14:09.758 --> 00:14:10.502 the postoperative MRI.

NOTE Confidence: 0.7114232525

00:14:10.510 --> 00:14:12.558 Did spinal cord looks a little bit better.

NOTE Confidence: 0.7114232525

00:14:12.560 --> 00:14:14.480 There's nothing much compression there,

NOTE Confidence: 0.7114232525

00:14:14.480 --> 00:14:16.504 but if you look at the axial cut

NOTE Confidence: 0.7114232525

00:14:16.504 --> 00:14:18.418 the majority of the tumors left

NOTE Confidence: 0.7114232525

00:14:18.418 --> 00:14:20.103 behind the entire vertebral bodies,

NOTE Confidence: 0.7114232525

00:14:20.110 --> 00:14:24.907 encased in tumor and all of that was not.

NOTE Confidence: 0.7114232525

00:14:24.910 --> 00:14:26.602 Touched by their purpose of the

NOTE Confidence: 0.7114232525

00:14:26.602 --> 00:14:28.389 surgery was really to just take

NOTE Confidence: 0.7114232525

00:14:28.389 --> 00:14:30.207 the portion within the canal that's

NOTE Confidence: 0.7114232525

00:14:30.207 --> 00:14:31.718 pressing on the spinal cord.

NOTE Confidence: 0.7114232525

00:14:31.720 --> 00:14:34.204 The postoperative specimen came

NOTE Confidence: 0.7114232525

00:14:34.204 --> 00:14:36.688 back to be lymphoma.

NOTE Confidence: 0.7114232525

00:14:36.690 --> 00:14:38.310 And so the question was,

NOTE Confidence: 0.7114232525

00:14:38.310 --> 00:14:40.921 was that the right choice for the

NOTE Confidence: 0.7114232525

00:14:40.921 --> 00:14:42.387 patient considering informer being

NOTE Confidence: 0.7114232525

00:14:42.387 --> 00:14:44.288 a highly radiosensitive tumor,

NOTE Confidence: 0.7114232525

00:14:44.288 --> 00:14:47.633 highly responding to adjuvant therapy

NOTE Confidence: 0.7114232525

00:14:47.633 --> 00:14:51.258 and rarely actually needs any surgery,

NOTE Confidence: 0.7114232525

00:14:51.260 --> 00:14:52.856 was there the right the right

NOTE Confidence: 0.7114232525

00:14:52.856 --> 00:14:54.682 choice for the patient and part one

NOTE Confidence: 0.7114232525

00:14:54.682 --> 00:14:56.327 of the downsides is not a patient

NOTE Confidence: 0.7114232525

00:14:56.387 --> 00:14:58.127 needs to recover from the surgery.

NOTE Confidence: 0.7114232525

00:14:58.130 --> 00:15:00.104 There's a fresh wound that will not

NOTE Confidence: 0.7114232525

00:15:00.104 --> 00:15:01.908 tolerate with the Asian so quickly,

NOTE Confidence: 0.7114232525

00:15:01.910 --> 00:15:04.028 so there's some downside for doing

NOTE Confidence: 0.7114232525

00:15:04.028 --> 00:15:06.525 the surgery and now have to wait

NOTE Confidence: 0.7114232525

00:15:06.525 --> 00:15:07.539 for the treatment.

NOTE Confidence: 0.7114232525

00:15:07.540 --> 00:15:09.300 Now, let's say we take the same case,

NOTE Confidence: 0.7114232525

00:15:09.300 --> 00:15:11.020 but instead of four out of five weakness,

NOTE Confidence: 0.7114232525

00:15:11.020 --> 00:15:12.496 the patient only had two out

NOTE Confidence: 0.7114232525

00:15:12.496 --> 00:15:13.234 of five weakness,

NOTE Confidence: 0.7114232525

00:15:13.240 --> 00:15:15.856 and would that have made a difference when

NOTE Confidence: 0.7114232525

00:15:15.856 --> 00:15:18.686 it comes to taking the patient to surgery?

NOTE Confidence: 0.7114232525

00:15:18.690 --> 00:15:21.858 So how much of a weakness is acceptable,

NOTE Confidence: 0.7114232525

00:15:21.860 --> 00:15:24.380 and how much of a weakness is not acceptable?

NOTE Confidence: 0.7114232525

00:15:24.380 --> 00:15:26.045 That becomes a very difficult

NOTE Confidence: 0.7114232525

00:15:26.045 --> 00:15:28.068 question to decide whether to take

NOTE Confidence: 0.7114232525

00:15:28.068 --> 00:15:29.856 to the patient's surgery or not.

NOTE Confidence: 0.7114232525

00:15:29.860 --> 00:15:32.148 It is another patient with a 51 year

NOTE Confidence: 0.7114232525

00:15:32.148 --> 00:15:35.109 old 51 year old who comes in with

NOTE Confidence: 0.7114232525

00:15:35.109 --> 00:15:36.653 weakness and some incontinence,

NOTE Confidence: 0.7114232525

00:15:36.660 --> 00:15:37.956 and you can see there is a tumor.

NOTE Confidence: 0.7114232525

00:15:37.960 --> 00:15:39.927 In the sacrum there's a lot of

NOTE Confidence: 0.7114232525

00:15:39.927 --> 00:15:42.738 tumor in the canal pressing on the

NOTE Confidence: 0.7114232525

00:15:42.738 --> 00:15:44.634 spinal canal explained incontinence,

NOTE Confidence: 0.7114232525

00:15:44.640 --> 00:15:47.139 and some of the weakness and you

NOTE Confidence: 0.7114232525

00:15:47.139 --> 00:15:49.427 can see another MRI here shows

NOTE Confidence: 0.7114232525

00:15:49.427 --> 00:15:51.707 the finding of a broken sacrum.

NOTE Confidence: 0.7114232525

00:15:51.710 --> 00:15:53.552 Some tumor in the canal and

NOTE Confidence: 0.7114232525

00:15:53.552 --> 00:15:54.780 the patient under men.

NOTE Confidence: 0.7114232525

00:15:54.780 --> 00:15:56.211 Emergent surgical intervention

NOTE Confidence: 0.7114232525

00:15:56.211 --> 00:15:58.596 with the Laminectomy and fixation,

NOTE Confidence: 0.7114232525

00:15:58.600 --> 00:16:01.048 but unfortunately this turns out to be a

NOTE Confidence: 0.7114232525

00:16:01.048 --> 00:16:03.368 primary bound tumor with a counter sarcoma,

NOTE Confidence: 0.7114232525

00:16:03.370 --> 00:16:04.534 and when they found out it

NOTE Confidence: 0.7114232525

00:16:04.534 --> 00:16:05.310 was a conscious or

NOTE Confidence: 0.800529711818182

00:16:05.360 --> 00:16:07.366 comma, the patient underwent

NOTE Confidence: 0.800529711818182

00:16:07.366 --> 00:16:08.530 stereotactic radiosurgery.

NOTE Confidence: 0.800529711818182

00:16:08.530 --> 00:16:10.684 Unfortunately, this is one of those

NOTE Confidence: 0.800529711818182

00:16:10.684 --> 00:16:12.438 tumors were the recommendation is

NOTE Confidence: 0.800529711818182

00:16:12.438 --> 00:16:14.244 to try and do an unblocker section.

NOTE Confidence: 0.800529711818182

00:16:14.250 --> 00:16:16.364 Once you enter this tumor and you

NOTE Confidence: 0.800529711818182

00:16:16.364 --> 00:16:18.649 take it in piece meal version,

NOTE Confidence: 0.800529711818182

00:16:18.650 --> 00:16:21.415 then there is 100% chance of recurrence.

NOTE Confidence: 0.800529711818182

00:16:21.420 --> 00:16:23.164 So really the only chance of the queue

NOTE Confidence: 0.800529711818182

00:16:23.164 --> 00:16:25.066 for this patient would have been during

NOTE Confidence: 0.800529711818182

00:16:25.066 --> 00:16:27.006 the first surgery with attempt to remove

NOTE Confidence: 0.800529711818182

00:16:27.006 --> 00:16:28.665 it in one piece without entering it,

NOTE Confidence: 0.800529711818182

00:16:28.670 --> 00:16:29.456 unfortunately here.

NOTE Confidence: 0.800529711818182

00:16:29.456 --> 00:16:31.421 The patient may have done

NOTE Confidence: 0.800529711818182

00:16:31.421 --> 00:16:33.610 well with the decompression,

NOTE Confidence: 0.800529711818182

00:16:33.610 --> 00:16:35.773 but the tumor have entered and death

NOTE Confidence: 0.800529711818182

00:16:35.773 --> 00:16:37.850 leads to spillage in the surrounding,

NOTE Confidence: 0.800529711818182

00:16:37.850 --> 00:16:39.170 which ultimately leads,

NOTE Confidence: 0.800529711818182

00:16:39.170 --> 00:16:41.022 will lead 100% to recurrence.

NOTE Confidence: 0.800529711818182

00:16:41.022 --> 00:16:41.820 And sure enough,

NOTE Confidence: 0.800529711818182

00:16:41.820 --> 00:16:43.716 this patient came back three years

NOTE Confidence: 0.800529711818182

00:16:43.716 --> 00:16:45.591 later and presented with this little

NOTE Confidence: 0.800529711818182

00:16:45.591 --> 00:16:47.783 bump in the back they thought was maybe

NOTE Confidence: 0.800529711818182

00:16:47.836 --> 00:16:49.768 one of the screws are getting loose.

NOTE Confidence: 0.800529711818182

00:16:49.770 --> 00:16:51.777 But when you look at the MRI you see

NOTE Confidence: 0.800529711818182

00:16:51.777 --> 00:16:53.917 that the entire tumor is now recurring,

NOTE Confidence: 0.800529711818182

00:16:53.920 --> 00:16:57.144 and in fact that bump is actually a

NOTE Confidence: 0.800529711818182

00:16:57.144 --> 00:16:59.528 metastatic disease underneath the skin,

NOTE Confidence: 0.800529711818182

00:16:59.530 --> 00:17:00.866 which was expected considering

NOTE Confidence: 0.800529711818182

00:17:00.866 --> 00:17:01.868 that the surgery.

NOTE Confidence: 0.800529711818182

00:17:01.870 --> 00:17:04.162 It was done with unfortunately intralesional

NOTE Confidence: 0.800529711818182

00:17:04.162 --> 00:17:06.369 instead of an unblocker section in.

NOTE Confidence: 0.800529711818182

00:17:06.370 --> 00:17:07.261 Not only dead.

NOTE Confidence: 0.800529711818182

00:17:07.261 --> 00:17:09.718 Now the rise is broken and then ended up

NOTE Confidence: 0.800529711818182

00:17:09.718 --> 00:17:11.610 taking this back patient back to surgery.

NOTE Confidence: 0.800529711818182

00:17:11.610 --> 00:17:13.820 We remove the lesion itself

NOTE Confidence: 0.800529711818182

00:17:13.820 --> 00:17:15.588 in an unblock fashion,

NOTE Confidence: 0.800529711818182

00:17:15.590 --> 00:17:17.438 but it really makes no difference

NOTE Confidence: 0.800529711818182

00:17:17.438 --> 00:17:19.370 now since the tumor has spread,

NOTE Confidence: 0.800529711818182

00:17:19.370 --> 00:17:21.596 and here is a specimen revising the

NOTE Confidence: 0.800529711818182

00:17:21.596 --> 00:17:23.471 cancer here and the plastic surgeons

NOTE Confidence: 0.800529711818182

00:17:23.471 --> 00:17:26.480 came by and did a flap to close this one.

NOTE Confidence: 0.800529711818182

00:17:26.480 --> 00:17:28.490 So the take home message meant

NOTE Confidence: 0.800529711818182

00:17:28.490 --> 00:17:30.360 message in all these is that

NOTE Confidence: 0.800529711818182

00:17:30.360 --> 00:17:32.310 this could be a miss management.

NOTE Confidence: 0.800529711818182

00:17:32.310 --> 00:17:34.414 In a way of trying to think through

NOTE Confidence: 0.800529711818182

00:17:34.414 --> 00:17:36.174 the process of what to do here

NOTE Confidence: 0.800529711818182

00:17:36.174 --> 00:17:38.136 and it could be related to bad

NOTE Confidence: 0.800529711818182

00:17:38.136 --> 00:17:39.592 timing operations or sometimes

NOTE Confidence: 0.800529711818182

00:17:39.592 --> 00:17:41.312 operation with no diagnosis where

NOTE Confidence: 0.800529711818182

00:17:41.312 --> 00:17:43.146 you don't really know what to do,

NOTE Confidence: 0.800529711818182

00:17:43.150 --> 00:17:43.998 and so I'm just.

NOTE Confidence: 0.800529711818182

00:17:43.998 --> 00:17:46.088 I call it a triple W phenomena to be

NOTE Confidence: 0.800529711818182

00:17:46.088 --> 00:17:48.270 aware of the triple W of the wrong

NOTE Confidence: 0.800529711818182

00:17:48.270 --> 00:17:50.040 operation on the wrong patient,

NOTE Confidence: 0.800529711818182

00:17:50.040 --> 00:17:51.750 sometimes by the wrong surgeon,

NOTE Confidence: 0.800529711818182

00:17:51.750 --> 00:17:54.022 or emphasizing neurological issues

NOTE Confidence: 0.800529711818182

00:17:54.022 --> 00:17:56.294 versus uncle logical issues.

NOTE Confidence: 0.800529711818182

00:17:56.300 --> 00:17:58.162 So when you're dealing with that this

NOTE Confidence: 0.800529711818182

00:17:58.162 --> 00:18:00.281 type of tumors and I'm going to go out

NOTE Confidence: 0.800529711818182

00:18:00.281 --> 00:18:02.457 fast just for the sake of time I mentioned.

NOTE Confidence: 0.800529711818182

00:18:02.460 --> 00:18:04.175 Some of these issues here when it

NOTE Confidence: 0.800529711818182

00:18:04.175 --> 00:18:06.249 comes to the goal and a lot of these

NOTE Confidence: 0.800529711818182

00:18:06.249 --> 00:18:07.993 things has to be done with making

NOTE Confidence: 0.800529711818182

00:18:07.993 --> 00:18:09.655 the right diagnosis and now what

NOTE Confidence: 0.800529711818182

00:18:09.655 --> 00:18:11.520 it is that you're dealing with.

NOTE Confidence: 0.800529711818182

00:18:11.520 --> 00:18:13.220 Biopsy is extremely critical

NOTE Confidence: 0.800529711818182

00:18:13.220 --> 00:18:14.920 as much as possible.

NOTE Confidence: 0.800529711818182

00:18:14.920 --> 00:18:16.680 Anytime you have a chance,

NOTE Confidence: 0.800529711818182

00:18:16.680 --> 00:18:18.520 you have an option of doing a biopsy.

NOTE Confidence: 0.800529711818182

00:18:18.520 --> 00:18:21.220 Make sure that you do the biopsy up front.

NOTE Confidence: 0.800529711818182

00:18:21.220 --> 00:18:23.425 It is a patient that they supposedly

NOTE Confidence: 0.800529711818182

00:18:23.425 --> 00:18:25.745 thought that it has a contractor comma

NOTE Confidence: 0.800529711818182

00:18:25.745 --> 00:18:28.260 or a chordoma will schedule the surgery.

NOTE Confidence: 0.800529711818182

00:18:28.260 --> 00:18:30.164 A biopsy was done and it turned out

NOTE Confidence: 0.800529711818182

00:18:30.164 --> 00:18:31.860 that this was in a pending Mama,

NOTE Confidence: 0.800529711818182

00:18:31.860 --> 00:18:33.516 which was a completely.

NOTE Confidence: 0.800529711818182

00:18:33.516 --> 00:18:35.172 Different tumor require completely

NOTE Confidence: 0.800529711818182

00:18:35.172 --> 00:18:36.000 different surgery,

NOTE Confidence: 0.800529711818182

00:18:36.000 --> 00:18:38.270 so biopsies are very critical.

NOTE Confidence: 0.800529711818182

00:18:38.270 --> 00:18:41.150 Make sure on this particular case

NOTE Confidence: 0.800529711818182

00:18:41.150 --> 00:18:45.280 is that you avoid a transol or a

NOTE Confidence: 0.800529711818182

00:18:45.280 --> 00:18:47.396 trans rectal biopsies because.

NOTE Confidence: 0.728553786666667

00:18:47.400 --> 00:18:49.269 If the idea is to take the

NOTE Confidence: 0.728553786666667

00:18:49.269 --> 00:18:50.770 entire piece of tumor out,

NOTE Confidence: 0.728553786666667

00:18:50.770 --> 00:18:53.647 the track itself can lead to contamination,

NOTE Confidence: 0.728553786666667

00:18:53.650 --> 00:18:55.981 and so we typically mark where the

NOTE Confidence: 0.728553786666667

00:18:55.981 --> 00:18:58.540 track of the biopsy is being done,

NOTE Confidence: 0.728553786666667

00:18:58.540 --> 00:19:00.364 and then we'll remove the entire

NOTE Confidence: 0.728553786666667

00:19:00.364 --> 00:19:02.208 specimen with the track itself to

NOTE Confidence: 0.728553786666667

00:19:02.208 --> 00:19:03.906 make sure that the whole specimen

NOTE Confidence: 0.728553786666667

00:19:03.906 --> 00:19:05.667 is being removed in one piece,

NOTE Confidence: 0.728553786666667

00:19:05.670 --> 00:19:07.790 and you can see right here some of

NOTE Confidence: 0.728553786666667

00:19:07.790 --> 00:19:09.977 the cases where the place where the

NOTE Confidence: 0.728553786666667

00:19:09.977 --> 00:19:12.375 skin was violated with that biopsy is

NOTE Confidence: 0.728553786666667

00:19:12.375 --> 00:19:14.589 being removed with the specimen itself,

NOTE Confidence: 0.728553786666667

00:19:14.590 --> 00:19:16.120 which means that the biopsy needs

NOTE Confidence: 0.728553786666667

00:19:16.120 --> 00:19:17.959 to be very close to the midline.

NOTE Confidence: 0.728553786666667

00:19:17.960 --> 00:19:20.623 Stay away from these type of issues

NOTE Confidence: 0.728553786666667

00:19:20.623 --> 00:19:22.887 where the biopsy is done very far way

NOTE Confidence: 0.728553786666667

00:19:22.887 --> 00:19:25.353 out to the side where we are unable to

NOTE Confidence: 0.728553786666667

00:19:25.353 --> 00:19:27.780 remove the track itself with the specimen.

NOTE Confidence: 0.728553786666667

00:19:27.780 --> 00:19:29.394 The biopsy needs to be very

NOTE Confidence: 0.728553786666667

00:19:29.394 --> 00:19:30.470 close to the midline.

NOTE Confidence: 0.728553786666667

00:19:30.470 --> 00:19:33.032 Uhm, I mentioned some of these intra

NOTE Confidence: 0.728553786666667

00:19:33.032 --> 00:19:34.680 lesional options unblock options.

NOTE Confidence: 0.728553786666667

00:19:34.680 --> 00:19:36.185 These are really the surgical

NOTE Confidence: 0.728553786666667

00:19:36.185 --> 00:19:37.389 options that we have.

NOTE Confidence: 0.728553786666667

00:19:37.390 --> 00:19:38.470 The Intralesional the

NOTE Confidence: 0.728553786666667

00:19:38.470 --> 00:19:39.910 mentions of peace meals.

NOTE Confidence: 0.728553786666667

00:19:39.910 --> 00:19:42.460 Here's a patient with two level

NOTE Confidence: 0.728553786666667

00:19:42.460 --> 00:19:44.770 metastatic disease at T3 and T4.

NOTE Confidence: 0.728553786666667

00:19:44.770 --> 00:19:46.765 We as surgeons need to be comfortable

NOTE Confidence: 0.728553786666667

00:19:46.765 --> 00:19:48.310 with being able to approach

NOTE Confidence: 0.728553786666667

00:19:48.310 --> 00:19:49.885 the spine from any direction.

NOTE Confidence: 0.728553786666667

00:19:49.890 --> 00:19:51.580 Possible weather through the front

NOTE Confidence: 0.728553786666667

00:19:51.580 --> 00:19:53.620 to the side through the back.

NOTE Confidence: 0.728553786666667

00:19:53.620 --> 00:19:55.160 It is a case where the spinal

NOTE Confidence: 0.728553786666667

00:19:55.160 --> 00:19:56.390 cord is being suspended.

NOTE Confidence: 0.728553786666667

00:19:56.390 --> 00:19:57.992 The nerve roots has been ligated

NOTE Confidence: 0.728553786666667

00:19:57.992 --> 00:20:00.260 and you can see that gives us access

NOTE Confidence: 0.728553786666667

00:20:00.260 --> 00:20:01.964 to the interior of the tables.

NOTE Confidence: 0.728553786666667

00:20:01.970 --> 00:20:04.130 Find through the vertebres we can.

NOTE Confidence: 0.728553786666667

00:20:04.130 --> 00:20:06.076 They then put the screws in our

NOTE Confidence: 0.728553786666667

00:20:06.076 --> 00:20:08.068 place and then we can actually

NOTE Confidence: 0.728553786666667

00:20:08.068 --> 00:20:09.883 remove the vertebral bodies through

NOTE Confidence: 0.728553786666667

00:20:09.883 --> 00:20:11.985 the back and then get underneath

NOTE Confidence: 0.728553786666667

00:20:11.985 --> 00:20:14.406 this power cord and sneakers a cage

NOTE Confidence: 0.728553786666667

00:20:14.406 --> 00:20:16.686 to replace the broken vertebras.

NOTE Confidence: 0.728553786666667

00:20:16.690 --> 00:20:18.370 And that's what it looks like

NOTE Confidence: 0.728553786666667

00:20:18.370 --> 00:20:19.210 after the surgery.

NOTE Confidence: 0.728553786666667

00:20:19.210 --> 00:20:20.855 The unblocker sections where we

NOTE Confidence: 0.728553786666667

00:20:20.855 --> 00:20:23.136 going in around the tumors are much

NOTE Confidence: 0.728553786666667

00:20:23.136 --> 00:20:24.870 more complicated is it is what

NOTE Confidence: 0.728553786666667

00:20:24.870 --> 00:20:26.689 we actually want to achieve with

NOTE Confidence: 0.728553786666667

00:20:26.689 --> 00:20:28.459 the entire segment of the spine

NOTE Confidence: 0.728553786666667

00:20:28.460 --> 00:20:30.476 is being removed in one piece

NOTE Confidence: 0.728553786666667

00:20:30.476 --> 00:20:32.004 without interrupting it and that.

NOTE Confidence: 0.728553786666667

00:20:32.004 --> 00:20:33.803 Takes a lot of planning when it

NOTE Confidence: 0.728553786666667

00:20:33.803 --> 00:20:35.488 comes to work to make the cuts,

NOTE Confidence: 0.728553786666667

00:20:35.490 --> 00:20:37.284 ultimately to be able to remove

NOTE Confidence: 0.728553786666667

00:20:37.284 --> 00:20:39.398 the specimen in one piece and you

NOTE Confidence: 0.728553786666667

00:20:39.398 --> 00:20:41.114 can see in this picture again,

NOTE Confidence: 0.728553786666667

00:20:41.120 --> 00:20:42.686 the tumor has not been violated

NOTE Confidence: 0.728553786666667

00:20:42.686 --> 00:20:44.544 on a primary bone tumor and you

NOTE Confidence: 0.728553786666667

00:20:44.544 --> 00:20:46.301 can see right here are the entire

NOTE Confidence: 0.728553786666667

00:20:46.355 --> 00:20:47.687 segment of the vertebrae.

NOTE Confidence: 0.728553786666667

00:20:47.690 --> 00:20:49.678 Is able to be removed from around

NOTE Confidence: 0.728553786666667

00:20:49.678 --> 00:20:51.809 the spinal cord without interruption.

NOTE Confidence: 0.728553786666667

00:20:51.810 --> 00:20:53.270 Radiation obviously is a huge

NOTE Confidence: 0.728553786666667

00:20:53.270 --> 00:20:54.730 component to what we do.

NOTE Confidence: 0.728553786666667

00:20:54.730 --> 00:20:56.920 There is a conventional option just

NOTE Confidence: 0.728553786666667

00:20:56.920 --> 00:20:59.529 so the Asian there is a surgery

NOTE Confidence: 0.728553786666667

00:20:59.529 --> 00:21:01.319 followed by radiation and then

NOTE Confidence: 0.728553786666667

00:21:01.319 --> 00:21:02.450 here it's Milo.

NOTE Confidence: 0.728553786666667

00:21:02.450 --> 00:21:04.942 And in major cancer hospital we have

NOTE Confidence: 0.728553786666667

00:21:04.942 --> 00:21:07.509 the option of spinal radiosurgery.

NOTE Confidence: 0.728553786666667

00:21:07.510 --> 00:21:09.617 We've written about there's a lot of

NOTE Confidence: 0.728553786666667

00:21:09.617 --> 00:21:11.488 cases out there about radiotherapy

NOTE Confidence: 0.728553786666667

00:21:11.488 --> 00:21:13.748 and radiation treatment option for

NOTE Confidence: 0.728553786666667

00:21:13.748 --> 00:21:15.630 patients with metastatic disease,

NOTE Confidence: 0.728553786666667

00:21:15.630 --> 00:21:17.766 and what are the indications for this thing.

NOTE Confidence: 0.728553786666667

00:21:17.770 --> 00:21:19.768 Recently we just published our series

NOTE Confidence: 0.728553786666667

00:21:19.768 --> 00:21:22.870 when I was at the James Cancer Hospital,

NOTE Confidence: 0.728553786666667

00:21:22.870 --> 00:21:24.858 but postoperative stereotactic body

NOTE Confidence: 0.728553786666667

00:21:24.858 --> 00:21:26.846 radiotherapy for spa metastasis

NOTE Confidence: 0.728553786666667

00:21:26.846 --> 00:21:28.950 and predictor of local control,

NOTE Confidence: 0.728553786666667

00:21:28.950 --> 00:21:32.220 and it's an amazing tool.

NOTE Confidence: 0.585835226666667

00:21:32.220 --> 00:21:35.319 To supplement our.

NOTE Confidence: 0.585835226666667

00:21:35.320 --> 00:21:38.260 You know our intervention and maintaining

NOTE Confidence: 0.585835226666667

00:21:38.260 --> 00:21:40.840 control of these these tumors,

NOTE Confidence: 0.585835226666667

00:21:40.840 --> 00:21:42.968 so you know the data is very promising.

NOTE Confidence: 0.585835226666667

00:21:42.970 --> 00:21:45.166 This is some of the cases you can see.

NOTE Confidence: 0.585835226666667

00:21:45.170 --> 00:21:47.025 These are cases that don't need surgery.

NOTE Confidence: 0.585835226666667

00:21:47.030 --> 00:21:47.754 Single met.

NOTE Confidence: 0.585835226666667

00:21:47.754 --> 00:21:50.288 Here is a tumor with a recurrence

NOTE Confidence: 0.585835226666667

00:21:50.288 --> 00:21:51.909 around vertebral artery,

NOTE Confidence: 0.585835226666667

00:21:51.910 --> 00:21:54.535 and so really this is a totally

NOTE Confidence: 0.585835226666667

00:21:54.535 --> 00:21:56.210 non invasive alternative adjuvant

NOTE Confidence: 0.585835226666667

00:21:56.210 --> 00:21:58.138 treatment there to surgery.

NOTE Confidence: 0.585835226666667

00:21:58.140 --> 00:22:00.125 Cement injections allow you mentioned

NOTE Confidence: 0.585835226666667

00:22:00.125 --> 00:22:02.493 this patient know that this is

NOTE Confidence: 0.585835226666667

00:22:02.493 --> 00:22:04.401 a very good tool for patients

NOTE Confidence: 0.585835226666667

00:22:04.401 --> 00:22:06.442 with mild fractures who needs to

NOTE Confidence: 0.585835226666667

00:22:06.442 --> 00:22:08.152 continue going with treatment who

NOTE Confidence: 0.585835226666667

00:22:08.152 --> 00:22:09.908 cannot go through major surgeries.

NOTE Confidence: 0.585835226666667

00:22:09.908 --> 00:22:12.400 So either you do it you plasty

NOTE Confidence: 0.585835226666667

00:22:12.466 --> 00:22:14.363 is or you can do a kyphoplasty

NOTE Confidence: 0.585835226666667

00:22:14.363 --> 00:22:16.350 is where we put a ballooning.

NOTE Confidence: 0.585835226666667

00:22:16.350 --> 00:22:17.940 You can inflate the balloon,

NOTE Confidence: 0.585835226666667

00:22:17.940 --> 00:22:19.865 correct some of the deformity

NOTE Confidence: 0.585835226666667

00:22:19.865 --> 00:22:21.790 removed the balloon and then

NOTE Confidence: 0.585835226666667

00:22:21.860 --> 00:22:23.720 inject cement into the bone.

NOTE Confidence: 0.585835226666667

00:22:23.720 --> 00:22:25.886 There's lots of papers that they

NOTE Confidence: 0.585835226666667

00:22:25.886 --> 00:22:28.166 would have been looked at the

NOTE Confidence: 0.585835226666667

00:22:28.166 --> 00:22:30.071 show that these treatments of

NOTE Confidence: 0.585835226666667

00:22:30.071 --> 00:22:32.010 cement injections are an amazing,

NOTE Confidence: 0.585835226666667

00:22:32.010 --> 00:22:33.435 not just diagnostic,

NOTE Confidence: 0.585835226666667

00:22:33.435 --> 00:22:35.335 but also therapeutic indications

NOTE Confidence: 0.585835226666667

00:22:35.335 --> 00:22:37.700 for patients with spine tumors.

NOTE Confidence: 0.585835226666667

00:22:37.700 --> 00:22:39.300 Sometimes we can't do it.

NOTE Confidence: 0.585835226666667

00:22:39.300 --> 00:22:41.020 You know if there's a lot of fracture,

NOTE Confidence: 0.585835226666667

00:22:41.020 --> 00:22:41.836 bad, fractional sometimes.

NOTE Confidence: 0.585835226666667

00:22:41.836 --> 00:22:43.740 That bone is already in the canal.

NOTE Confidence: 0.585835226666667

00:22:43.740 --> 00:22:45.945 The idea is to make sure that

NOTE Confidence: 0.585835226666667

00:22:45.945 --> 00:22:47.620 cement doesn't leak into the

NOTE Confidence: 0.585835226666667

00:22:47.620 --> 00:22:49.600 canal and press the spinal cord,

NOTE Confidence: 0.585835226666667

00:22:49.600 --> 00:22:51.735 then lead to us nor logical issues.

NOTE Confidence: 0.585835226666667

00:22:51.740 --> 00:22:52.855 Or sometimes you can see

NOTE Confidence: 0.585835226666667

00:22:52.855 --> 00:22:53.970 right here with the tumor.

NOTE Confidence: 0.585835226666667

00:22:53.970 --> 00:22:55.489 It's through the back of the bone

NOTE Confidence: 0.585835226666667

00:22:55.489 --> 00:22:56.999 and write it right through it.

NOTE Confidence: 0.585835226666667

00:22:57.000 --> 00:22:58.520 So there are some contraindications

NOTE Confidence: 0.585835226666667

00:22:58.520 --> 00:23:00.270 of when not to do it.

NOTE Confidence: 0.585835226666667

00:23:00.270 --> 00:23:02.153 This is what we don't want to

NOTE Confidence: 0.585835226666667

00:23:02.153 --> 00:23:03.661 see happen with cement leak

NOTE Confidence: 0.585835226666667

00:23:03.661 --> 00:23:05.563 into the spinal canal or right

NOTE Confidence: 0.585835226666667

00:23:05.563 --> 00:23:07.841 here where you can see a lot of

NOTE Confidence: 0.585835226666667

00:23:07.841 --> 00:23:09.286 cement was injected and cement.

NOTE Confidence: 0.585835226666667

00:23:09.286 --> 00:23:11.216 Its kind of overlying the

NOTE Confidence: 0.585835226666667

00:23:11.216 --> 00:23:12.760 entire pickle sake sometimes.

NOTE Confidence: 0.585835226666667

00:23:12.760 --> 00:23:14.458 You see cement in other places,

NOTE Confidence: 0.585835226666667

00:23:14.460 --> 00:23:16.399 even in the brain you can see

NOTE Confidence: 0.585835226666667

00:23:16.399 --> 00:23:17.799 particle of cements going to.

NOTE Confidence: 0.585835226666667

00:23:17.800 --> 00:23:19.529 Here is a case where you don't

NOTE Confidence: 0.585835226666667

00:23:19.529 --> 00:23:21.411 want to see again with cement was

NOTE Confidence: 0.585835226666667

00:23:21.411 --> 00:23:23.698 injected in the a lot of the cement

NOTE Confidence: 0.585835226666667

00:23:23.698 --> 00:23:25.798 leak into the canal leading to a

NOTE Confidence: 0.585835226666667

00:23:25.798 --> 00:23:27.728 patient presenting right after the

NOTE Confidence: 0.585835226666667

00:23:27.728 --> 00:23:29.356 surgery with neurological deficit.

NOTE Confidence: 0.585835226666667

00:23:29.360 --> 00:23:30.935 So you gotta watch for those things.

NOTE Confidence: 0.585835226666667

00:23:30.940 --> 00:23:33.860 Here is a patient who have a lesion

NOTE Confidence: 0.585835226666667

00:23:33.860 --> 00:23:37.285 in the odontoid and we used to treat

NOTE Confidence: 0.585835226666667

00:23:37.285 --> 00:23:38.809 this with significant reconstruction

NOTE Confidence: 0.585835226666667

00:23:38.809 --> 00:23:41.702 of the cervical spine to help with

NOTE Confidence: 0.585835226666667

00:23:41.702 --> 00:23:43.330 mechanical mechanical neck pain.

NOTE Confidence: 0.585835226666667

00:23:43.330 --> 00:23:43.800 But now,

NOTE Confidence: 0.585835226666667

00:23:43.800 --> 00:23:45.210 if you really push the limits,

NOTE Confidence: 0.585835226666667

00:23:45.210 --> 00:23:47.218 cement is a huge tool and on this

NOTE Confidence: 0.585835226666667

00:23:47.218 --> 00:23:49.618 case is now we're getting to the point

NOTE Confidence: 0.585835226666667

00:23:49.618 --> 00:23:52.129 where we don't need to do big surgeries.

NOTE Confidence: 0.585835226666667

00:23:52.130 --> 00:23:53.964 We can actually go through the back

NOTE Confidence: 0.585835226666667

00:23:53.964 --> 00:23:55.953 of the mouth and injects cement

NOTE Confidence: 0.585835226666667

00:23:55.953 --> 00:23:57.958 directly into the odontoid and

NOTE Confidence: 0.585835226666667

00:23:57.958 --> 00:24:00.459 you can see what it looks like,

NOTE Confidence: 0.585835226666667

00:24:00.460 --> 00:24:02.446 what it looks like after the

NOTE Confidence: 0.585835226666667

00:24:02.446 --> 00:24:04.230 surgery and we actually published

NOTE Confidence: 0.585835226666667

00:24:04.230 --> 00:24:06.564 this technique where we can use

NOTE Confidence: 0.585835226666667

00:24:06.564 --> 00:24:08.752 the stereotactic CT guided images

NOTE Confidence: 0.585835226666667

00:24:08.752 --> 00:24:09.708 and fluoroscopy,

NOTE Confidence: 0.585835226666667

00:24:09.710 --> 00:24:11.502 unable to go through the back of

NOTE Confidence: 0.585835226666667

00:24:11.502 --> 00:24:12.900 the mouth without EMT colleagues

NOTE Confidence: 0.585835226666667

00:24:12.900 --> 00:24:14.628 and able to inject the cement.

NOTE Confidence: 0.585835226666667

00:24:14.630 --> 00:24:16.080 Right into the broken vertebrae.

NOTE Confidence: 0.585835226666667

00:24:16.080 --> 00:24:17.400 Instead of putting the patient

NOTE Confidence: 0.585835226666667

00:24:17.400 --> 00:24:18.720 through some sort of an

NOTE Confidence: 0.832888775384615

00:24:18.769 --> 00:24:20.038 exhibit cervical fixation,

NOTE Confidence: 0.832888775384615

00:24:20.040 --> 00:24:21.645 so some of those country

NOTE Confidence: 0.832888775384615

00:24:21.645 --> 00:24:23.250 indication we can refute them,

NOTE Confidence: 0.832888775384615

00:24:23.250 --> 00:24:24.458 and we actually publish

NOTE Confidence: 0.832888775384615

00:24:24.458 --> 00:24:25.968 our series at MD Anderson.

NOTE Confidence: 0.832888775384615

00:24:25.970 --> 00:24:27.608 When it comes to when to do

NOTE Confidence: 0.832888775384615

00:24:27.608 --> 00:24:29.158 it and when not to do it,

NOTE Confidence: 0.832888775384615

00:24:29.160 --> 00:24:31.692 and a conclusion was that relative

NOTE Confidence: 0.832888775384615

00:24:31.692 --> 00:24:33.380 contraindications can be relaxed

NOTE Confidence: 0.832888775384615

00:24:33.450 --> 00:24:35.750 for patient without other options

NOTE Confidence: 0.832888775384615

00:24:35.750 --> 00:24:37.590 with no clinically significant

NOTE Confidence: 0.832888775384615

00:24:37.590 --> 00:24:39.190 increase in complications.

NOTE Confidence: 0.832888775384615

00:24:39.190 --> 00:24:41.863 So I want to, for the sake of time,

NOTE Confidence: 0.832888775384615

00:24:41.870 --> 00:24:45.230 just go quickly through my last slide.

NOTE Confidence: 0.832888775384615

00:24:45.230 --> 00:24:46.778 Here, you know the key if

NOTE Confidence: 0.832888775384615

00:24:46.778 --> 00:24:48.120 you want to take one.

NOTE Confidence: 0.832888775384615

00:24:48.120 --> 00:24:50.395 Slide audible this is that this is

NOTE Confidence: 0.832888775384615

00:24:50.395 --> 00:24:52.220 when we're thinking about Sergio.

NOTE Confidence: 0.832888775384615

00:24:52.220 --> 00:24:53.635 We're thinking doing surgery for

NOTE Confidence: 0.832888775384615

00:24:53.635 --> 00:24:55.327 patient when we think that we

NOTE Confidence: 0.832888775384615

00:24:55.327 --> 00:24:56.653 can make a difference that we

NOTE Confidence: 0.832888775384615

00:24:56.653 --> 00:24:58.410 can after the prognosis we think

NOTE Confidence: 0.832888775384615

00:24:58.410 --> 00:25:00.240 about doing surgery when there is

NOTE Confidence: 0.832888775384615

00:25:00.240 --> 00:25:01.500 significant spinal instability.

NOTE Confidence: 0.832888775384615

00:25:01.500 --> 00:25:04.307 The spine is so broken that the the

NOTE Confidence: 0.832888775384615

00:25:04.307 --> 00:25:06.330 patient unable to get out of bed

NOTE Confidence: 0.832888775384615

00:25:06.395 --> 00:25:08.549 with thinking to do surgery when

NOTE Confidence: 0.832888775384615

00:25:08.549 --> 00:25:10.906 there isn't nor logical deficits and

NOTE Confidence: 0.832888775384615

00:25:10.906 --> 00:25:13.456 painted by itself even without deficits,

NOTE Confidence: 0.832888775384615

00:25:13.460 --> 00:25:16.088 is also an indication for surgery.

NOTE Confidence: 0.832888775384615

00:25:16.090 --> 00:25:18.434 And so. Spine instability.

NOTE Confidence: 0.832888775384615

00:25:18.434 --> 00:25:19.020 Clearly,

NOTE Confidence: 0.832888775384615

00:25:19.020 --> 00:25:20.469 if you look at these MRI you

NOTE Confidence: 0.832888775384615

00:25:20.469 --> 00:25:22.060 can see that the fan is broken.

NOTE Confidence: 0.832888775384615

00:25:22.060 --> 00:25:24.209 This is something we can fix with

NOTE Confidence: 0.832888775384615

00:25:24.209 --> 00:25:26.212 surgery and there are now a scale

NOTE Confidence: 0.832888775384615

00:25:26.212 --> 00:25:28.170 that helps us that we have developed

NOTE Confidence: 0.832888775384615

00:25:28.170 --> 00:25:30.414 to define what is finding stability

NOTE Confidence: 0.832888775384615

00:25:30.414 --> 00:25:32.082 in patients with metastatic disease.

NOTE Confidence: 0.832888775384615

00:25:32.082 --> 00:25:34.440 And I'm not going to take you through it,

NOTE Confidence: 0.832888775384615

00:25:34.440 --> 00:25:36.162 but it's a very nice since code

NOTE Confidence: 0.832888775384615

00:25:36.162 --> 00:25:37.992 that you can Add all these numbers

NOTE Confidence: 0.832888775384615

00:25:37.992 --> 00:25:39.913 and if you Add all these numbers

NOTE Confidence: 0.832888775384615

00:25:39.913 --> 00:25:42.111 when it comes to location pain that

NOTE Confidence: 0.832888775384615

00:25:42.111 --> 00:25:43.744 abolition it is is there alignment

NOTE Confidence: 0.832888775384615

00:25:43.744 --> 00:25:45.587 or know how much of their bodies

NOTE Confidence: 0.832888775384615

00:25:45.587 --> 00:25:47.505 involved you can Add all of these?

NOTE Confidence: 0.832888775384615

00:25:47.510 --> 00:25:50.072 Points and that will lead to deciding

NOTE Confidence: 0.832888775384615

00:25:50.072 --> 00:25:52.717 whether the patient is stable and unstable,

NOTE Confidence: 0.832888775384615

00:25:52.720 --> 00:25:54.590 which may help deciding whether

NOTE Confidence: 0.832888775384615

00:25:54.590 --> 00:25:56.460 to do surgery or not.

NOTE Confidence: 0.832888775384615

00:25:56.460 --> 00:25:58.410 Nor logical deficit is clearly

NOTE Confidence: 0.832888775384615

00:25:58.410 --> 00:26:00.974 something that we get called on and

NOTE Confidence: 0.832888775384615

00:26:00.974 --> 00:26:03.506 then we have to make a decision as to

NOTE Confidence: 0.832888775384615

00:26:03.506 --> 00:26:05.858 whether to go on with surgery or not.

NOTE Confidence: 0.832888775384615

00:26:05.860 --> 00:26:07.440 And as I mentioned,

NOTE Confidence: 0.832888775384615

00:26:07.440 --> 00:26:09.415 just pain sometimes also helps

NOTE Confidence: 0.832888775384615

00:26:09.415 --> 00:26:11.031 us help with surgery,

NOTE Confidence: 0.832888775384615

00:26:11.031 --> 00:26:13.473 especially when we deal with the

NOTE Confidence: 0.832888775384615

00:26:13.473 --> 00:26:15.274 mechanical type NC traumatology

NOTE Confidence: 0.832888775384615

00:26:15.274 --> 00:26:17.038 which indicate a fracture.

NOTE Confidence: 0.832888775384615

00:26:17.040 --> 00:26:18.410 When you thinking about surgery,

NOTE Confidence: 0.832888775384615

00:26:18.410 --> 00:26:20.906 just always make sure that it's

NOTE Confidence: 0.832888775384615

00:26:20.906 --> 00:26:22.154 physically technically feasible

NOTE Confidence: 0.832888775384615

00:26:22.154 --> 00:26:23.959 to do adequate approach.

NOTE Confidence: 0.832888775384615

00:26:23.960 --> 00:26:25.253 Good strategy, satisfaction,

NOTE Confidence: 0.832888775384615

00:26:25.253 --> 00:26:26.977 reconstruction, and that ultimately

NOTE Confidence: 0.832888775384615

00:26:26.977 --> 00:26:29.158 it's going to give it doable.

NOTE Confidence: 0.832888775384615

00:26:29.160 --> 00:26:30.090 Patient benefits,

NOTE Confidence: 0.832888775384615

00:26:30.090 --> 00:26:31.950 because ultimately these are

NOTE Confidence: 0.832888775384615

00:26:31.950 --> 00:26:35.380 this can end up to be, you know,

NOTE Confidence: 0.832888775384615

00:26:35.380 --> 00:26:39.020 very very large lesion for these patients,

NOTE Confidence: 0.832888775384615

00:26:39.020 --> 00:26:41.441 so I just want to get to the last

NOTE Confidence: 0.832888775384615

00:26:41.441 --> 00:26:43.979 part and that is the primary tumors.

NOTE Confidence: 0.832888775384615

00:26:43.980 --> 00:26:46.380 These are not metastatic disease,

NOTE Confidence: 0.832888775384615

00:26:46.380 --> 00:26:48.768 these are the most challenging cases.

NOTE Confidence: 0.832888775384615

00:26:48.770 --> 00:26:50.342 Some of them can be treated

NOTE Confidence: 0.832888775384615

00:26:50.342 --> 00:26:51.128 with adjuvant therapy,

NOTE Confidence: 0.832888775384615

00:26:51.130 --> 00:26:53.362 but most the converse of trauma

NOTE Confidence: 0.832888775384615

00:26:53.362 --> 00:26:54.850 in the chordoma cannot,

NOTE Confidence: 0.832888775384615

00:26:54.850 --> 00:26:56.872 and some of them can response

NOTE Confidence: 0.832888775384615

00:26:56.872 --> 00:26:57.883 to preoperative chemotherapy.

NOTE Confidence: 0.832888775384615

00:26:57.890 --> 00:26:59.210 But most don't.

NOTE Confidence: 0.832888775384615

00:26:59.210 --> 00:27:00.530 They good example,

NOTE Confidence: 0.832888775384615

00:27:00.530 --> 00:27:01.170 for example,

NOTE Confidence: 0.832888775384615

00:27:01.170 --> 00:27:01.810 is denosumab,

NOTE Confidence: 0.832888775384615

00:27:01.810 --> 00:27:03.730 which helps very much in patient

NOTE Confidence: 0.832888775384615

00:27:03.786 --> 00:27:04.978 with giant cell tumor.

NOTE Confidence: 0.832888775384615

00:27:04.980 --> 00:27:06.690 We used to think that all

NOTE Confidence: 0.832888775384615

00:27:06.690 --> 00:27:07.830 this patient needs surgery,

NOTE Confidence: 0.832888775384615

00:27:07.830 --> 00:27:08.995 but you can see they

NOTE Confidence: 0.832888775384615

00:27:08.995 --> 00:27:10.160 present with big holes in

NOTE Confidence: 0.8644207125

00:27:10.219 --> 00:27:11.788 the vertebrae. But on denosumab,

NOTE Confidence: 0.8644207125

00:27:11.788 --> 00:27:14.420 here is a patient with an L3 fracture.

NOTE Confidence: 0.8644207125

00:27:14.420 --> 00:27:15.967 You can see on the CAT scan.

NOTE Confidence: 0.8644207125

00:27:15.970 --> 00:27:17.258 There is no L3,

NOTE Confidence: 0.8644207125

00:27:17.258 --> 00:27:19.190 it's completely eaten away by the.

NOTE Confidence: 0.8644207125

00:27:19.190 --> 00:27:22.290 Tumor and you can see the PET scan over here.

NOTE Confidence: 0.8644207125

00:27:22.290 --> 00:27:24.440 Here is the CT reconstruction

NOTE Confidence: 0.8644207125

00:27:24.440 --> 00:27:26.160 of this L3 lesion.

NOTE Confidence: 0.8644207125

00:27:26.160 --> 00:27:27.033 Very large region,

NOTE Confidence: 0.8644207125

00:27:27.033 --> 00:27:29.465 but you can see that with the NASA

NOTE Confidence: 0.8644207125

00:27:29.465 --> 00:27:31.761 map you know the voter becomes very

NOTE Confidence: 0.8644207125

00:27:31.761 --> 00:27:33.783 calcified and strong to the point that

NOTE Confidence: 0.8644207125

00:27:33.783 --> 00:27:36.230 there may not be a role for surgery

NOTE Confidence: 0.8644207125

00:27:36.230 --> 00:27:38.130 anymore for this patient population.

NOTE Confidence: 0.8644207125

00:27:38.130 --> 00:27:40.314 Here is a pharmacist again, the odontoid.

NOTE Confidence: 0.8644207125

00:27:40.314 --> 00:27:42.568 The C2 vertebra is completely eaten away.

NOTE Confidence: 0.8644207125

00:27:42.570 --> 00:27:43.710 There's almost nothing

NOTE Confidence: 0.8644207125

00:27:43.710 --> 00:27:45.374 left of the C2 vertebrae.

NOTE Confidence: 0.8644207125

00:27:45.374 --> 00:27:47.800 All we did here is we stabilize is fine.

NOTE Confidence: 0.8644207125

00:27:47.800 --> 00:27:49.564 We did not take the tumor out.

NOTE Confidence: 0.8644207125

00:27:49.570 --> 00:27:50.640 You can see right here.

NOTE Confidence: 0.8644207125

00:27:50.640 --> 00:27:52.644 There's posterior stabilization and

NOTE Confidence: 0.8644207125

00:27:52.644 --> 00:27:55.650 within couple of months the entire

NOTE Confidence: 0.8644207125

00:27:55.723 --> 00:27:58.173 bond filled in here and there is

NOTE Confidence: 0.8644207125

00:27:58.173 --> 00:28:00.518 normal hall that was there before,

NOTE Confidence: 0.8644207125

00:28:00.520 --> 00:28:02.878 so there is definitely a clear

NOTE Confidence: 0.8644207125

00:28:02.880 --> 00:28:04.624 role for Asian therapy.

NOTE Confidence: 0.8644207125

00:28:04.624 --> 00:28:06.804 Now why these unblock resections?

NOTE Confidence: 0.8644207125

00:28:06.810 --> 00:28:09.132 Because that's really the only way

NOTE Confidence: 0.8644207125

00:28:09.132 --> 00:28:12.208 to give a chance for these patients.

NOTE Confidence: 0.8644207125

00:28:12.210 --> 00:28:13.953 And here is a patient with a

NOTE Confidence: 0.8644207125

00:28:13.953 --> 00:28:15.479 Seiko tumor that we can go in.

NOTE Confidence: 0.8644207125

00:28:15.480 --> 00:28:17.076 We can like get a tickle

NOTE Confidence: 0.8644207125

00:28:17.076 --> 00:28:18.140 sakkinen and unblock fashion.

NOTE Confidence: 0.8644207125

00:28:18.140 --> 00:28:19.652 You can see the margins or

NOTE Confidence: 0.8644207125

00:28:19.652 --> 00:28:21.299 clean all the way around it.

NOTE Confidence: 0.8644207125

00:28:21.300 --> 00:28:23.900 And we know from all the data that's

NOTE Confidence: 0.8644207125

00:28:23.900 --> 00:28:26.252 out there that unblock resection can be

NOTE Confidence: 0.8644207125

00:28:26.252 --> 00:28:29.370 can lead to Q of this patient period.

NOTE Confidence: 0.8644207125

00:28:29.370 --> 00:28:31.593 The patient with sarcoma in the meter at 6

NOTE Confidence: 0.8644207125

00:28:31.593 --> 00:28:33.840 pine we don't want to enter this terminal.

NOTE Confidence: 0.8644207125

00:28:33.840 --> 00:28:35.366 We want to be able to remove

NOTE Confidence: 0.8644207125

00:28:35.366 --> 00:28:36.739 this tumor out in one piece.

NOTE Confidence: 0.8644207125

00:28:36.740 --> 00:28:38.546 Will plan where we going to make

NOTE Confidence: 0.8644207125

00:28:38.546 --> 00:28:40.064 our accounts to deliver this

NOTE Confidence: 0.8644207125

00:28:40.064 --> 00:28:41.784 vertebra from around the spinal

NOTE Confidence: 0.8644207125

00:28:41.784 --> 00:28:43.680 cord and ultimately able to remove.

NOTE Confidence: 0.8644207125

00:28:43.680 --> 00:28:46.500 The entire vertebrae in one piece

NOTE Confidence: 0.8644207125

00:28:46.500 --> 00:28:49.798 without entering it and able to then

NOTE Confidence: 0.8644207125

00:28:49.798 --> 00:28:52.150 reconstruct it and and and give the

NOTE Confidence: 0.8644207125

00:28:52.150 --> 00:28:54.430 patient a chance for Q of patient.

NOTE Confidence: 0.8644207125

00:28:54.430 --> 00:28:56.220 The sacral tumors are the

NOTE Confidence: 0.8644207125

00:28:56.220 --> 00:28:58.010 biggest ones to deal with,

NOTE Confidence: 0.8644207125

00:28:58.010 --> 00:28:59.906 and are the most complicated one.

NOTE Confidence: 0.8644207125

00:28:59.910 --> 00:29:01.970 There are lots of methodologies,

NOTE Confidence: 0.8644207125

00:29:01.970 --> 00:29:03.572 and I'm sharing some slides here

NOTE Confidence: 0.8644207125

00:29:03.572 --> 00:29:05.340 about how we approach these tumors.

NOTE Confidence: 0.8644207125

00:29:05.340 --> 00:29:07.328 There are lots of techniques that

NOTE Confidence: 0.8644207125

00:29:07.328 --> 00:29:08.854 I'm not going to get into this.

NOTE Confidence: 0.8644207125

00:29:08.860 --> 00:29:12.140 Most surgery oriented talk

NOTE Confidence: 0.8644207125

00:29:12.140 --> 00:29:14.450 about how to be able to remove.

NOTE Confidence: 0.8644207125

00:29:14.450 --> 00:29:16.571 A lot of these sacral tumor and

NOTE Confidence: 0.8644207125

00:29:16.571 --> 00:29:18.320 ultimately able to achieve an

NOTE Confidence: 0.8644207125

00:29:18.320 --> 00:29:20.265 unblocker section on these tumors.

NOTE Confidence: 0.8644207125

00:29:20.270 --> 00:29:22.838 Some of these techniques we have

NOTE Confidence: 0.8644207125

00:29:22.838 --> 00:29:25.184 described here is some big example of

NOTE Confidence: 0.8644207125

00:29:25.184 --> 00:29:27.063 the counter sarcoma that's going up

NOTE Confidence: 0.8644207125

00:29:27.063 --> 00:29:29.231 to the lumbar spine up to the pelvis.

NOTE Confidence: 0.8644207125

00:29:29.240 --> 00:29:31.810 List is obviously combined with

NOTE Confidence: 0.8644207125

00:29:31.810 --> 00:29:32.838 multidisciplinary approach,

NOTE Confidence: 0.8644207125

00:29:32.840 --> 00:29:34.740 or an unblocker section was

NOTE Confidence: 0.8644207125

00:29:34.740 --> 00:29:36.260 performed with orthopedics and

NOTE Confidence: 0.8644207125

00:29:36.260 --> 00:29:37.858 urology and plastic surgery,

NOTE Confidence: 0.8644207125

00:29:37.860 --> 00:29:39.870 and this tumor was removed

NOTE Confidence: 0.8644207125

00:29:39.870 --> 00:29:41.478 with vascularized bone graft.

NOTE Confidence: 0.8644207125

00:29:41.480 --> 00:29:42.992 We published this technical

NOTE Confidence: 0.8644207125

00:29:42.992 --> 00:29:44.882 aspect of using a talaga.

NOTE Confidence: 0.8644207125

00:29:44.890 --> 00:29:46.112 Bone graft.

NOTE Confidence: 0.8644207125

00:29:46.112 --> 00:29:48.556 And dental reconstruction obviously

NOTE Confidence: 0.8644207125

00:29:48.556 --> 00:29:51.684 was significant issue about how to

NOTE Confidence: 0.8644207125

00:29:51.684 --> 00:29:54.540 reconstruct these tumors when it comes

NOTE Confidence: 0.8644207125

00:29:54.631 --> 00:29:57.808 to be able to do this type of surgery.

NOTE Confidence: 0.8644207125

00:29:57.810 --> 00:30:00.132 This is these are very highly

NOTE Confidence: 0.8644207125

00:30:00.132 --> 00:30:03.129 very is a big time surgeries.

NOTE Confidence: 0.8644207125

00:30:03.130 --> 00:30:04.474 This is one of the stories

NOTE Confidence: 0.8644207125

00:30:04.474 --> 00:30:05.370 that we've done that

NOTE Confidence: 0.752332653809524

00:30:05.427 --> 00:30:06.861 ended up being the front cover

NOTE Confidence: 0.752332653809524

00:30:06.861 --> 00:30:08.250 of the general node surgery.

NOTE Confidence: 0.752332653809524

00:30:08.250 --> 00:30:09.935 These are highly complex type

NOTE Confidence: 0.752332653809524

00:30:09.935 --> 00:30:12.349 surgeries when it comes to do and

NOTE Confidence: 0.752332653809524

00:30:12.349 --> 00:30:14.335 you can see interactive pictures of

NOTE Confidence: 0.752332653809524

00:30:14.335 --> 00:30:16.328 the vascular grafts that has been.

NOTE Confidence: 0.752332653809524

00:30:16.330 --> 00:30:19.270 Use on this particular patients,

NOTE Confidence: 0.752332653809524

00:30:19.270 --> 00:30:20.810 and these patients ultimately

NOTE Confidence: 0.752332653809524

00:30:20.810 --> 00:30:21.965 fuses very well.

NOTE Confidence: 0.752332653809524

00:30:21.970 --> 00:30:23.446 This is the post operative picture

NOTE Confidence: 0.752332653809524

00:30:23.446 --> 00:30:25.019 of the patient a year later,

NOTE Confidence: 0.752332653809524

00:30:25.020 --> 00:30:27.258 so there are some fair frontiers

NOTE Confidence: 0.752332653809524

00:30:27.258 --> 00:30:30.195 that have been looked at when it

NOTE Confidence: 0.752332653809524

00:30:30.195 --> 00:30:32.475 comes to getting engineering involved

NOTE Confidence: 0.752332653809524

00:30:32.475 --> 00:30:34.709 with personalized model 3D printers.

NOTE Confidence: 0.752332653809524

00:30:34.710 --> 00:30:36.095 Try to predict which voters

NOTE Confidence: 0.752332653809524

00:30:36.095 --> 00:30:37.203 are going to break.

NOTE Confidence: 0.752332653809524

00:30:37.210 --> 00:30:40.258 We're looking at animal models in

NOTE Confidence: 0.752332653809524

00:30:40.258 --> 00:30:41.782 unblock tissue characterization.

NOTE Confidence: 0.752332653809524

00:30:41.790 --> 00:30:43.954 We aiming toward personalized.

NOTE Confidence: 0.752332653809524

00:30:43.954 --> 00:30:47.200 Surgeries and its patients take the

NOTE Confidence: 0.752332653809524

00:30:47.283 --> 00:30:50.067 patients CAT scan the patient MRI,

NOTE Confidence: 0.752332653809524

00:30:50.070 --> 00:30:52.250 creating these 3D reconstruction

NOTE Confidence: 0.752332653809524

00:30:52.250 --> 00:30:54.430 models for these patients,

NOTE Confidence: 0.752332653809524

00:30:54.430 --> 00:30:55.453 creating those models,

NOTE Confidence: 0.752332653809524

00:30:55.453 --> 00:30:57.158 and then ultimately figuring out

NOTE Confidence: 0.752332653809524

00:30:57.158 --> 00:30:59.035 this is some of the 3D models

NOTE Confidence: 0.752332653809524

00:30:59.035 --> 00:31:00.816 that we have done on the lady

NOTE Confidence: 0.752332653809524

00:31:00.816 --> 00:31:02.276 with breast cancer and figuring

NOTE Confidence: 0.752332653809524

00:31:02.276 --> 00:31:04.594 out what type of surgeries with

NOTE Confidence: 0.752332653809524

00:31:04.594 --> 00:31:06.861 benefits these patients at the most.

NOTE Confidence: 0.752332653809524

00:31:06.861 --> 00:31:09.240 And then you can see some of the

NOTE Confidence: 0.752332653809524

00:31:09.240 --> 00:31:11.466 implants some of the 3D implants

NOTE Confidence: 0.752332653809524

00:31:11.466 --> 00:31:13.202 vertebres that can be patient

NOTE Confidence: 0.752332653809524

00:31:13.202 --> 00:31:16.086 specific for the patient you can see.

NOTE Confidence: 0.752332653809524

00:31:16.090 --> 00:31:19.010 Half his sacrum patient specific

NOTE Confidence: 0.752332653809524

00:31:19.010 --> 00:31:20.854 for these particular patients,

NOTE Confidence: 0.752332653809524

00:31:20.854 --> 00:31:22.698 we're looking at different

NOTE Confidence: 0.752332653809524

00:31:22.698 --> 00:31:25.159 modeling to reconstruct the spine.

NOTE Confidence: 0.752332653809524

00:31:25.160 --> 00:31:25.573 Again,

NOTE Confidence: 0.752332653809524

00:31:25.573 --> 00:31:27.225 these are all specifically

NOTE Confidence: 0.752332653809524

00:31:27.225 --> 00:31:28.978 for the patients itself,

NOTE Confidence: 0.752332653809524

00:31:28.978 --> 00:31:32.534 so it's just some of the slides

NOTE Confidence: 0.752332653809524

00:31:32.534 --> 00:31:34.920 that we are doing right now.

NOTE Confidence: 0.752332653809524

00:31:34.920 --> 00:31:35.850 So in conclusion,

NOTE Confidence: 0.752332653809524

00:31:35.850 --> 00:31:37.442 the management is challenging,

NOTE Confidence: 0.752332653809524

00:31:37.442 --> 00:31:39.432 it can restore and protect

NOTE Confidence: 0.752332653809524

00:31:39.432 --> 00:31:40.400 neurological function.

NOTE Confidence: 0.752332653809524

00:31:40.400 --> 00:31:41.524 It can improve pain,

NOTE Confidence: 0.752332653809524

00:31:41.524 --> 00:31:42.929 it can impact the quality

NOTE Confidence: 0.752332653809524

00:31:42.929 --> 00:31:44.300 of the patients life.

NOTE Confidence: 0.752332653809524

00:31:44.300 --> 00:31:46.020 Understanding the biology of these

NOTE Confidence: 0.752332653809524

00:31:46.020 --> 00:31:47.740 tumors is critical in defining

NOTE Confidence: 0.752332653809524

00:31:47.793 --> 00:31:49.865 the goal of treatment in a given

NOTE Confidence: 0.752332653809524

00:31:49.865 --> 00:31:51.678 patient and determining the most

NOTE Confidence: 0.752332653809524

00:31:51.678 --> 00:31:52.980 appropriate therapeutic options.

NOTE Confidence: 0.752332653809524

00:31:52.980 --> 00:31:54.635 Surgeons dealing with this neoplasm

NOTE Confidence: 0.752332653809524

00:31:54.635 --> 00:31:56.290 really should be familiar with.

NOTE Confidence: 0.752332653809524

00:31:56.290 --> 00:31:59.140 All surgical approaches as well as

NOTE Confidence: 0.752332653809524

00:31:59.140 --> 00:32:01.040 complex anterior posterior construction

NOTE Confidence: 0.752332653809524

00:32:01.105 --> 00:32:03.125 techniques in order to provide

NOTE Confidence: 0.752332653809524

00:32:03.125 --> 00:32:05.145 optimal care for these patients.

NOTE Confidence: 0.752332653809524

00:32:05.150 --> 00:32:07.680 So overall I want to end up as saying it,

NOTE Confidence: 0.752332653809524

00:32:07.680 --> 00:32:09.990 try it. Don't try to be good.

NOTE Confidence: 0.752332653809524

00:32:09.990 --> 00:32:12.468 Uhm, thank you.

NOTE Confidence: 0.752332653809524

00:32:12.470 --> 00:32:12.780 OK,

NOTE Confidence: 0.856067879285714

00:32:12.790 --> 00:32:15.118 thank you very much for a really fascinating

NOTE Confidence: 0.856067879285714

00:32:15.118 --> 00:32:17.129 talk and let it challenging field.

NOTE Confidence: 0.856067879285714

00:32:17.130 --> 00:32:18.990 Unfortunately, since we're running late,

NOTE Confidence: 0.856067879285714

00:32:18.990 --> 00:32:20.250 we won't have time for questions.

NOTE Confidence: 0.856067879285714

00:32:20.250 --> 00:32:21.470 I know there are some,

NOTE Confidence: 0.856067879285714

00:32:21.470 --> 00:32:23.125 so please direct your questions

NOTE Confidence: 0.856067879285714

00:32:23.125 --> 00:32:25.010 directly to Doctor Mandel,

NOTE Confidence: 0.856067879285714

00:32:25.010 --> 00:32:26.610 but we do have a second speaker today.

NOTE Confidence: 0.856067879285714

00:32:26.610 --> 00:32:27.914 Thank you very much.

NOTE Confidence: 0.856067879285714

00:32:27.914 --> 00:32:29.670 Thank you so our second speaker

NOTE Confidence: 0.856067879285714

00:32:29.670 --> 00:32:31.273 today is Henry Park and you

NOTE Confidence: 0.856067879285714

00:32:31.273 --> 00:32:32.833 can maybe get your slides up.

NOTE Confidence: 0.856067879285714

00:32:32.833 --> 00:32:35.048 Henry is an assistant professor

NOTE Confidence: 0.856067879285714

00:32:35.048 --> 00:32:37.334 of therapeutic radiology here and

NOTE Confidence: 0.856067879285714

00:32:37.334 --> 00:32:39.549 chief of Rip Thoracic radiotherapy.

NOTE Confidence: 0.856067879285714

00:32:39.550 --> 00:32:40.734 He received his undergraduate

NOTE Confidence: 0.856067879285714

00:32:40.734 --> 00:32:42.214 and medical degrees from Yale

NOTE Confidence: 0.856067879285714

00:32:42.214 --> 00:32:43.879 and completed internal medicine.

NOTE Confidence: 0.856067879285714

00:32:43.880 --> 00:32:46.574 Training of the Harvard system then

NOTE Confidence: 0.856067879285714

00:32:46.574 --> 00:32:49.418 returned to Yale for radiation oncology.

NOTE Confidence: 0.856067879285714

00:32:49.420 --> 00:32:51.418 He specializes in radiation therapy for

NOTE Confidence: 0.856067879285714

00:32:51.418 --> 00:32:53.766 lung cancer and had neck cancer and

NOTE Confidence: 0.856067879285714

00:32:53.766 --> 00:32:56.140 brain tumors and is also quite active

NOTE Confidence: 0.856067879285714

00:32:56.140 --> 00:32:57.880 in comparative effectiveness in health

NOTE Confidence: 0.856067879285714

00:32:57.936 --> 00:32:59.976 services research as well as Serbian.

NOTE Confidence: 0.856067879285714

00:32:59.980 --> 00:33:02.208 As our program Director,

NOTE Confidence: 0.856067879285714

00:33:02.208 --> 00:33:04.436 residency director in in

NOTE Confidence: 0.856067879285714

00:33:04.436 --> 00:33:05.550 therapeutic radiology.

NOTE Confidence: 0.856067879285714

00:33:05.550 --> 00:33:07.867 So Henry on the floor is yours.

NOTE Confidence: 0.946993222

00:33:08.340 --> 00:33:10.640 OK, thank you very much for

NOTE Confidence: 0.946993222

00:33:10.640 --> 00:33:11.560 the very kind introduction.

NOTE Confidence: 0.946993222

00:33:11.560 --> 00:33:13.342 So today I'll be speaking about

NOTE Confidence: 0.946993222

00:33:13.342 --> 00:33:15.149 the new directions in Lung SBRT.

NOTE Confidence: 0.8504905925

00:33:18.050 --> 00:33:19.418 So here my disclosures.

NOTE Confidence: 0.750373582105263

00:33:21.490 --> 00:33:23.786 So that my my my goals today to

NOTE Confidence: 0.750373582105263

00:33:23.786 --> 00:33:25.316 discuss updated evidence on the

NOTE Confidence: 0.750373582105263

00:33:25.316 --> 00:33:27.104 role of SBRT in early stage.

NOTE Confidence: 0.750373582105263

00:33:27.110 --> 00:33:28.762 Non small cell lung cancer as well

NOTE Confidence: 0.750373582105263

00:33:28.762 --> 00:33:30.138 as long although ministered disease

NOTE Confidence: 0.750373582105263

00:33:30.138 --> 00:33:32.280 will also be reviewing our lung cancer

NOTE Confidence: 0.750373582105263

00:33:32.280 --> 00:33:33.678 clinical trials that involve longest

NOTE Confidence: 0.750373582105263

00:33:33.678 --> 00:33:37.829 period T that we've had open here at Yale.

NOTE Confidence: 0.750373582105263

00:33:37.830 --> 00:33:39.167 So first we'll start with early stage,

NOTE Confidence: 0.750373582105263

00:33:39.170 --> 00:33:40.814 non small cell,

NOTE Confidence: 0.750373582105263

00:33:40.814 --> 00:33:42.458 medically inoperable patients.

NOTE Confidence: 0.750373582105263

00:33:42.460 --> 00:33:44.876 So if here we have an elderly patient

NOTE Confidence: 0.750373582105263

00:33:44.876 --> 00:33:46.970 with lung nodule that's deemed

NOTE Confidence: 0.750373582105263

00:33:46.970 --> 00:33:48.783 medically inoperable to because

NOTE Confidence: 0.750373582105263

00:33:48.783 --> 00:33:50.748 of the patients pulmonary status,

NOTE Confidence: 0.750373582105263

00:33:50.750 --> 00:33:53.126 how do we treat so really?

NOTE Confidence: 0.750373582105263

00:33:53.130 --> 00:33:54.565 It's all about the real estate mantra.

NOTE Confidence: 0.750373582105263

00:33:54.570 --> 00:33:57.402 It's about location, location,

NOTE Confidence: 0.750373582105263

00:33:57.402 --> 00:33:58.110 location.

NOTE Confidence: 0.750373582105263

00:33:58.110 --> 00:34:00.660 How we end up treating this so SPFT

NOTE Confidence: 0.750373582105263

00:34:00.660 --> 00:34:02.250 those fractionation just to kind of

NOTE Confidence: 0.750373582105263

00:34:02.250 --> 00:34:04.306 walk you through a few terms here

NOTE Confidence: 0.750373582105263

00:34:04.306 --> 00:34:05.781 when we talk about conventionally

NOTE Confidence: 0.750373582105263

00:34:05.838 --> 00:34:07.518 factoring fractionated radiation,

NOTE Confidence: 0.750373582105263

00:34:07.520 --> 00:34:09.249 we talk about low dose per fraction,

NOTE Confidence: 0.750373582105263

00:34:09.250 --> 00:34:11.610 about two grade per day over many fractions,

NOTE Confidence: 0.750373582105263

00:34:11.610 --> 00:34:13.770 usually about 30 to 35 fractions

NOTE Confidence: 0.750373582105263

00:34:13.770 --> 00:34:15.720 over six to seven weeks.

NOTE Confidence: 0.750373582105263

00:34:15.720 --> 00:34:17.106 Hypofractionated radiation is

NOTE Confidence: 0.750373582105263

00:34:17.106 --> 00:34:19.416 a moderate dose per fraction,

NOTE Confidence: 0.750373582105263

00:34:19.420 --> 00:34:20.967 about three to seven grade per day

NOTE Confidence: 0.750373582105263

00:34:20.967 --> 00:34:22.618 over a fewer number of fractions,

NOTE Confidence: 0.750373582105263

00:34:22.620 --> 00:34:24.708 about 8 to 20 on SBRT would be

NOTE Confidence: 0.750373582105263

00:34:24.708 --> 00:34:26.579 a high dose per fraction,

NOTE Confidence: 0.750373582105263

00:34:26.580 --> 00:34:28.160 so usually tend to 18,

NOTE Confidence: 0.750373582105263

00:34:28.160 --> 00:34:30.296 but really up to even 34 grave over

NOTE Confidence: 0.750373582105263

00:34:30.296 --> 00:34:32.418 a very few number of fractions,

NOTE Confidence: 0.750373582105263

00:34:32.420 --> 00:34:34.212 which is defined in the US as

NOTE Confidence: 0.750373582105263

00:34:34.212 --> 00:34:35.670 one to five fractions.

NOTE Confidence: 0.750373582105263

00:34:35.670 --> 00:34:37.260 I'll also talk about this concept,

NOTE Confidence: 0.750373582105263

00:34:37.260 --> 00:34:40.230 called biologically effective dose orbed.

NOTE Confidence: 0.750373582105263

00:34:40.230 --> 00:34:43.080 This speed increases with higher dose

NOTE Confidence: 0.750373582105263

00:34:43.080 --> 00:34:45.820 per fraction and actually increases.

NOTE Confidence: 0.750373582105263

00:34:45.820 --> 00:34:47.608 With a lower number of fractions,

NOTE Confidence: 0.750373582105263

00:34:47.610 --> 00:34:49.836 so 54 Gray and three fractions

NOTE Confidence: 0.750373582105263

00:34:49.836 --> 00:34:51.900 is actually higher in bedded,

NOTE Confidence: 0.750373582105263

00:34:51.900 --> 00:34:54.288 in 60 Gray and five fractions,

NOTE Confidence: 0.750373582105263

00:34:54.290 --> 00:34:55.988 and that is higher than 60

NOTE Confidence: 0.750373582105263

00:34:55.988 --> 00:34:56.837 grade 15 fractions,

NOTE Confidence: 0.750373582105263

00:34:56.840 --> 00:34:59.024 which is there which is afterwards are

NOTE Confidence: 0.750373582105263

00:34:59.024 --> 00:35:01.440 higher than 60 Gray in in 30 fractions.

NOTE Confidence: 0.707227175

00:35:03.490 --> 00:35:05.767 So in an effort for us for tumors that

NOTE Confidence: 0.707227175

00:35:05.767 --> 00:35:07.959 are outside was called No fly zone,

NOTE Confidence: 0.707227175

00:35:07.960 --> 00:35:10.095 we call this the the fly zone,

NOTE Confidence: 0.707227175

00:35:10.100 --> 00:35:12.164 which is within two centimeters of

NOTE Confidence: 0.707227175

00:35:12.164 --> 00:35:13.540 proximal tracheal bronchial tree.

NOTE Confidence: 0.707227175

00:35:13.540 --> 00:35:15.532 Anything that's peripheral to that are

NOTE Confidence: 0.707227175

00:35:15.532 --> 00:35:17.929 outside of it can be treated in in,

NOTE Confidence: 0.707227175

00:35:17.930 --> 00:35:20.107 in in the user with a high

NOTE Confidence: 0.707227175

00:35:20.107 --> 00:35:21.710 dose 3 fraction regimen,

NOTE Confidence: 0.707227175

00:35:21.710 --> 00:35:24.041 so we know from the chisel trial the best

NOTE Confidence: 0.707227175

00:35:24.041 --> 00:35:26.256 party is is superior to conventionally

NOTE Confidence: 0.707227175

00:35:26.256 --> 00:35:28.156 fractionated radiation for stage one

NOTE Confidence: 0.707227175

00:35:28.215 --> 00:35:30.308 non small cell lung cancers like this.

NOTE Confidence: 0.707227175

00:35:30.310 --> 00:35:32.970 But we know that if you're treating

NOTE Confidence: 0.707227175

00:35:32.970 --> 00:35:35.240 within the central region of this.

NOTE Confidence: 0.707227175

00:35:35.240 --> 00:35:38.219 This area, then the plastic can be too high,

NOTE Confidence: 0.707227175

00:35:38.220 --> 00:35:40.530 whereas the opening treat outside of it.

NOTE Confidence: 0.707227175

00:35:40.530 --> 00:35:43.394 The outcomes of an excellent 98% control at

NOTE Confidence: 0.707227175

00:35:43.394 --> 00:35:45.718 three years and 90% control in five years.

NOTE Confidence: 0.852341551904762

00:35:47.960 --> 00:35:49.920 Uh so so we did some work here as well

NOTE Confidence: 0.852341551904762

00:35:49.974 --> 00:35:51.815 as some other places where we looked

NOTE Confidence: 0.852341551904762

00:35:51.815 --> 00:35:53.836 at for central tumors. How do we?

NOTE Confidence: 0.852341551904762

00:35:53.836 --> 00:35:55.740 How do we proceed with SBRT here?

NOTE Confidence: 0.852341551904762

00:35:55.740 --> 00:35:57.796 So this is a program that was started

NOTE Confidence: 0.852341551904762

00:35:57.796 --> 00:35:59.701 by Roy Decker several years ago

NOTE Confidence: 0.852341551904762

00:35:59.701 --> 00:36:01.699 and really to decrease the dose,

NOTE Confidence: 0.852341551904762

00:36:01.700 --> 00:36:03.440 but also standard fractionation

NOTE Confidence: 0.852341551904762

00:36:03.440 --> 00:36:04.745 to five sessions.

NOTE Confidence: 0.852341551904762

00:36:04.750 --> 00:36:07.956 So using looking at your retrospective data,

NOTE Confidence: 0.852341551904762

00:36:07.960 --> 00:36:10.138 we found that overall survival local

NOTE Confidence: 0.852341551904762

00:36:10.138 --> 00:36:12.056 control and toxicity were similar

NOTE Confidence: 0.852341551904762

00:36:12.056 --> 00:36:14.076 between central and peripheral tumors

NOTE Confidence: 0.852341551904762

00:36:14.076 --> 00:36:16.339 that have been followed up with an

NOTE Confidence: 0.852341551904762

00:36:16.340 --> 00:36:18.629 RPG 0813 trial phase one two study.

NOTE Confidence: 0.852341551904762

00:36:18.630 --> 00:36:21.248 How that that was using those escalation

NOTE Confidence: 0.852341551904762

00:36:21.248 --> 00:36:23.333 with five fractions to see that

NOTE Confidence: 0.852341551904762

00:36:23.333 --> 00:36:25.426 there really it it really all there,

NOTE Confidence: 0.852341551904762

00:36:25.430 --> 00:36:26.996 the doses that they were using.

NOTE Confidence: 0.852341551904762

00:36:27.000 --> 00:36:29.090 This is safe and effective.

NOTE Confidence: 0.852341551904762

00:36:29.090 --> 00:36:31.250 For central tumors.

NOTE Confidence: 0.852341551904762

00:36:31.250 --> 00:36:32.714 So we have a trial here that I've

NOTE Confidence: 0.852341551904762

00:36:32.714 --> 00:36:33.812 been working with Doctor Peters

NOTE Confidence: 0.852341551904762

00:36:33.812 --> 00:36:34.957 for the last several years.

NOTE Confidence: 0.852341551904762

00:36:34.960 --> 00:36:36.490 This is a dose deescalated

NOTE Confidence: 0.852341551904762

00:36:36.490 --> 00:36:37.408 3 fraction measurement.

NOTE Confidence: 0.852341551904762

00:36:37.410 --> 00:36:39.258 We need to call it dream.

NOTE Confidence: 0.852341551904762

00:36:39.260 --> 00:36:41.006 This is for central but not

NOTE Confidence: 0.852341551904762

00:36:41.006 --> 00:36:42.170 Ultra central lung tumors.

NOTE Confidence: 0.852341551904762

00:36:42.170 --> 00:36:44.222 So either primary non small cell

NOTE Confidence: 0.852341551904762

00:36:44.222 --> 00:36:45.985 lung cancers or metastases that

NOTE Confidence: 0.852341551904762

00:36:45.985 --> 00:36:48.302 uses a similar BB to current five

NOTE Confidence: 0.852341551904762

00:36:48.302 --> 00:36:50.030 fraction regiments but lower than

NOTE Confidence: 0.852341551904762

00:36:50.030 --> 00:36:51.374 current three fraction regiments

NOTE Confidence: 0.852341551904762

00:36:51.374 --> 00:36:53.518 to be more convenient for patients.

NOTE Confidence: 0.852341551904762

00:36:53.518 --> 00:36:55.398 Given that we're not necessarily

NOTE Confidence: 0.852341551904762

00:36:55.398 --> 00:36:57.694 sure that those D escalation as

NOTE Confidence: 0.852341551904762

00:36:57.694 --> 00:36:59.238 well as extending fractionation

NOTE Confidence: 0.852341551904762

00:36:59.238 --> 00:37:01.490 is really essential in this case.

NOTE Confidence: 0.852341551904762

00:37:01.490 --> 00:37:04.170 So we're looking at a lower dose 3

NOTE Confidence: 0.852341551904762

00:37:04.170 --> 00:37:06.420 fraction instead for the central tumors,

NOTE Confidence: 0.852341551904762

00:37:06.420 --> 00:37:08.436 we define this as being within 2 centimeters,

NOTE Confidence: 0.852341551904762

00:37:08.440 --> 00:37:11.000 but not a budding the the the Safa,

NOTE Confidence: 0.852341551904762

00:37:11.000 --> 00:37:13.928 guess hard or or the tricky monkey tree.

NOTE Confidence: 0.852341551904762

00:37:13.930 --> 00:37:15.680 So as a phase one two study,

NOTE Confidence: 0.852341551904762

00:37:15.680 --> 00:37:17.408 we're targeting 60 patients in total

NOTE Confidence: 0.852341551904762

00:37:17.408 --> 00:37:19.190 over the course of five years.

NOTE Confidence: 0.852341551904762

00:37:19.190 --> 00:37:20.686 We had this open for the past year

NOTE Confidence: 0.852341551904762

00:37:20.686 --> 00:37:22.237 and have a clear about 13 patients.

NOTE Confidence: 0.852341551904762

00:37:22.240 --> 00:37:24.080 So we were pretty much on target here.

NOTE Confidence: 0.852341551904762

00:37:24.080 --> 00:37:25.610 Our primary endpoints are grade three

NOTE Confidence: 0.852341551904762

00:37:25.610 --> 00:37:27.410 plus toxicity as well as local control.

NOTE Confidence: 0.671477112

00:37:30.290 --> 00:37:31.930 Also, for Ultra Central tumors,

NOTE Confidence: 0.671477112

00:37:31.930 --> 00:37:34.346 were there either a budding or within a

NOTE Confidence: 0.671477112

00:37:34.346 --> 00:37:36.608 centimeter or critical central structures.

NOTE Confidence: 0.671477112

00:37:36.610 --> 00:37:38.479 Do we avoid SBRT altogether and then

NOTE Confidence: 0.671477112

00:37:38.479 --> 00:37:40.589 use a more fractionated Benjamin?

NOTE Confidence: 0.671477112

00:37:40.590 --> 00:37:42.050 It's the highest trial here,

NOTE Confidence: 0.671477112

00:37:42.050 --> 00:37:43.688 just published this year that looked

NOTE Confidence: 0.671477112

00:37:43.688 --> 00:37:45.424 at high dose 8 fraction regiments

NOTE Confidence: 0.671477112

00:37:45.424 --> 00:37:47.776 with a similar be the to the current

NOTE Confidence: 0.671477112

00:37:47.836 --> 00:37:49.441 five fraction regiment and found

NOTE Confidence: 0.671477112

00:37:49.441 --> 00:37:51.778 actually the closer you get to the

NOTE Confidence: 0.671477112

00:37:51.778 --> 00:37:53.598 mainstem bronchi or the trachea,

NOTE Confidence: 0.671477112

00:37:53.600 --> 00:37:56.030 the higher likelihood of fatal toxicities.

NOTE Confidence: 0.671477112

00:37:56.030 --> 00:37:58.840 So it's a very serious.

NOTE Confidence: 0.671477112

00:37:58.840 --> 00:38:00.156 This news in general,

NOTE Confidence: 0.671477112

00:38:00.156 --> 00:38:01.801 but but actually even having

NOTE Confidence: 0.671477112

00:38:01.801 --> 00:38:03.566 grade 5 toxicity was up to the

NOTE Confidence: 0.671477112

00:38:03.566 --> 00:38:05.356 even the 30 to 40% of Maine.

NOTE Confidence: 0.671477112

00:38:05.356 --> 00:38:07.582 When you get that close to the

NOTE Confidence: 0.671477112

00:38:07.582 --> 00:38:09.199 mainstem bronchi or trachea.

NOTE Confidence: 0.671477112

00:38:09.200 --> 00:38:10.866 A much lower risk if you're on

NOTE Confidence: 0.671477112

00:38:10.866 --> 00:38:12.580 your low bar bronchus instead.

NOTE Confidence: 0.671477112

00:38:12.580 --> 00:38:14.505 So these are things that are very

NOTE Confidence: 0.671477112

00:38:14.505 --> 00:38:16.663 concerning to us with using these very

NOTE Confidence: 0.671477112

00:38:16.663 --> 00:38:18.577 high doses and ultra central tumors.

NOTE Confidence: 0.671477112

00:38:18.580 --> 00:38:20.463 So what do we do instead when

NOTE Confidence: 0.671477112

00:38:20.463 --> 00:38:21.809 they're not candidates for SBRT

NOTE Confidence: 0.671477112

00:38:21.809 --> 00:38:23.510 based on either tumor size or based

NOTE Confidence: 0.671477112

00:38:23.510 --> 00:38:25.357 on location like we talked about?

NOTE Confidence: 0.671477112

00:38:25.360 --> 00:38:28.041 You know we've been doing some work

NOTE Confidence: 0.671477112

00:38:28.041 --> 00:38:30.958 with with this medical students here.

NOTE Confidence: 0.671477112

00:38:30.960 --> 00:38:33.616 Nadia Saeed and all sassy and using the

NOTE Confidence: 0.671477112

00:38:33.616 --> 00:38:35.610 National Cancer database of you know,

NOTE Confidence: 0.671477112

00:38:35.610 --> 00:38:37.225 with retrospective studies showing that

NOTE Confidence: 0.671477112

00:38:37.225 --> 00:38:39.350 there was higher survival among stage one.

NOTE Confidence: 0.671477112

00:38:39.350 --> 00:38:41.252 Non small cell lung cancer patients

NOTE Confidence: 0.671477112

00:38:41.252 --> 00:38:42.520 who are receiving hyperfractionated

NOTE Confidence: 0.671477112

00:38:42.568 --> 00:38:44.356 radiation compared to conventionally

NOTE Confidence: 0.671477112

00:38:44.356 --> 00:38:45.250 fractionated radiation,

NOTE Confidence: 0.671477112

00:38:45.250 --> 00:38:48.112 especially when using a higher higher BD.

NOTE Confidence: 0.671477112

00:38:48.112 --> 00:38:50.548 So we also look I'm looking

NOTE Confidence: 0.671477112

00:38:50.548 --> 00:38:53.028 at a yield databases as well.

NOTE Confidence: 0.671477112

00:38:53.028 --> 00:38:55.224 Comparing a lower dose 15 fraction

NOTE Confidence: 0.671477112

00:38:55.224 --> 00:38:57.340 regiment to a higher dose eating

NOTE Confidence: 0.671477112

00:38:57.340 --> 00:38:59.325 fraction regimen to those who are not

NOTE Confidence: 0.671477112

00:38:59.325 --> 00:39:01.249 candidates for SBRT and we hope that.

NOTE Confidence: 0.671477112

00:39:01.250 --> 00:39:02.430 One day I will be.

NOTE Confidence: 0.671477112

00:39:02.430 --> 00:39:04.020 We can maybe compare this winter

NOTE Confidence: 0.671477112

00:39:04.020 --> 00:39:05.370 to do an SPRT veg.

NOTE Confidence: 0.671477112

00:39:05.370 --> 00:39:06.380 And for those who are,

NOTE Confidence: 0.671477112

00:39:06.380 --> 00:39:06.980 you know,

NOTE Confidence: 0.671477112

00:39:06.980 --> 00:39:10.145 maybe a lower dose SP regimen to see what

NOTE Confidence: 0.671477112

00:39:10.145 --> 00:39:13.330 works best for these ultra central teams.

NOTE Confidence: 0.671477112

00:39:13.330 --> 00:39:15.530 On a different topic here

NOTE Confidence: 0.671477112

00:39:15.530 --> 00:39:16.850 for multiple targets,

NOTE Confidence: 0.671477112

00:39:16.850 --> 00:39:18.100 if we have multiple nodes,

NOTE Confidence: 0.671477112

00:39:18.100 --> 00:39:19.189 muscle lung cancers,

NOTE Confidence: 0.671477112

00:39:19.189 --> 00:39:21.004 which we sometimes do encounter,

NOTE Confidence: 0.671477112

00:39:21.010 --> 00:39:23.859 can they be treated simultaneously with SPRT?

NOTE Confidence: 0.671477112

00:39:23.860 --> 00:39:25.785 This is work that we just published

NOTE Confidence: 0.671477112

00:39:25.785 --> 00:39:27.376 this past week that looking at

NOTE Confidence: 0.671477112

00:39:27.376 --> 00:39:29.382 and we look at our own data here

NOTE Confidence: 0.671477112

00:39:29.382 --> 00:39:31.128 among 60 patients treated over the

NOTE Confidence: 0.671477112

00:39:31.128 --> 00:39:33.882 last 12 years to 126 lesions and

NOTE Confidence: 0.671477112

00:39:33.882 --> 00:39:36.264 found 87% local control and 70%

NOTE Confidence: 0.671477112

00:39:36.264 --> 00:39:38.430 overall survival at the two year

NOTE Confidence: 0.671477112

00:39:38.502 --> 00:39:40.510 mark with acceptable toxicity.

NOTE Confidence: 0.671477112

00:39:40.510 --> 00:39:43.492 .3% Grade 2 toxicity and only 3% grade.

NOTE Confidence: 0.671477112

00:39:43.492 --> 00:39:45.636 Three plus toxicity in both of those cases

NOTE Confidence: 0.671477112

00:39:45.636 --> 00:39:47.000 we would have used a different regimen.

NOTE Confidence: 0.671477112

00:39:47.000 --> 00:39:48.926 These days those were both treated.

NOTE Confidence: 0.861891185

00:39:51.150 --> 00:39:53.738 A long time ago.

NOTE Confidence: 0.861891185

00:39:53.740 --> 00:39:56.057 So now moving on to SBRT plus

NOTE Confidence: 0.861891185

00:39:56.057 --> 00:39:57.729 systemic therapy so you know,

NOTE Confidence: 0.861891185

00:39:57.730 --> 00:39:59.234 we know from the surgical that is shared.

NOTE Confidence: 0.861891185

00:39:59.240 --> 00:40:00.536 Putting some some words,

NOTE Confidence: 0.861891185

00:40:00.536 --> 00:40:03.166 you know those done done here from Dan

NOTE Confidence: 0.861891185

00:40:03.166 --> 00:40:05.357 Buffa and his group that that patients

NOTE Confidence: 0.861891185

00:40:05.360 --> 00:40:07.688 may who undergo surgery may benefit

NOTE Confidence: 0.861891185

00:40:07.688 --> 00:40:10.000 from chemotherapy and even more recent

NOTE Confidence: 0.861891185

00:40:10.000 --> 00:40:12.150 trials showing that immunotherapy may

NOTE Confidence: 0.861891185

00:40:12.150 --> 00:40:14.700 help in selected patients as well.

NOTE Confidence: 0.861891185

00:40:14.700 --> 00:40:16.986 So can SBRT patients also benefit

NOTE Confidence: 0.861891185

00:40:16.986 --> 00:40:18.910 from systemic therapy as well?

NOTE Confidence: 0.861891185

00:40:18.910 --> 00:40:21.358 We looked at our data here that showed

NOTE Confidence: 0.861891185

00:40:21.358 --> 00:40:23.838 that patients who were perceived.

NOTE Confidence: 0.861891185

00:40:23.838 --> 00:40:25.464 Mantis stomach therapy,

NOTE Confidence: 0.861891185

00:40:25.470 --> 00:40:28.986 you know did have a lower risk

NOTE Confidence: 0.861891185

00:40:28.986 --> 00:40:30.798 of regional distant failure,

NOTE Confidence: 0.861891185

00:40:30.800 --> 00:40:33.024 so but we do also do know that

NOTE Confidence: 0.861891185

00:40:33.024 --> 00:40:34.823 chemotherapy is is challenging in

NOTE Confidence: 0.861891185

00:40:34.823 --> 00:40:36.788 this offering fail SPT population,

NOTE Confidence: 0.861891185

00:40:36.790 --> 00:40:39.051 which has garnered a lot of interest

NOTE Confidence: 0.861891185

00:40:39.051 --> 00:40:40.520 in using immunotherapy instead,

NOTE Confidence: 0.861891185

00:40:40.520 --> 00:40:43.160 so can be immune checkpoint inhibitors.

NOTE Confidence: 0.861891185

00:40:43.160 --> 00:40:45.016 One study we have two studies open here

NOTE Confidence: 0.861891185

00:40:45.016 --> 00:40:47.205 at Yale that are looking at this question.

NOTE Confidence: 0.861891185

00:40:47.210 --> 00:40:49.046 One is the keynote 867 trial,

NOTE Confidence: 0.861891185

00:40:49.050 --> 00:40:51.216 which is a phase three study

NOTE Confidence: 0.861891185

00:40:51.216 --> 00:40:52.299 targeting 500 patients.

NOTE Confidence: 0.861891185

00:40:52.300 --> 00:40:53.956 This would look at SBRT plus.

NOTE Confidence: 0.861891185

00:40:53.960 --> 00:40:58.056 Concurrent in admin panel is a man versus.

NOTE Confidence: 0.861891185

00:40:58.060 --> 00:40:59.740 For stage one and two non small

NOTE Confidence: 0.861891185

00:40:59.740 --> 00:41:01.169 cell lung cancer this is open.

NOTE Confidence: 0.861891185

00:41:01.170 --> 00:41:02.858 It's been opened at the in New Haven

NOTE Confidence: 0.861891185

00:41:02.858 --> 00:41:04.476 and North Haven only at this point,

NOTE Confidence: 0.861891185

00:41:04.480 --> 00:41:08.003 but this would be a cute free week infusion.

NOTE Confidence: 0.861891185

00:41:08.003 --> 00:41:08.889 Either way,

NOTE Confidence: 0.861891185

00:41:08.889 --> 00:41:11.990 whether you get the immunotherapy or placebo.

NOTE Confidence: 0.861891185

00:41:11.990 --> 00:41:14.006 But the endpoints being event free

NOTE Confidence: 0.861891185

00:41:14.006 --> 00:41:15.350 survival and overall survival,

NOTE Confidence: 0.861891185

00:41:15.350 --> 00:41:17.191 we also are about ready to activate

NOTE Confidence: 0.861891185

00:41:17.191 --> 00:41:17.980 this new study.

NOTE Confidence: 0.861891185

00:41:17.980 --> 00:41:19.054 SWOG S 1914,

NOTE Confidence: 0.861891185

00:41:19.054 --> 00:41:21.560 which has been activated nationally but ready

NOTE Confidence: 0.861891185

00:41:21.626 --> 00:41:24.155 to open here and all of our care centers.

NOTE Confidence: 0.861891185

00:41:24.160 --> 00:41:26.620 So it's a phase three that's

NOTE Confidence: 0.861891185

00:41:26.620 --> 00:41:27.850 targeting 480 patients.

NOTE Confidence: 0.861891185

00:41:27.850 --> 00:41:28.578 Similar question,

NOTE Confidence: 0.861891185

00:41:28.578 --> 00:41:31.126 but the slightly different SBRT plus minus

NOTE Confidence: 0.861891185

00:41:31.126 --> 00:41:33.697 MU Advent concurrent attachment therapy,

NOTE Confidence: 0.861891185

00:41:33.700 --> 00:41:35.746 which will be in this case

NOTE Confidence: 0.861891185

00:41:35.746 --> 00:41:38.940 different mean therapy would be.

NOTE Confidence: 0.861891185

00:41:38.940 --> 00:41:41.460 No friend only for six months instead of 12.

NOTE Confidence: 0.861891185

00:41:41.460 --> 00:41:42.880 A big difference is that.

NOTE Confidence: 0.805608484347826

00:41:46.370 --> 00:41:49.051 Truly just got the SBRT and then

NOTE Confidence: 0.805608484347826

00:41:49.051 --> 00:41:51.122 there's only including high risk

NOTE Confidence: 0.805608484347826

00:41:51.122 --> 00:41:53.672 factors which are size greater than

NOTE Confidence: 0.805608484347826

00:41:53.672 --> 00:41:56.256 two centimeters SUV Max of 6.2 or a

NOTE Confidence: 0.805608484347826

00:41:56.256 --> 00:41:58.510 grade of two to three on lapsing.

NOTE Confidence: 0.805608484347826

00:41:58.510 --> 00:42:01.633 And again this will be open at all care

NOTE Confidence: 0.805608484347826

00:42:01.633 --> 00:42:04.048 centers that have yellow radiation.

NOTE Confidence: 0.805608484347826

00:42:04.050 --> 00:42:05.694 So moving out the early station

NOTE Confidence: 0.805608484347826

00:42:05.694 --> 00:42:06.790 as muscle lung cancer.

NOTE Confidence: 0.805608484347826

00:42:06.790 --> 00:42:08.065 Medically operable patients,

NOTE Confidence: 0.805608484347826

00:42:08.065 --> 00:42:10.615 so can ask European alternative to

NOTE Confidence: 0.805608484347826

00:42:10.615 --> 00:42:13.019 surgery for medically operable patients.

NOTE Confidence: 0.805608484347826

00:42:13.020 --> 00:42:14.330 First was work from there,

NOTE Confidence: 0.805608484347826

00:42:14.330 --> 00:42:15.968 from James you and Kerry Gross.

NOTE Confidence: 0.805608484347826

00:42:15.970 --> 00:42:17.586 Looking at CR Medicare,

NOTE Confidence: 0.805608484347826

00:42:17.586 --> 00:42:20.010 looking at a retrospective study here

NOTE Confidence: 0.805608484347826

00:42:20.010 --> 00:42:22.180 that founded overall survival was

NOTE Confidence: 0.805608484347826

00:42:22.180 --> 00:42:24.232 improved for patients who received

NOTE Confidence: 0.805608484347826

00:42:24.232 --> 00:42:26.596 surgery versus those who received SPRT.

NOTE Confidence: 0.805608484347826

00:42:26.600 --> 00:42:28.305 The short term plasticity did

NOTE Confidence: 0.805608484347826

00:42:28.305 --> 00:42:29.669 seem to favor SPRT,

NOTE Confidence: 0.805608484347826

00:42:29.670 --> 00:42:31.826 but then even out by by about

NOTE Confidence: 0.805608484347826

00:42:31.826 --> 00:42:33.611 two years out in in the.

NOTE Confidence: 0.805608484347826

00:42:33.611 --> 00:42:35.046 National Cancer Database from Denver

NOTE Confidence: 0.805608484347826

00:42:35.046 --> 00:42:36.503 Office Group found that overall

NOTE Confidence: 0.805608484347826

00:42:36.503 --> 00:42:38.165 survival was higher among those who

NOTE Confidence: 0.805608484347826

00:42:38.165 --> 00:42:40.106 got surgery than those who got SPRT

NOTE Confidence: 0.805608484347826

00:42:40.106 --> 00:42:43.112 even after adjusting for known confounders,

NOTE Confidence: 0.805608484347826

00:42:43.112 --> 00:42:45.373 including selecting for only

NOTE Confidence: 0.805608484347826

00:42:45.373 --> 00:42:47.097 patients who had refused.

NOTE Confidence: 0.805608484347826

00:42:47.100 --> 00:42:49.044 He had refused surgery,

NOTE Confidence: 0.805608484347826

00:42:49.044 --> 00:42:50.988 but we're recommending surgery

NOTE Confidence: 0.805608484347826

00:42:50.988 --> 00:42:53.823 for those who had no committees

NOTE Confidence: 0.805608484347826

00:42:53.823 --> 00:42:55.607 or Hello Committee score.

NOTE Confidence: 0.805608484347826

00:42:55.610 --> 00:42:55.901 However,

NOTE Confidence: 0.805608484347826

00:42:55.901 --> 00:42:57.647 we know that selection and indication

NOTE Confidence: 0.805608484347826

00:42:57.647 --> 00:42:59.683 bias is a concern when comparing

NOTE Confidence: 0.805608484347826

00:42:59.683 --> 00:43:01.159 surgery and SBRT retrospectively

NOTE Confidence: 0.805608484347826

00:43:01.159 --> 00:43:03.318 there have been there's work out of

NOTE Confidence: 0.805608484347826

00:43:03.318 --> 00:43:05.157 here as well as other places showing

NOTE Confidence: 0.805608484347826

00:43:05.157 --> 00:43:06.842 that patients who are considered

NOTE Confidence: 0.805608484347826

00:43:06.842 --> 00:43:08.943 operable who do receive SPRT do

NOTE Confidence: 0.805608484347826

00:43:08.943 --> 00:43:10.683 have higher overall survival and

NOTE Confidence: 0.805608484347826

00:43:10.683 --> 00:43:12.104 progression free survival compared

NOTE Confidence: 0.805608484347826

00:43:12.104 --> 00:43:13.729 to those who are inoperable,

NOTE Confidence: 0.805608484347826

00:43:13.730 --> 00:43:17.629 so it's difficult to compare these patients.

NOTE Confidence: 0.805608484347826

00:43:17.630 --> 00:43:19.475 Contracted an apples to apples

NOTE Confidence: 0.805608484347826

00:43:19.475 --> 00:43:21.747 comparison even though they do have

NOTE Confidence: 0.805608484347826

00:43:21.747 --> 00:43:24.246 similar local control and regional

NOTE Confidence: 0.805608484347826

00:43:24.246 --> 00:43:27.450 distant failure as well among operable

NOTE Confidence: 0.805608484347826

00:43:27.538 --> 00:43:30.170 versus inoperable SBRT patients.

NOTE Confidence: 0.805608484347826

00:43:30.170 --> 00:43:32.620 So I think that because like this,

NOTE Confidence: 0.805608484347826

00:43:32.620 --> 00:43:33.296 this this,

NOTE Confidence: 0.805608484347826

00:43:33.296 --> 00:43:35.324 this four part reviews here that

NOTE Confidence: 0.805608484347826

00:43:35.330 --> 00:43:37.370 I've drawn a few figures from.

NOTE Confidence: 0.805608484347826

00:43:37.370 --> 00:43:39.080 You know one thing you should

NOTE Confidence: 0.805608484347826

00:43:39.080 --> 00:43:40.962 use was showing here is that

NOTE Confidence: 0.805608484347826

00:43:40.962 --> 00:43:42.672 randomized phase three trials of

NOTE Confidence: 0.805608484347826

00:43:42.672 --> 00:43:44.440 surgery versus SBRT are ongoing,

NOTE Confidence: 0.805608484347826

00:43:44.440 --> 00:43:46.215 but have been historically difficult

NOTE Confidence: 0.805608484347826

00:43:46.215 --> 00:43:48.580 to recruit in these four here have

NOTE Confidence: 0.805608484347826

00:43:48.580 --> 00:43:51.248 accrued a total of 2.9% of the targets,

NOTE Confidence: 0.805608484347826

00:43:51.248 --> 00:43:53.300 so really they all had the

NOTE Confidence: 0.805608484347826

00:43:53.378 --> 00:43:55.710 clothes being very underpowered.

NOTE Confidence: 0.805608484347826

00:43:55.710 --> 00:43:58.095 There's a Fowler study at the VA that is

NOTE Confidence: 0.805608484347826

00:43:58.095 --> 00:44:00.200 probably the most promising ongoing trial.

NOTE Confidence: 0.805608484347826

00:44:00.200 --> 00:44:02.351 So far as accrued more than I think more

NOTE Confidence: 0.805608484347826

00:44:02.351 --> 00:44:04.299 than all these have combined so far,

NOTE Confidence: 0.805608484347826

00:44:04.300 --> 00:44:06.996 yet this is targeting 670 patients and is

NOTE Confidence: 0.805608484347826

00:44:06.996 --> 00:44:10.214 not due to read out for at least five years.

NOTE Confidence: 0.805608484347826

00:44:10.220 --> 00:44:11.580 So in the meantime,

NOTE Confidence: 0.805608484347826

00:44:11.580 --> 00:44:12.940 what do we do?

NOTE Confidence: 0.805608484347826

00:44:12.940 --> 00:44:13.928 What do we do?

NOTE Confidence: 0.805608484347826

00:44:13.928 --> 00:44:15.891 We know that the stars and roselle

NOTE Confidence: 0.805608484347826

00:44:15.891 --> 00:44:17.971 trials have been actually merged

NOTE Confidence: 0.805608484347826

00:44:17.971 --> 00:44:19.635 together and pooled analysis

NOTE Confidence: 0.805608484347826

00:44:19.700 --> 00:44:21.420 that again both underpowered and

NOTE Confidence: 0.805608484347826

00:44:21.420 --> 00:44:23.456 closed early due to poor accrual.

NOTE Confidence: 0.805608484347826

00:44:23.456 --> 00:44:24.720 They did find it.

NOTE Confidence: 0.805608484347826

00:44:24.720 --> 00:44:25.620 In this case.

NOTE Confidence: 0.805608484347826

00:44:25.620 --> 00:44:27.120 A surprising result that SBRT

NOTE Confidence: 0.805608484347826

00:44:27.120 --> 00:44:28.718 patients actually had higher overall

NOTE Confidence: 0.805608484347826

00:44:28.718 --> 00:44:30.288 survival and in this population.

NOTE Confidence: 0.805608484347826

00:44:30.290 --> 00:44:32.747 Which was a very small population again,

NOTE Confidence: 0.805608484347826

00:44:32.750 --> 00:44:35.634 but it was similar in recurrence Crucible.

NOTE Confidence: 0.805608484347826

00:44:35.640 --> 00:44:37.422 A larger study was done more

NOTE Confidence: 0.805608484347826

00:44:37.422 --> 00:44:38.610 recently a nonrandomized study,

NOTE Confidence: 0.805608484347826

00:44:38.610 --> 00:44:41.586 so single ARM SBRT trial that that had

NOTE Confidence: 0.805608484347826

00:44:41.586 --> 00:44:43.919 better accrual but from Indy Anderson

NOTE Confidence: 0.805608484347826

00:44:43.919 --> 00:44:46.478 that looked at that actually had a

NOTE Confidence: 0.805608484347826

00:44:46.478 --> 00:44:47.930 protocol specified comparison to

NOTE Confidence: 0.768281687222222

00:44:47.989 --> 00:44:49.999 an institutional surgical cohort and

NOTE Confidence: 0.768281687222222

00:44:49.999 --> 00:44:52.086 found that certain outcomes in this

NOTE Confidence: 0.768281687222222

00:44:52.086 --> 00:44:53.546 population was similar to surgery

NOTE Confidence: 0.768281687222222

00:44:53.546 --> 00:44:55.170 and overall survival progression.

NOTE Confidence: 0.768281687222222

00:44:55.170 --> 00:44:56.995 Free survival and other outcomes

NOTE Confidence: 0.768281687222222

00:44:56.995 --> 00:44:58.820 and and again surprising results

NOTE Confidence: 0.768281687222222

00:44:58.885 --> 00:45:00.076 that 87% overall survival.

NOTE Confidence: 0.768281687222222

00:45:00.076 --> 00:45:03.037 At five years for SBRT so hard to know

NOTE Confidence: 0.768281687222222

00:45:03.037 --> 00:45:05.291 how to extrapolate some of the older

NOTE Confidence: 0.768281687222222

00:45:05.291 --> 00:45:07.656 studies that included patients who were

NOTE Confidence: 0.768281687222222

00:45:07.656 --> 00:45:10.030 not great surgical candidates in terms,

NOTE Confidence: 0.768281687222222

00:45:10.030 --> 00:45:12.370 especially in terms of overall survival.

NOTE Confidence: 0.768281687222222

00:45:12.370 --> 00:45:13.714 So at the end you know with

NOTE Confidence: 0.768281687222222

00:45:13.714 --> 00:45:14.910 the fact that it beckoned,

NOTE Confidence: 0.768281687222222

00:45:14.910 --> 00:45:17.292 and several Members who are here

NOTE Confidence: 0.768281687222222

00:45:17.292 --> 00:45:20.098 right now is at the love you

NOTE Confidence: 0.768281687222222

00:45:20.098 --> 00:45:21.706 know from different disciplines.

NOTE Confidence: 0.768281687222222

00:45:21.710 --> 00:45:23.566 We all got together and and it's been

NOTE Confidence: 0.768281687222222

00:45:23.566 --> 00:45:25.586 working on this four part yield guideline.

NOTE Confidence: 0.768281687222222

00:45:25.590 --> 00:45:27.048 That's a collaboration

NOTE Confidence: 0.768281687222222

00:45:27.048 --> 00:45:28.506 that that transformative,

NOTE Confidence: 0.768281687222222

00:45:28.510 --> 00:45:30.700 practical framework for weighing short term

NOTE Confidence: 0.768281687222222

00:45:30.700 --> 00:45:32.960 versus long term benefits and downsides.

NOTE Confidence: 0.768281687222222

00:45:32.960 --> 00:45:34.967 So this is one of many figures in this

NOTE Confidence: 0.768281687222222

00:45:34.967 --> 00:45:37.136 paper that are are looking at, you know how?

NOTE Confidence: 0.768281687222222

00:45:37.136 --> 00:45:38.690 How can we go through all the

NOTE Confidence: 0.768281687222222

00:45:38.751 --> 00:45:40.407 data that's out there right now,

NOTE Confidence: 0.768281687222222

00:45:40.410 --> 00:45:42.178 as imperfect as it is, and?

NOTE Confidence: 0.768281687222222

00:45:42.178 --> 00:45:44.386 Trying to figure out which patients

NOTE Confidence: 0.768281687222222

00:45:44.386 --> 00:45:46.740 you may benefit from SPRT, lobectomy,

NOTE Confidence: 0.768281687222222

00:45:46.740 --> 00:45:48.820 sublumbar resection, or ablation,

NOTE Confidence: 0.768281687222222

00:45:48.820 --> 00:45:50.356 and as you can see in this figure,

NOTE Confidence: 0.768281687222222

00:45:50.360 --> 00:45:54.458 there's nuances with and patient selection

NOTE Confidence: 0.768281687222222

00:45:54.460 --> 00:45:56.218 that's really critical and and and,

NOTE Confidence: 0.768281687222222

00:45:56.220 --> 00:45:57.450 and that was very proud of

NOTE Confidence: 0.768281687222222

00:45:57.450 --> 00:45:58.839 how well our team has worked,

NOTE Confidence: 0.768281687222222

00:45:58.840 --> 00:46:00.835 as in in in a tumor board,

NOTE Confidence: 0.768281687222222

00:46:00.840 --> 00:46:02.016 as well as just on the phone.

NOTE Confidence: 0.768281687222222

00:46:02.020 --> 00:46:05.328 Otherwise working through these.

NOTE Confidence: 0.768281687222222

00:46:05.330 --> 00:46:07.685 Working through the decisions about

NOTE Confidence: 0.768281687222222

00:46:07.685 --> 00:46:10.700 how to handle each individual patient.

NOTE Confidence: 0.768281687222222

00:46:10.700 --> 00:46:12.968 So I'm moving on to long arguments

NOTE Confidence: 0.768281687222222

00:46:12.968 --> 00:46:13.616 that disease,

NOTE Confidence: 0.768281687222222

00:46:13.620 --> 00:46:13.905 uhm,

NOTE Confidence: 0.768281687222222

00:46:13.905 --> 00:46:16.470 I so here we pick up all the mess

NOTE Confidence: 0.768281687222222

00:46:16.545 --> 00:46:19.377 that disease as a intermediate state

NOTE Confidence: 0.768281687222222

00:46:19.377 --> 00:46:21.870 between local and systemic disease

NOTE Confidence: 0.768281687222222

00:46:21.870 --> 00:46:24.198 where the the kind of original

NOTE Confidence: 0.768281687222222

00:46:24.198 --> 00:46:26.096 helmet and excellent definition was

NOTE Confidence: 0.768281687222222

00:46:26.096 --> 00:46:28.063 that there may be a small subset

NOTE Confidence: 0.768281687222222

00:46:28.063 --> 00:46:30.271 for whom radical local treatment of

NOTE Confidence: 0.768281687222222

00:46:30.271 --> 00:46:32.635 primary cancer and almost at legions

NOTE Confidence: 0.768281687222222

00:46:32.640 --> 00:46:34.280 might have a curative potential,

NOTE Confidence: 0.768281687222222

00:46:34.280 --> 00:46:37.439 often defined as 123 or one to five patients.

NOTE Confidence: 0.768281687222222

00:46:37.440 --> 00:46:39.352 So we know the surgery or radiation may

NOTE Confidence: 0.768281687222222

00:46:39.352 --> 00:46:41.610 have a larger role in localized disease.

NOTE Confidence: 0.768281687222222

00:46:41.610 --> 00:46:43.020 With an stomach there be having

NOTE Confidence: 0.768281687222222

00:46:43.020 --> 00:46:44.430 a much smaller role in Wylie,

NOTE Confidence: 0.768281687222222

00:46:44.430 --> 00:46:46.008 metastatic disease is really the opposite,

NOTE Confidence: 0.768281687222222

00:46:46.010 --> 00:46:48.670 where it's stomach therapy is a primary

NOTE Confidence: 0.768281687222222

00:46:48.670 --> 00:46:50.809 role over surgery and radiation.

NOTE Confidence: 0.768281687222222

00:46:50.810 --> 00:46:52.126 But alchemist axes disease,

NOTE Confidence: 0.768281687222222

00:46:52.126 --> 00:46:54.490 there may be a role for both.

NOTE Confidence: 0.768281687222222

00:46:54.490 --> 00:46:57.024 So here this is some going for

NOTE Confidence: 0.768281687222222

00:46:57.024 --> 00:46:59.415 the papers here that some trials

NOTE Confidence: 0.768281687222222

00:46:59.415 --> 00:47:01.869 that are phase two looking at

NOTE Confidence: 0.768281687222222

00:47:01.869 --> 00:47:04.089 local consolidative therapy.

NOTE Confidence: 0.768281687222222

00:47:04.090 --> 00:47:06.578 In this case the Gomez studied in the

NOTE Confidence: 0.768281687222222

00:47:06.578 --> 00:47:08.037 Anderson showed that either surgery

NOTE Confidence: 0.768281687222222

00:47:08.037 --> 00:47:09.990 or SBRT for stage four non small

NOTE Confidence: 0.768281687222222

00:47:10.049 --> 00:47:12.226 cell lung cancer patients with one to

NOTE Confidence: 0.768281687222222

00:47:12.226 --> 00:47:13.864 three metastases and no progression

NOTE Confidence: 0.768281687222222

00:47:13.864 --> 00:47:15.796 after three plus months of chemo,

NOTE Confidence: 0.768281687222222

00:47:15.800 --> 00:47:17.620 actually had increased progression,

NOTE Confidence: 0.768281687222222

00:47:17.620 --> 00:47:19.895 free survival and overall survival.

NOTE Confidence: 0.768281687222222

00:47:19.900 --> 00:47:22.588 Median of 41 versus 17 months

NOTE Confidence: 0.768281687222222

00:47:22.588 --> 00:47:24.380 compared to to not.

NOTE Confidence: 0.768281687222222

00:47:24.380 --> 00:47:27.917 Using a local resolves OK and then use it

NOTE Confidence: 0.768281687222222

00:47:27.917 --> 00:47:30.877 stomach therapy alone after this point.

NOTE Confidence: 0.768281687222222

00:47:30.880 --> 00:47:32.826 This was also shown you know this

NOTE Confidence: 0.768281687222222

00:47:32.826 --> 00:47:34.995 this study just the best PRT but

NOTE Confidence: 0.768281687222222

00:47:34.995 --> 00:47:36.585 similar population stage four non

NOTE Confidence: 0.768281687222222

00:47:36.585 --> 00:47:38.724 small cell lung cancer from the

NOTE Confidence: 0.768281687222222

00:47:38.724 --> 00:47:40.132 southwestern after three plus

NOTE Confidence: 0.768281687222222

00:47:40.132 --> 00:47:41.706 months of chemotherapy this had

NOTE Confidence: 0.768281687222222

00:47:41.706 --> 00:47:43.530 to be stopped early because of

NOTE Confidence: 0.872031570588235

00:47:43.591 --> 00:47:45.646 the very clear progression free

NOTE Confidence: 0.872031570588235

00:47:45.646 --> 00:47:47.004 survival improvement this was.

NOTE Confidence: 0.872031570588235

00:47:47.004 --> 00:47:48.873 This was shut down by the IRB

NOTE Confidence: 0.872031570588235

00:47:48.873 --> 00:47:50.686 because it's not about to be

NOTE Confidence: 0.872031570588235

00:47:50.686 --> 00:47:52.166 ethical to continue this study.

NOTE Confidence: 0.872031570588235

00:47:52.170 --> 00:47:54.634 Uh, and then come see if a comment

NOTE Confidence: 0.872031570588235

00:47:54.634 --> 00:47:56.925 looked at at all domestic cases of

NOTE Confidence: 0.872031570588235

00:47:56.925 --> 00:47:59.404 any primary and found the five year

NOTE Confidence: 0.872031570588235

00:47:59.404 --> 00:48:01.578 overall survival of 42% versus 18%.

NOTE Confidence: 0.872031570588235

00:48:01.578 --> 00:48:03.672 So actually quite similar to the

NOTE Confidence: 0.872031570588235

00:48:03.672 --> 00:48:05.596 Golden study showed that really,

NOTE Confidence: 0.872031570588235

00:48:05.596 --> 00:48:07.567 that's where 4.5% in this case.

NOTE Confidence: 0.872031570588235

00:48:07.567 --> 00:48:09.121 So they they did have three

NOTE Confidence: 0.872031570588235

00:48:09.121 --> 00:48:10.458 that's in this population,

NOTE Confidence: 0.872031570588235

00:48:10.460 --> 00:48:12.091 but there was no quality of life

NOTE Confidence: 0.872031570588235

00:48:12.091 --> 00:48:13.220 difference among among the best.

NOTE Confidence: 0.872031570588235

00:48:13.220 --> 00:48:14.660 So you know, there's always caution.

NOTE Confidence: 0.872031570588235

00:48:14.660 --> 00:48:16.291 Of course it needs to be taken

NOTE Confidence: 0.872031570588235

00:48:16.291 --> 00:48:17.688 when you when you do this,

NOTE Confidence: 0.872031570588235

00:48:17.690 --> 00:48:20.287 all those were the chemotherapy alone era.

NOTE Confidence: 0.872031570588235

00:48:20.290 --> 00:48:22.354 Now we're in the immunotherapy area as well.

NOTE Confidence: 0.872031570588235

00:48:22.360 --> 00:48:24.694 So energy LU002 is the current

NOTE Confidence: 0.872031570588235

00:48:24.694 --> 00:48:26.778 ongoing phase three study that's

NOTE Confidence: 0.872031570588235

00:48:26.778 --> 00:48:29.038 looking at a similar population,

NOTE Confidence: 0.872031570588235

00:48:29.040 --> 00:48:30.834 but now allowing for immunotherapy in

NOTE Confidence: 0.872031570588235

00:48:30.834 --> 00:48:33.009 there in the most recent amendment.

NOTE Confidence: 0.872031570588235

00:48:33.010 --> 00:48:36.195 So I think we still quite relevant

NOTE Confidence: 0.872031570588235

00:48:36.200 --> 00:48:37.700 question to ask at this point.

NOTE Confidence: 0.872031570588235

00:48:37.700 --> 00:48:39.392 They do require that you use

NOTE Confidence: 0.872031570588235

00:48:39.392 --> 00:48:41.259 SBRT for at least one lesion,

NOTE Confidence: 0.872031570588235

00:48:41.260 --> 00:48:43.942 but can use surgery for other

NOTE Confidence: 0.872031570588235

00:48:43.942 --> 00:48:45.283 regions as well.

NOTE Confidence: 0.872031570588235

00:48:45.290 --> 00:48:48.048 So now for long, oligo progressive disease.

NOTE Confidence: 0.872031570588235

00:48:48.050 --> 00:48:50.372 This is a somewhat different concept

NOTE Confidence: 0.872031570588235

00:48:50.372 --> 00:48:52.600 in that there you may not necessarily

NOTE Confidence: 0.872031570588235

00:48:52.600 --> 00:48:54.599 have just a few minutes up front.

NOTE Confidence: 0.872031570588235

00:48:54.600 --> 00:48:56.336 You may have several types of disease and

NOTE Confidence: 0.872031570588235

00:48:56.336 --> 00:48:58.047 have good control with stomach therapy,

NOTE Confidence: 0.872031570588235

00:48:58.050 --> 00:48:59.954 but when you stay on this systemic

NOTE Confidence: 0.872031570588235

00:48:59.954 --> 00:49:01.749 therapy or when you're off of it,

NOTE Confidence: 0.872031570588235

00:49:01.750 --> 00:49:04.837 if one or a few areas grow,

NOTE Confidence: 0.872031570588235

00:49:04.840 --> 00:49:07.210 then you're faced with choices.

NOTE Confidence: 0.872031570588235

00:49:07.210 --> 00:49:09.534 Do you switch therapy to continue therapy,

NOTE Confidence: 0.872031570588235

00:49:09.540 --> 00:49:11.832 or do you add therapy and so

NOTE Confidence: 0.872031570588235

00:49:11.832 --> 00:49:13.939 so so so this is some workouts

NOTE Confidence: 0.872031570588235

00:49:13.939 --> 00:49:15.960 from from staff get injured.

NOTE Confidence: 0.872031570588235

00:49:15.960 --> 00:49:17.815 I'm looking at the SBRT for oligo,

NOTE Confidence: 0.872031570588235

00:49:17.820 --> 00:49:19.640 progressive mounts, muscle lung cancer.

NOTE Confidence: 0.872031570588235

00:49:19.640 --> 00:49:20.644 After immunotherapy,

NOTE Confidence: 0.872031570588235

00:49:20.644 --> 00:49:23.656 a small study of 26 patients

NOTE Confidence: 0.872031570588235

00:49:23.660 --> 00:49:25.725 who had acquired resistance to

NOTE Confidence: 0.872031570588235

00:49:25.725 --> 00:49:26.964 immune checkpoint inhibitors,

NOTE Confidence: 0.872031570588235

00:49:26.970 --> 00:49:29.287 15 of them had local therapy without

NOTE Confidence: 0.872031570588235

00:49:29.287 --> 00:49:30.760 immediate salvage systemic therapy,

NOTE Confidence: 0.872031570588235

00:49:30.760 --> 00:49:33.022 so they either were treatment holiday

NOTE Confidence: 0.872031570588235

00:49:33.022 --> 00:49:34.898 systemically or just remain on

NOTE Confidence: 0.872031570588235

00:49:34.898 --> 00:49:36.734 their on their same amino therapy.

NOTE Confidence: 0.872031570588235

00:49:36.740 --> 00:49:38.987 It's a somewhat busy the figure here,

NOTE Confidence: 0.872031570588235

00:49:38.990 --> 00:49:40.586 but the in essence the green

NOTE Confidence: 0.872031570588235

00:49:40.586 --> 00:49:42.170 is where they were able to.

NOTE Confidence: 0.872031570588235

00:49:42.170 --> 00:49:44.226 The circles are where you got local therapy.

NOTE Confidence: 0.872031570588235

00:49:44.230 --> 00:49:46.950 The green is when they were able to stay on.

NOTE Confidence: 0.872031570588235

00:49:46.950 --> 00:49:48.330 Immunotherapy and then Gray is when

NOTE Confidence: 0.872031570588235

00:49:48.330 --> 00:49:49.777 they had to switch to something

NOTE Confidence: 0.872031570588235

00:49:49.777 --> 00:49:51.795 else to your overall survival was

NOTE Confidence: 0.872031570588235

00:49:51.795 --> 00:49:53.818 92% and quite a few patients were

NOTE Confidence: 0.872031570588235

00:49:53.818 --> 00:49:55.421 able to maintain mean checkpoint

NOTE Confidence: 0.872031570588235

00:49:55.421 --> 00:49:56.729 inhibitors for years.

NOTE Confidence: 0.872031570588235

00:49:56.730 --> 00:50:00.546 In some cases after local therapy.

NOTE Confidence: 0.872031570588235

00:50:00.550 --> 00:50:02.170 So this is a state from

NOTE Confidence: 0.872031570588235

00:50:02.170 --> 00:50:02.980 Redecan Allison Campbell,

NOTE Confidence: 0.872031570588235

00:50:02.980 --> 00:50:05.677 an investigator initiated trials here that

NOTE Confidence: 0.872031570588235

00:50:05.677 --> 00:50:08.176 looked at SBRT for all the progressive,

NOTE Confidence: 0.872031570588235

00:50:08.180 --> 00:50:09.480 non small cells lung cancer.

NOTE Confidence: 0.872031570588235

00:50:09.480 --> 00:50:10.736 After immunotherapy as well,

NOTE Confidence: 0.872031570588235

00:50:10.736 --> 00:50:12.620 this is a 21 patients faced

NOTE Confidence: 0.872031570588235

00:50:12.684 --> 00:50:15.001 one and two study where he gave

NOTE Confidence: 0.872031570588235

00:50:15.001 --> 00:50:15.994 Pembroke until progression,

NOTE Confidence: 0.872031570588235

00:50:16.000 --> 00:50:17.735 then SBRT and then then

NOTE Confidence: 0.872031570588235

00:50:17.735 --> 00:50:18.776 restarted Kimbrough again.

NOTE Confidence: 0.872031570588235

00:50:18.780 --> 00:50:20.535 Right afterwards the endpoint was

NOTE Confidence: 0.872031570588235

00:50:20.535 --> 00:50:22.755 overall response rate and non irradiated

NOTE Confidence: 0.872031570588235

00:50:22.755 --> 00:50:24.795 legions to really to investigate.

NOTE Confidence: 0.872031570588235

00:50:24.800 --> 00:50:26.016 Can you reinvigorate this

NOTE Confidence: 0.872031570588235

00:50:26.016 --> 00:50:27.536 immune response and maybe even

NOTE Confidence: 0.872031570588235

00:50:27.536 --> 00:50:29.120 get enough scope of response

NOTE Confidence: 0.82679625

00:50:29.120 --> 00:50:30.980 to sites that were not treated?

NOTE Confidence: 0.82679625

00:50:30.980 --> 00:50:33.760 Disease Control overall was 57%,

NOTE Confidence: 0.82679625

00:50:33.760 --> 00:50:36.760 but interestingly there were two patients.

NOTE Confidence: 0.82679625

00:50:36.760 --> 00:50:38.824 10% of the group that had a partial

NOTE Confidence: 0.82679625

00:50:38.824 --> 00:50:40.746 response for more than a year and and,

NOTE Confidence: 0.82679625

00:50:40.750 --> 00:50:43.564 and there's lots of ongoing studies now

NOTE Confidence: 0.82679625

00:50:43.564 --> 00:50:45.746 investigating more about about who this

NOTE Confidence: 0.82679625

00:50:45.746 --> 00:50:48.237 you know the the the factors that may

NOTE Confidence: 0.82679625

00:50:48.237 --> 00:50:50.435 have led to that for those patients.

NOTE Confidence: 0.82679625

00:50:50.440 --> 00:50:54.552 So just Astro the last month was presented

NOTE Confidence: 0.82679625

00:50:54.552 --> 00:50:57.786 this curb study out of MSK that looked

NOTE Confidence: 0.82679625

00:50:57.786 --> 00:50:59.334 at a similar population of knots,

NOTE Confidence: 0.82679625

00:50:59.340 --> 00:51:00.648 muscle lung cancer patients,

NOTE Confidence: 0.82679625

00:51:00.648 --> 00:51:01.956 or breast cancer patients,

NOTE Confidence: 0.82679625

00:51:01.960 --> 00:51:02.718 and interestingly,

NOTE Confidence: 0.82679625

00:51:02.718 --> 00:51:05.750 found a large PFS benefit for SBRT for

NOTE Confidence: 0.82679625

00:51:05.816 --> 00:51:08.210 non small cell lung cancer patients,

NOTE Confidence: 0.82679625

00:51:08.210 --> 00:51:09.860 but not for breast cancer patients.

NOTE Confidence: 0.82679625

00:51:09.860 --> 00:51:12.585 You can see in lung 44 nine weeks

NOTE Confidence: 0.82679625

00:51:12.585 --> 00:51:15.180 whereas breast was 18 versus 19.

NOTE Confidence: 0.82679625

00:51:15.180 --> 00:51:16.440 No difference there.

NOTE Confidence: 0.82679625

00:51:16.440 --> 00:51:17.736 Paper still yet to come out,

NOTE Confidence: 0.82679625

00:51:17.740 --> 00:51:18.846 so I think there's still a lot

NOTE Confidence: 0.82679625

00:51:18.846 --> 00:51:20.331 of questions here, but this is.

NOTE Confidence: 0.82679625

00:51:20.331 --> 00:51:23.090 Intriguing data that maybe this is not this.

NOTE Confidence: 0.82679625

00:51:23.090 --> 00:51:24.606 Maybe Histology independent in

NOTE Confidence: 0.82679625

00:51:24.606 --> 00:51:27.574 terms of the the the role of SBRT

NOTE Confidence: 0.82679625

00:51:27.574 --> 00:51:30.006 in this context stuff Joe Hung is

NOTE Confidence: 0.82679625

00:51:30.006 --> 00:51:32.045 about to activate this study as

NOTE Confidence: 0.82679625

00:51:32.045 --> 00:51:33.570 well for renal cell carcinoma.

NOTE Confidence: 0.82679625

00:51:33.570 --> 00:51:35.110 This is a phase two study where

NOTE Confidence: 0.82679625

00:51:35.110 --> 00:51:36.560 we're looking at ICI until

NOTE Confidence: 0.82679625

00:51:36.560 --> 00:51:38.535 disease progression and then SPRT.

NOTE Confidence: 0.82679625

00:51:38.540 --> 00:51:40.412 And then I see I again at the end

NOTE Confidence: 0.82679625

00:51:40.412 --> 00:51:42.377 point being progression free survival.

NOTE Confidence: 0.82679625

00:51:42.380 --> 00:51:44.018 So there's there's a lot going

NOTE Confidence: 0.82679625

00:51:44.018 --> 00:51:45.110 on in this arena.

NOTE Confidence: 0.82679625

00:51:45.110 --> 00:51:46.608 Just again for the CD three study.

NOTE Confidence: 0.82679625

00:51:46.610 --> 00:51:49.250 We do include all capacities,

NOTE Confidence: 0.82679625

00:51:49.250 --> 00:51:50.670 all progressive disease as well.

NOTE Confidence: 0.82679625

00:51:50.670 --> 00:51:53.230 This teams that are central,

NOTE Confidence: 0.82679625

00:51:53.230 --> 00:51:55.165 so we've had this review here that we were

NOTE Confidence: 0.82679625

00:51:55.165 --> 00:51:56.897 last here on local updated therapies.

NOTE Confidence: 0.82679625

00:51:56.900 --> 00:51:58.340 If you want more details,

NOTE Confidence: 0.82679625

00:51:58.340 --> 00:51:59.582 feel free to refer to this

NOTE Confidence: 0.82679625

00:51:59.582 --> 00:52:00.630 on other studies that have

NOTE Confidence: 0.958946765

00:52:00.860 --> 00:52:01.568 come out as well.

NOTE Confidence: 0.702190201538462

00:52:03.200 --> 00:52:05.951 So in summary, we come we for

NOTE Confidence: 0.702190201538462

00:52:05.951 --> 00:52:08.889 early season of muscle lung cancer.

NOTE Confidence: 0.702190201538462

00:52:08.890 --> 00:52:11.434 You know our future directions here are that

NOTE Confidence: 0.702190201538462

00:52:11.434 --> 00:52:13.742 we're really looking to optimize patient

NOTE Confidence: 0.702190201538462

00:52:13.742 --> 00:52:15.757 selection and SBRT dose fractionation

NOTE Confidence: 0.702190201538462

00:52:15.760 --> 00:52:18.148 for peripheral tumors for central tumors,

NOTE Confidence: 0.702190201538462

00:52:18.150 --> 00:52:20.040 or we have this D3 trial like I mentioned,

NOTE Confidence: 0.702190201538462

00:52:20.040 --> 00:52:21.660 as well as Ultra central tumors,

NOTE Confidence: 0.702190201538462

00:52:21.660 --> 00:52:22.872 which we're currently investigating

NOTE Confidence: 0.702190201538462

00:52:22.872 --> 00:52:23.781 retrospectively and hopefully

NOTE Confidence: 0.702190201538462

00:52:23.781 --> 00:52:25.430 leading to a prospective study.

NOTE Confidence: 0.702190201538462

00:52:25.430 --> 00:52:27.642 At some point we're looking to add

NOTE Confidence: 0.702190201538462

00:52:27.642 --> 00:52:29.616 immunotherapy to SPRT and seeing to

NOTE Confidence: 0.702190201538462

00:52:29.616 --> 00:52:31.870 investigate whether that is helpful or not,

NOTE Confidence: 0.702190201538462

00:52:31.870 --> 00:52:34.156 in which populations may be useful.

NOTE Confidence: 0.702190201538462

00:52:34.160 --> 00:52:36.906 Two ongoing trials open it, yell as well.

NOTE Confidence: 0.702190201538462

00:52:36.906 --> 00:52:38.416 The keynote and the swab

NOTE Confidence: 0.702190201538462

00:52:38.416 --> 00:52:39.616 studies Olga Ministik.

NOTE Confidence: 0.702190201538462

00:52:39.616 --> 00:52:40.960 Another progressive disease,

NOTE Confidence: 0.702190201538462

00:52:40.960 --> 00:52:42.301 optimizing patient selection,

NOTE Confidence: 0.702190201538462

00:52:42.301 --> 00:52:44.089 and those fractionation as

NOTE Confidence: 0.702190201538462

00:52:44.089 --> 00:52:45.430 well as sequencing,

NOTE Confidence: 0.702190201538462

00:52:45.430 --> 00:52:47.230 combining SPRT without CI.

NOTE Confidence: 0.702190201538462

00:52:47.230 --> 00:52:48.130 So we

NOTE Confidence: 0.76480165

00:52:49.450 --> 00:52:52.820 make sure that the prospective

NOTE Confidence: 0.76480165

00:52:52.820 --> 00:52:55.182 studies. If you're if credit,

NOTE Confidence: 0.76480165

00:52:55.182 --> 00:52:56.838 that's his name going forward.

NOTE Confidence: 0.887258881818182

00:52:58.050 --> 00:52:59.382 So outside the scope today we

NOTE Confidence: 0.887258881818182

00:52:59.382 --> 00:53:01.094 have a lot of exciting, ongoing,

NOTE Confidence: 0.887258881818182

00:53:01.094 --> 00:53:02.614 pending trials at and pending

NOTE Confidence: 0.887258881818182

00:53:02.614 --> 00:53:04.520 trials at the yield a lung dart,

NOTE Confidence: 0.887258881818182

00:53:04.520 --> 00:53:05.927 as well as the T Red Dart.

NOTE Confidence: 0.887258881818182

00:53:05.930 --> 00:53:07.450 I'm not going to get into this today,

NOTE Confidence: 0.887258881818182

00:53:07.450 --> 00:53:09.070 but locally advanced non small cell

NOTE Confidence: 0.887258881818182

00:53:09.070 --> 00:53:10.755 lung cancer limited stage and extensive

NOTE Confidence: 0.887258881818182

00:53:10.755 --> 00:53:12.145 stage small cell lung cancers.

NOTE Confidence: 0.887258881818182

00:53:12.150 --> 00:53:13.920 There's a lot going on,

NOTE Confidence: 0.887258881818182

00:53:13.920 --> 00:53:17.208 so we're excited to be working on that.

NOTE Confidence: 0.887258881818182

00:53:17.210 --> 00:53:19.400 And finally, like to acknowledge our

NOTE Confidence: 0.887258881818182

00:53:19.400 --> 00:53:20.860 yield domestic radiotherapy program,

NOTE Confidence: 0.887258881818182

00:53:20.860 --> 00:53:22.924 the members of our team have been phenomenal.

NOTE Confidence: 0.887258881818182

00:53:22.930 --> 00:53:23.790 We've been working weekly

NOTE Confidence: 0.887258881818182

00:53:23.790 --> 00:53:24.865 and chart rounds ever since.

NOTE Confidence: 0.887258881818182

00:53:24.870 --> 00:53:27.142 I had the honor of taking this over

NOTE Confidence: 0.887258881818182

00:53:27.142 --> 00:53:29.190 this program in 2019 from Roy Decker,

NOTE Confidence: 0.887258881818182

00:53:29.190 --> 00:53:30.888 who's been just amazing mentor of

NOTE Confidence: 0.887258881818182

00:53:30.888 --> 00:53:32.998 mine and we really started the SPRT

NOTE Confidence: 0.887258881818182

00:53:32.998 --> 00:53:35.133 program here at Yale several years ago,

NOTE Confidence: 0.887258881818182

00:53:35.140 --> 00:53:37.090 and among our six sides,

NOTE Confidence: 0.887258881818182

00:53:37.090 --> 00:53:39.246 we go over all of radiation plans

NOTE Confidence: 0.887258881818182

00:53:39.246 --> 00:53:41.549 having to do with lung cancer every

NOTE Confidence: 0.887258881818182

00:53:41.549 --> 00:53:43.636 week to be sure we're improving

NOTE Confidence: 0.887258881818182

00:53:43.636 --> 00:53:45.420 communication and quality assurance

NOTE Confidence: 0.887258881818182

00:53:45.420 --> 00:53:47.650 and standardizing practice and then

NOTE Confidence: 0.887258881818182

00:53:47.714 --> 00:53:49.478 sharing and sharing information.

NOTE Confidence: 0.887258881818182

00:53:49.480 --> 00:53:51.912 So I I just I'm very blessed to

NOTE Confidence: 0.887258881818182

00:53:51.912 --> 00:53:54.088 work with this wonderful team.

NOTE Confidence: 0.887258881818182

00:53:54.090 --> 00:53:55.539 Thank you all very much for your time today.

NOTE Confidence: 0.888486175714286

00:53:57.660 --> 00:53:58.734 Thank you Henry.

NOTE Confidence: 0.888486175714286

00:53:58.734 --> 00:54:00.166 It's very impressive results.

NOTE Confidence: 0.888486175714286

00:54:00.170 --> 00:54:02.552 Some of the trials you showed

NOTE Confidence: 0.888486175714286

00:54:02.552 --> 00:54:04.140 us are there questions.

NOTE Confidence: 0.888486175714286

00:54:04.140 --> 00:54:05.534 I see someone has a hand up,

NOTE Confidence: 0.888486175714286

00:54:05.534 --> 00:54:06.950 but I can't see who that is.

NOTE Confidence: 0.9155051

00:54:09.180 --> 00:54:10.530 Or the questions in the chat.

NOTE Confidence: 0.9374584

00:54:22.930 --> 00:54:23.840 No questions.

NOTE Confidence: 0.97351617

00:54:26.350 --> 00:54:28.770 So so Henry in your time here,

NOTE Confidence: 0.97351617

00:54:28.770 --> 00:54:30.240 what do you think has been the

NOTE Confidence: 0.97351617

00:54:30.240 --> 00:54:33.760 biggest step advance? In radiotherapy

NOTE Confidence: 0.886416345

00:54:33.770 --> 00:54:37.750 specifically, I think our ability

NOTE Confidence: 0.886416345

00:54:37.750 --> 00:54:40.250 to really use the imaging that

NOTE Confidence: 0.886416345

00:54:40.250 --> 00:54:43.708 we have of and and and be able to

NOTE Confidence: 0.886416345

00:54:43.708 --> 00:54:45.803 target even more precisely overtime,

NOTE Confidence: 0.886416345

00:54:45.810 --> 00:54:47.224 and I think you know we're excited

NOTE Confidence: 0.886416345

00:54:47.224 --> 00:54:48.940 to have a new reflection machine.

NOTE Confidence: 0.886416345

00:54:48.940 --> 00:54:51.569 You know that's coming in soon to be able

NOTE Confidence: 0.886416345

00:54:51.569 --> 00:54:53.170 to target all of them attached season Algo.

NOTE Confidence: 0.886416345

00:54:53.170 --> 00:54:53.866 Progressive disease.

NOTE Confidence: 0.886416345

00:54:53.866 --> 00:54:55.954 I think that's really the future

NOTE Confidence: 0.886416345

00:54:55.954 --> 00:54:58.330 here in terms of, you know,

NOTE Confidence: 0.886416345

00:54:58.330 --> 00:55:01.300 using local therapy to supplement the

NOTE Confidence: 0.886416345

00:55:01.300 --> 00:55:02.840 excellent events that we've made in systemic.

NOTE Confidence: 0.886416345

00:55:02.840 --> 00:55:03.173 Therapy.

NOTE Confidence: 0.886416345

00:55:03.173 --> 00:55:04.838 There's been so impressive and

NOTE Confidence: 0.886416345

00:55:04.838 --> 00:55:06.600 and especially in lung cancer,

NOTE Confidence: 0.886416345

00:55:06.600 --> 00:55:08.520 where we see just, you know,

NOTE Confidence: 0.886416345

00:55:08.520 --> 00:55:09.755 so much better survival than

NOTE Confidence: 0.886416345

00:55:09.755 --> 00:55:10.743 we've ever seen before.

NOTE Confidence: 0.886416345

00:55:10.750 --> 00:55:13.132 Vestige for patients you know and

NOTE Confidence: 0.886416345

00:55:13.132 --> 00:55:15.556 combine this with with you know

NOTE Confidence: 0.886416345

00:55:15.556 --> 00:55:17.646 with with targeted agents and

NOTE Confidence: 0.886416345

00:55:17.646 --> 00:55:19.090 immunotherapy and chemotherapy to

NOTE Confidence: 0.886416345

00:55:19.090 --> 00:55:21.470 really extend survival and and,

NOTE Confidence: 0.886416345

00:55:21.470 --> 00:55:22.618 you know, are we going to seek?

NOTE Confidence: 0.886416345

00:55:22.620 --> 00:55:23.645 You know we're seeing more

NOTE Confidence: 0.886416345

00:55:23.645 --> 00:55:24.920 patients at that 10 year Mark?

NOTE Confidence: 0.886416345

00:55:24.920 --> 00:55:27.272 Now you know even more who are still

NOTE Confidence: 0.886416345

00:55:27.272 --> 00:55:29.220 disease free, so you know, it's it's.

NOTE Confidence: 0.886416345

00:55:29.220 --> 00:55:31.215 It's very exciting time that you know,

NOTE Confidence: 0.886416345

00:55:31.220 --> 00:55:33.050 as a technology improves in our.

NOTE Confidence: 0.886416345

00:55:33.050 --> 00:55:34.730 Ability to select patients

NOTE Confidence: 0.886416345

00:55:34.730 --> 00:55:36.410 properly for this improves.

NOTE Confidence: 0.886416345

00:55:36.410 --> 00:55:38.540 We're hoping to really see

NOTE Confidence: 0.886416345

00:55:38.540 --> 00:55:40.244 more patients benefit from,

NOTE Confidence: 0.886416345

00:55:40.250 --> 00:55:40.802 you know,

NOTE Confidence: 0.886416345

00:55:40.802 --> 00:55:41.906 from from using SBRT

NOTE Confidence: 0.7572500875

00:55:41.920 --> 00:55:43.620 in this setting. Perfect

NOTE Confidence: 0.69801159

00:55:43.690 --> 00:55:46.540 we have doctor D. Do you have a question?

NOTE Confidence: 0.8902136575

00:55:49.530 --> 00:55:53.750 I see a hand. Uhm, maybe not.

NOTE Confidence: 0.8902136575

00:55:53.750 --> 00:55:55.680 OK, well thank both speakers again.

NOTE Confidence: 0.8902136575

00:55:55.680 --> 00:55:56.884 It was a terrific series and I

NOTE Confidence: 0.8902136575

00:55:56.884 --> 00:55:58.290 learned a lot and I hope the

NOTE Confidence: 0.8902136575

00:55:58.290 --> 00:55:59.580 audience did. Also thank you.

NOTE Confidence: 0.970883715

00:56:00.600 --> 00:56:01.130 Thank you.