WEBVTT

NOTE duration:"01:01:43.2960000"

NOTE language:en-us

NOTE Confidence: 0.797424852848053

00:00:00.000 --> 00:00:03.390 Offered by the smile or Liver

NOTE Confidence: 0.797424852848053

00:00:03.390 --> 00:00:07.290 cancer program and we want to.

NOTE Confidence: 0.797424852848053

00:00:07.290 --> 00:00:10.470 Go in the next three months,

NOTE Confidence: 0.797424852848053

00:00:10.470 --> 00:00:14.180 go through some of the aspects that

NOTE Confidence: 0.797424852848053

00:00:14.180 --> 00:00:17.948 are more novel in the treatment of

NOTE Confidence: 0.797424852848053

00:00:17.948 --> 00:00:21.600 able to sell a carcinoma liver cancer,

NOTE Confidence: 0.797424852848053

00:00:21.600 --> 00:00:25.310 and we asked some of our faculty,

NOTE Confidence: 0.797424852848053

00:00:25.310 --> 00:00:26.370 like Doctor

NOTE Confidence: 0.723835051059723

00:00:26.370 --> 00:00:27.960 Billingslea, another Madoff

NOTE Confidence: 0.723835051059723

00:00:27.960 --> 00:00:30.080 and Doctor Stein too.

NOTE Confidence: 0.791841506958008

00:00:30.080 --> 00:00:33.482 Teach us the novelty in their respective

NOTE Confidence: 0.791841506958008

00:00:33.482 --> 00:00:36.759 field as you know about the cell

NOTE Confidence: 0.791841506958008

00:00:36.759 --> 00:00:39.916 carcinoma is on the rise is becoming

NOTE Confidence: 0.791841506958008

00:00:39.916 --> 00:00:43.255 one of the most frequent and and

NOTE Confidence: 0.791841506958008

00:00:43.255 --> 00:00:46.096 little two models on our latitudes.

NOTE Confidence: 0.791841506958008

00:00:46.096 --> 00:00:49.250 And what is important to understand

NOTE Confidence: 0.791841506958008

00:00:49.250 --> 00:00:51.930 is that treatment of hepatocellular

NOTE Confidence: 0.791841506958008

00:00:52.010 --> 00:00:55.209 carcinoma is complex is a moving target.

NOTE Confidence: 0.791841506958008

00:00:55.210 --> 00:00:57.886 And then it takes a village.

NOTE Confidence: 0.791841506958008

00:00:57.890 --> 00:01:01.394 Here you see some of the our colleagues

NOTE Confidence: 0.791841506958008

00:01:01.394 --> 00:01:04.805 working with us to go through the

NOTE Confidence: 0.791841506958008

00:01:04.805 --> 00:01:07.250 different possible approaches to this

NOTE Confidence: 0.791841506958008

00:01:07.336 --> 00:01:10.504 patient an I have to tell you that

NOTE Confidence: 0.791841506958008

00:01:10.504 --> 00:01:13.108 this picture are in defect with.

NOTE Confidence: 0.791841506958008

00:01:13.108 --> 00:01:14.916 There are many other.

NOTE Confidence: 0.791841506958008

00:01:14.920 --> 00:01:17.620 Colleagues said they work with

NOTE Confidence: 0.791841506958008

00:01:17.620 --> 00:01:19.780 us with this patient,

NOTE Confidence: 0.791841506958008

00:01:19.780 --> 00:01:22.750 but today today we have the

NOTE Confidence: 0.791841506958008

00:01:22.750 --> 00:01:25.373 pleasure of having Doctor Kevin

NOTE Confidence: 0.791841506958008

00:01:25.373 --> 00:01:28.083 Billingslea carrying as a great

NOTE Confidence: 0.791841506958008

00:01:28.083 --> 00:01:31.660 pedigree in terms of these studies,

NOTE Confidence: 0.791841506958008

00:01:31.660 --> 00:01:34.846 they went to Stanford and then

NOTE Confidence: 0.791841506958008

00:01:34.846 --> 00:01:38.337 John Hopkins enjoy in the surgery

NOTE Confidence: 0.791841506958008

00:01:38.337 --> 00:01:41.477 residency at the Oregon Health.

NOTE Confidence: 0.791841506958008

00:01:41.480 --> 00:01:45.665 And after a fellowship at NCI an MSA KCC,

NOTE Confidence: 0.791841506958008

00:01:45.670 --> 00:01:48.322 he joined the faculty at the

NOTE Confidence: 0.791841506958008

00:01:48.322 --> 00:01:50.669 University of Washington Ann and

NOTE Confidence: 0.791841506958008

00:01:50.669 --> 00:01:53.129 became Chief of Surgical Oncology.

NOTE Confidence: 0.791841506958008

00:01:53.130 --> 00:01:56.385 Focusing of effort to be Jerry surgery,

NOTE Confidence: 0.791841506958008

00:01:56.390 --> 00:01:59.645 an anchoring Carissa for almost 16 year,

NOTE Confidence: 0.791841506958008

00:01:59.650 --> 00:02:01.790 and then we were.

NOTE Confidence: 0.791841506958008

00:02:01.790 --> 00:02:05.693 Fortunate enough to be able to recruit

NOTE Confidence: 0.791841506958008

00:02:05.693 --> 00:02:10.325 him as a Chief medical officer of the

NOTE Confidence: 0.791841506958008

00:02:10.325 --> 00:02:14.478 Smiler Hospital Ann You Cancer Center.

NOTE Confidence: 0.791841506958008

00:02:14.480 --> 00:02:18.674 And he came at the beginning of the year,

NOTE Confidence: 0.791841506958008

00:02:18.680 --> 00:02:21.464 and was instrumental in all our

NOTE Confidence: 0.791841506958008

00:02:21.464 --> 00:02:23.320 transformation that we went

NOTE Confidence: 0.791841506958008

00:02:23.406 --> 00:02:25.686 through because of the covid.

NOTE Confidence: 0.791841506958008

00:02:25.690 --> 00:02:28.630 And but in a way that made

NOTE Confidence: 0.791841506958008

00:02:28.630 --> 00:02:31.290 as reminding of our patients,

NOTE Confidence: 0.791841506958008

00:02:31.290 --> 00:02:34.559 so that nobody will be left behind.

NOTE Confidence: 0.791841506958008

00:02:34.560 --> 00:02:35.799 That. In addition,

NOTE Confidence: 0.791841506958008

00:02:35.799 --> 00:02:40.170 if I have to have had a personal note,

NOTE Confidence: 0.791841506958008

00:02:40.170 --> 00:02:43.448 is a really pleasant colleague. It's it's.

NOTE Confidence: 0.791841506958008

00:02:43.448 --> 00:02:46.766 It's just a joy working with them.

NOTE Confidence: 0.791841506958008

00:02:46.770 --> 00:02:49.480 And you always participate to

NOTE Confidence: 0.791841506958008

00:02:49.480 --> 00:02:52.892 our two more boards with the

NOTE Confidence: 0.791841506958008

00:02:52.892 --> 00:02:54.968 extremely helpful insight.

NOTE Confidence: 0.791841506958008

00:02:54.968 --> 00:02:56.980 And so.

NOTE Confidence: 0.791841506958008

00:02:56.980 --> 00:02:57.850 Without further

NOTE Confidence: 0.809668362140656

00:02:57.850 --> 00:03:00.030 ado, I'll I'll, I'll leave

NOTE Confidence: 0.809668362140656

00:03:00.030 --> 00:03:02.200 the stage to Doctor Billingslea.

NOTE Confidence: 0.706543207168579

00:03:06.300 --> 00:03:06.880 Coming.

NOTE Confidence: 0.819882392883301

00:03:10.360 --> 00:03:15.729 Oreo, thank you very much for that

NOTE Confidence: 0.819882392883301

00:03:15.729 --> 00:03:18.030 really gracious introduction.

NOTE Confidence: 0.819882392883301

00:03:18.030 --> 00:03:20.526 Let me just make sure that.

NOTE Confidence: 0.819226145744324

00:03:22.550 --> 00:03:25.118 Everyone seeing my slides.

NOTE Confidence: 0.746532142162323

00:03:30.130 --> 00:03:35.840 Has that look under folks? Yep, OK.

NOTE Confidence: 0.746532142162323

00:03:35.840 --> 00:03:38.404 Well, you know, thank you again.

NOTE Confidence: 0.746532142162323

00:03:38.404 --> 00:03:41.110 It's been an absolute absolute pleasure

NOTE Confidence: 0.746532142162323

00:03:41.185 --> 00:03:44.235 being here at yell for the past year and I

NOTE Confidence: 0.746532142162323

00:03:44.315 --> 00:03:47.582 am delighted to be here in a leadership role,

NOTE Confidence: 0.746532142162323

00:03:47.590 --> 00:03:50.270 but I will say one of the highlights

NOTE Confidence: 0.746532142162323

00:03:50.270 --> 00:03:52.140 of my clinical life,

NOTE Confidence: 0.746532142162323

00:03:52.140 --> 00:03:54.408 which is very important to me,

NOTE Confidence: 0.746532142162323

00:03:54.410 --> 00:03:56.576 has been the opportunity to participate

NOTE Confidence: 0.746532142162323

00:03:56.576 --> 00:03:58.580 in this liver tumor program.

NOTE Confidence: 0.746532142162323

00:03:58.580 --> 00:04:01.226 You know, under Mario's leadership and with

NOTE Confidence: 0.746532142162323

00:04:01.226 --> 00:04:04.071 the contribution of many other people, this.

NOTE Confidence: 0.746532142162323

00:04:04.071 --> 00:04:07.437 Program really represents that what we

NOTE Confidence: 0.746532142162323

00:04:07.437 --> 00:04:11.891 are aiming to develop in all of our of

NOTE Confidence: 0.746532142162323

00:04:11.891 --> 00:04:15.319 our disease sites and disease centers,

NOTE Confidence: 0.746532142162323

00:04:15.320 --> 00:04:17.360 which is a collaborative,

NOTE Confidence: 0.746532142162323

00:04:17.360 --> 00:04:19.910 multidisciplinary team that meets regularly,

NOTE Confidence: 0.746532142162323

00:04:19.910 --> 00:04:22.326 plans treatment prospectively collects

NOTE Confidence: 0.746532142162323

00:04:22.326 --> 00:04:25.950 data and continuously examines what we're

NOTE Confidence: 0.746532142162323

00:04:26.032 --> 00:04:28.888 doing to improve and optimize treatment

NOTE Confidence: 0.746532142162323

00:04:28.888 --> 00:04:32.229 for patients and moving the field forward.

NOTE Confidence: 0.746532142162323

00:04:32.230 --> 00:04:34.631 So it's it's it really is is

NOTE Confidence: 0.746532142162323

00:04:34.631 --> 00:04:36.460 a pleasure and an honor.

NOTE Confidence: 0.746532142162323

00:04:36.460 --> 00:04:39.575 So I'm a surgical oncologist by background,

NOTE Confidence: 0.746532142162323

00:04:39.580 --> 00:04:41.089 in clinical practice,

NOTE Confidence: 0.746532142162323

00:04:41.089 --> 00:04:44.107 and is Martin shared I've spent.

NOTE Confidence: 0.746532142162323

00:04:44.110 --> 00:04:49.429 The majority of my time in the past over.

NOTE Confidence: 0.746532142162323

00:04:49.430 --> 00:04:51.943 Close to 20 years focusing on both

NOTE Confidence: 0.746532142162323

00:04:51.943 --> 00:04:54.360 liver cancer and pancreatic cancer,

NOTE Confidence: 0.746532142162323

00:04:54.360 --> 00:04:57.237 but primarily liver cancer in liver surgery,

NOTE Confidence: 0.746532142162323

00:04:57.240 --> 00:04:59.907 and I think the management of this

NOTE Confidence: 0.746532142162323

00:04:59.907 --> 00:05:02.273 group of patients with a paddle

NOTE Confidence: 0.746532142162323

00:05:02.273 --> 00:05:04.559 cellular carcinoma in some ways is

NOTE Confidence: 0.746532142162323

00:05:04.559 --> 00:05:07.295 the most complicated set of patients

NOTE Confidence: 0.746532142162323

00:05:07.295 --> 00:05:10.392 I'm involved with because not only is

NOTE Confidence: 0.746532142162323

00:05:10.392 --> 00:05:12.036 the surgery technically complicated,

NOTE Confidence: 0.746532142162323

00:05:12.040 --> 00:05:14.910 will touch on that a little bit,

NOTE Confidence: 0.746532142162323

00:05:14.910 --> 00:05:17.196 but the decision-making about who to

NOTE Confidence: 0.746532142162323

00:05:17.196 --> 00:05:19.510 operate window operate who transplants.

NOTE Confidence: 0.746532142162323

00:05:19.510 --> 00:05:22.348 And who to treat with alternative?

NOTE Confidence: 0.746532142162323

00:05:22.350 --> 00:05:23.296 You know,

NOTE Confidence: 0.746532142162323

00:05:23.296 --> 00:05:25.188 oblativa or arterial therapies

NOTE Confidence: 0.746532142162323

00:05:25.188 --> 00:05:27.080 is also extremely complicated,

NOTE Confidence: 0.746532142162323

00:05:27.080 --> 00:05:30.856 and we'll talk more as we go along.

NOTE Confidence: 0.746532142162323

00:05:30.860 --> 00:05:34.171 But it it very much involves complex

NOTE Confidence: 0.746532142162323

00:05:34.171 --> 00:05:35.590 multidisciplinary decision making.

NOTE Confidence: 0.802272856235504

00:05:39.170 --> 00:05:41.600 You know, so was Mario

NOTE Confidence: 0.802272856235504

00:05:41.600 --> 00:05:43.544 indicated in the introduction?

NOTE Confidence: 0.802272856235504

00:05:43.550 --> 00:05:45.955 Apparel Center carcinoma remains one

NOTE Confidence: 0.802272856235504

00:05:45.955 --> 00:05:48.926 of our most daunting global public

NOTE Confidence: 0.802272856235504

00:05:48.926 --> 00:05:51.824 health challenges in the cancer arena.

NOTE Confidence: 0.802272856235504

00:05:51.830 --> 00:05:55.876 And if you look at this graphic.

NOTE Confidence: 0.802272856235504

00:05:55.880 --> 00:06:01.480 The incidence of the disease is going up.

NOTE Confidence: 0.802272856235504

00:06:01.480 --> 00:06:03.544 Only in North American,

NOTE Confidence: 0.802272856235504

00:06:03.544 --> 00:06:06.124 but basically around the world.

NOTE Confidence: 0.802272856235504

00:06:06.130 --> 00:06:07.742 And like many diseases,

NOTE Confidence: 0.802272856235504

00:06:07.742 --> 00:06:10.891 there is a greater burden of disease

NOTE Confidence: 0.802272856235504

00:06:10.891 --> 00:06:13.487 in under represented minorities

NOTE Confidence: 0.802272856235504

00:06:13.487 --> 00:06:15.434 and vulnerable populations.

NOTE Confidence: 0.802272856235504

00:06:15.440 --> 00:06:18.800 Although you know the overall incidence

NOTE Confidence: 0.802272856235504

00:06:18.800 --> 00:06:23.497 is creeping up in almost across the board.

NOTE Confidence: 0.802272856235504

00:06:23.500 --> 00:06:27.240 You know this is to a large degree due to

NOTE Confidence: 0.802272856235504

00:06:27.333 --> 00:06:31.435 the the underlying burden of viral hepatitis,

NOTE Confidence: 0.802272856235504

00:06:31.440 --> 00:06:32.838 principally hepatitis C.

NOTE Confidence: 0.802272856235504

00:06:32.838 --> 00:06:35.634 Here in North America and Europe.

NOTE Confidence: 0.802272856235504

00:06:35.640 --> 00:06:37.980 hepatitis B more in Asia.

NOTE Confidence: 0.802272856235504

00:06:37.980 --> 00:06:38.804 But really,

NOTE Confidence: 0.802272856235504

00:06:38.804 --> 00:06:40.864 the looming crisis on the

NOTE Confidence: 0.802272856235504

00:06:40.864 --> 00:06:43.787 horizon is the explosion of non

NOTE Confidence: 0.802272856235504

00:06:43.787 --> 00:06:45.919 alcoholic fatty liver disease,

NOTE Confidence: 0.802272856235504

00:06:45.920 --> 00:06:48.255 or so-called knaflich from a

NOTE Confidence: 0.802272856235504

00:06:48.255 --> 00:06:50.590 variety of sources and etiologies.

NOTE Confidence: 0.802272856235504

00:06:50.590 --> 00:06:53.859 But Nah fled is on track to.

NOTE Confidence: 0.802272856235504

00:06:53.860 --> 00:06:56.255 Be the largest and most

NOTE Confidence: 0.802272856235504

00:06:56.255 --> 00:06:58.171 significant indication for liver

NOTE Confidence: 0.802272856235504

00:06:58.171 --> 00:07:00.160 transplant in the coming years,

NOTE Confidence: 0.802272856235504

00:07:00.160 --> 00:07:02.652 and it is probably going to be

NOTE Confidence: 0.802272856235504

00:07:02.652 --> 00:07:04.390 the most prominent underlying

NOTE Confidence: 0.802272856235504

00:07:04.390 --> 00:07:07.360 contributor to a parasailer carcinoma,

NOTE Confidence: 0.802272856235504

00:07:07.360 --> 00:07:10.140 particularly as our antiviral

NOTE Confidence: 0.802272856235504

00:07:10.140 --> 00:07:11.530 therapies improve.

NOTE Confidence: 0.802272856235504

00:07:11.530 --> 00:07:14.858 So my focus today is going to be

NOTE Confidence: 0.802272856235504

00:07:14.858 --> 00:07:17.769 on surgical therapy and you know.

NOTE Confidence: 0.802272856235504

00:07:17.770 --> 00:07:20.440 Where do we stand in surgical

NOTE Confidence: 0.802272856235504

00:07:20.440 --> 00:07:23.009 treatment for for HTC in 2021?

NOTE Confidence: 0.802272856235504

00:07:23.010 --> 00:07:23.455 Well,

NOTE Confidence: 0.802272856235504

00:07:23.455 --> 00:07:26.570 I think there are many things that

NOTE Confidence: 0.802272856235504

00:07:26.570 --> 00:07:30.233 we can be proud of and be excited

NOTE Confidence: 0.802272856235504

00:07:30.233 --> 00:07:33.349 about and are causes for optimism.

NOTE Confidence: 0.802272856235504

00:07:33.350 --> 00:07:35.948 Surgical treatment for HCC as well

NOTE Confidence: 0.802272856235504

00:07:35.948 --> 00:07:38.635 as other liver tumors have really

NOTE Confidence: 0.802272856235504

00:07:38.635 --> 00:07:41.245 developed in the past 2020 years.

NOTE Confidence: 0.802272856235504

00:07:41.250 --> 00:07:43.466 In a in a number of ways we've

NOTE Confidence: 0.802272856235504

00:07:43.466 --> 00:07:46.372 seen a renaissance related to the

NOTE Confidence: 0.802272856235504

00:07:46.372 --> 00:07:48.648 introduction of minimally invasive

NOTE Confidence: 0.802272856235504

00:07:48.648 --> 00:07:50.910 techniques for liver surgery.

NOTE Confidence: 0.802272856235504

00:07:50.910 --> 00:07:54.123 I'm going to talk about both laparoscopic

NOTE Confidence: 0.802272856235504

00:07:54.123 --> 00:07:56.648 and robotic approaches in some detail.

NOTE Confidence: 0.802272856235504

00:07:56.650 --> 00:07:59.122 The way we action surgically come

NOTE Confidence: 0.802272856235504

00:07:59.122 --> 00:08:01.370 through the liver and divide,

NOTE Confidence: 0.802272856235504

00:08:01.370 --> 00:08:03.082 deliver surgically has changed.

NOTE Confidence: 0.802272856235504

00:08:03.082 --> 00:08:03.938 You know,

NOTE Confidence: 0.802272856235504

00:08:03.940 --> 00:08:07.792 we used to use a lot of crush plant.

NOTE Confidence: 0.802272856235504

00:08:07.800 --> 00:08:10.272 Now we almost do everything with

NOTE Confidence: 0.802272856235504

00:08:10.272 --> 00:08:12.883 energy sources and and more refined

NOTE Confidence: 0.802272856235504

00:08:12.883 --> 00:08:15.523 techniques such as acusa or herby.

NOTE Confidence: 0.802272856235504

00:08:15.530 --> 00:08:18.060 Our understanding of the anesthesia

NOTE Confidence: 0.802272856235504

00:08:18.060 --> 00:08:20.084 anesthesiology anesthetic component of

NOTE Confidence: 0.802272856235504

00:08:20.084 --> 00:08:22.348 this patient management is improved

NOTE Confidence: 0.802272856235504

00:08:22.348 --> 00:08:24.463 and we've minimized look blood

NOTE Confidence: 0.802272856235504

00:08:24.463 --> 00:08:26.678 loss through the use of low CVP.

NOTE Confidence: 0.802272856235504

00:08:26.680 --> 00:08:28.162 Anaesthesia taken together

NOTE Confidence: 0.802272856235504

00:08:28.162 --> 00:08:30.632 these developments as well as

NOTE Confidence: 0.802272856235504

00:08:30.632 --> 00:08:32.290 improved surgical training,

NOTE Confidence: 0.802272856235504

00:08:32.290 --> 00:08:34.650 expertise of lowered overall

NOTE Confidence: 0.802272856235504

00:08:34.650 --> 00:08:37.600 surgical mortality into the range

NOTE Confidence: 0.802272856235504

00:08:37.600 --> 00:08:40.924 of 1 to 3% after liver resection.

NOTE Confidence: 0.802272856235504

00:08:40.924 --> 00:08:42.260 Experience centers.

NOTE Confidence: 0.802272856235504

00:08:42.260 --> 00:08:42.736 Unfortunately,

NOTE Confidence: 0.802272856235504

00:08:42.736 --> 00:08:46.068 due to the nature of the disease,

NOTE Confidence: 0.802272856235504

00:08:46.070 --> 00:08:48.450 relatively few patients who present

NOTE Confidence: 0.802272856235504

00:08:48.450 --> 00:08:50.830 with HTC are surgical candidates,

NOTE Confidence: 0.802272856235504

00:08:50.830 --> 00:08:54.078 and this is due to the severity

NOTE Confidence: 0.802272856235504

00:08:54.078 --> 00:08:56.043 underlying liver disease of

NOTE Confidence: 0.802272856235504

00:08:56.043 --> 00:08:57.967 any variety of etiologies,

NOTE Confidence: 0.802272856235504

00:08:57.970 --> 00:08:58.920 viral hepatitis,

NOTE Confidence: 0.802272856235504

00:08:58.920 --> 00:09:02.245 as well as the extent of disease.

NOTE Confidence: 0.802272856235504

00:09:02.250 --> 00:09:04.150 Sometimes patients have smaller

NOTE Confidence: 0.802272856235504

00:09:04.150 --> 00:09:05.575 early stage disease,

NOTE Confidence: 0.802272856235504

00:09:05.580 --> 00:09:09.225 but it is not uncommon for us to see

NOTE Confidence: 0.802272856235504

00:09:09.225 --> 00:09:12.369 extensive and infiltrating disease with.

NOTE Confidence: 0.802272856235504

00:09:12.370 --> 00:09:14.695 Portal vein invasion and other

NOTE Confidence: 0.802272856235504

00:09:14.695 --> 00:09:17.662 sites of disease in the liberal

NOTE Confidence: 0.802272856235504

00:09:17.662 --> 00:09:19.866 or extra padick disease.

NOTE Confidence: 0.802272856235504

00:09:19.870 --> 00:09:23.874 So this combination of things often limits.

NOTE Confidence: 0.802272856235504

00:09:23.880 --> 00:09:26.520 The surgical candidacy of a variety

NOTE Confidence: 0.802272856235504

00:09:26.520 --> 00:09:29.540 of of many of the patients.

NOTE Confidence: 0.802272856235504

00:09:29.540 --> 00:09:31.808 So in my talk this evening,

NOTE Confidence: 0.802272856235504

00:09:31.810 --> 00:09:34.048 I'm going to really highlight a

NOTE Confidence: 0.802272856235504

00:09:34.048 --> 00:09:36.736 couple of a number of key areas

NOTE Confidence: 0.802272856235504

00:09:36.736 --> 00:09:38.228 of our current status.

NOTE Confidence: 0.861259996891022

00:09:38.230 --> 00:09:40.792 We're going to spend some time talking

NOTE Confidence: 0.861259996891022

00:09:40.792 --> 00:09:43.115 about the fact that this really

NOTE Confidence: 0.861259996891022

00:09:43.115 --> 00:09:45.419 is a dual challenge for surgeons,

NOTE Confidence: 0.861259996891022

00:09:45.420 --> 00:09:47.700 but also for every specialty who's

NOTE Confidence: 0.861259996891022

00:09:47.700 --> 00:09:50.672 involved in the care of this group of

NOTE Confidence: 0.861259996891022

00:09:50.672 --> 00:09:53.213 patients because we have to treat the

NOTE Confidence: 0.861259996891022

00:09:53.213 --> 00:09:55.577 underlying liver disease and the cancer

NOTE Confidence: 0.861259996891022

00:09:55.577 --> 00:09:58.420 were not just on cologist, we are.

NOTE Confidence: 0.861259996891022

00:09:58.420 --> 00:09:59.665 Hepatology oncologist dealing

NOTE Confidence: 0.861259996891022

00:09:59.665 --> 00:10:01.520 with both disease entities.

NOTE Confidence: 0.861259996891022

00:10:01.520 --> 00:10:04.922 You know, very few of our patients are nuts.

NOTE Confidence: 0.861259996891022

00:10:04.930 --> 00:10:06.830 Erotics in the western world,

NOTE Confidence: 0.861259996891022

00:10:06.830 --> 00:10:08.720 only about 5% of them.

NOTE Confidence: 0.861259996891022

00:10:08.720 --> 00:10:10.736 In Asia, about 40% of patients

NOTE Confidence: 0.861259996891022

00:10:10.736 --> 00:10:12.890 with HCC or non cirrhotic,

NOTE Confidence: 0.861259996891022

00:10:12.890 --> 00:10:15.585 so it's a different kind of clinical

NOTE Confidence: 0.861259996891022

00:10:15.585 --> 00:10:18.198 picture in other parts of the world.

NOTE Confidence: 0.861259996891022

00:10:18.200 --> 00:10:20.906 But for what we deal with

NOTE Confidence: 0.861259996891022

00:10:20.906 --> 00:10:22.710 many patients or cirrhotics.

NOTE Confidence: 0.861259996891022

00:10:22.710 --> 00:10:25.464 We will spend a brief bit of time talking

NOTE Confidence: 0.861259996891022

00:10:25.464 --> 00:10:27.660 about reception versus transplant.

NOTE Confidence: 0.861259996891022

00:10:27.660 --> 00:10:30.708 I'm not a transplant surgeon and I'm not.

NOTE Confidence: 0.861259996891022

00:10:30.710 --> 00:10:34.139 I won't claim a mantle of expertise in this,

NOTE Confidence: 0.861259996891022

00:10:34.140 --> 00:10:36.318 but I think any discussion of

NOTE Confidence: 0.861259996891022

00:10:36.318 --> 00:10:38.639 surgery in this disease has to

NOTE Confidence: 0.861259996891022

00:10:38.639 --> 00:10:40.235 at least mention transplant.

NOTE Confidence: 0.861259996891022

00:10:40.240 --> 00:10:42.838 Given its great importance in the

NOTE Confidence: 0.861259996891022

00:10:42.838 --> 00:10:45.549 management of this group of patients.

NOTE Confidence: 0.861259996891022

00:10:45.550 --> 00:10:48.169 I'm going to spend a fair bit of time

NOTE Confidence: 0.861259996891022

00:10:48.169 --> 00:10:50.571 talking about the process of patient

NOTE Confidence: 0.861259996891022

00:10:50.571 --> 00:10:52.611 selection for reception because it

NOTE Confidence: 0.861259996891022

00:10:52.680 --> 00:10:55.039 is truly a complex art and science

NOTE Confidence: 0.861259996891022

00:10:55.039 --> 00:10:57.995 that requires the input of a lot of

NOTE Confidence: 0.861259996891022

00:10:57.995 --> 00:11:00.450 people and will discuss that some.

NOTE Confidence: 0.861259996891022

00:11:00.450 --> 00:11:02.440 Talk about these technical developments,

NOTE Confidence: 0.861259996891022

00:11:02.440 --> 00:11:04.420 primarily the role evolving role

NOTE Confidence: 0.861259996891022

00:11:04.420 --> 00:11:06.004 of minimally invasive techniques.

NOTE Confidence: 0.861259996891022

00:11:06.010 --> 00:11:07.995 Talk some about techniques for

NOTE Confidence: 0.861259996891022

00:11:07.995 --> 00:11:08.789 patient optimization,

NOTE Confidence: 0.861259996891022

00:11:08.790 --> 00:11:11.499 and then I'm going to spend a bit of

NOTE Confidence: 0.861259996891022

00:11:11.499 --> 00:11:14.740 time talking about a few key special

NOTE Confidence: 0.861259996891022

00:11:14.740 --> 00:11:16.648 clinical populations who actually

NOTE Confidence: 0.861259996891022

00:11:16.730 --> 00:11:19.112 are good surgical candidates and we

NOTE Confidence: 0.861259996891022

00:11:19.112 --> 00:11:22.428 need to be keeping an eye out for.

NOTE Confidence: 0.861259996891022

00:11:22.428 --> 00:11:25.020 As we look at patients with

NOTE Confidence: 0.861259996891022

00:11:25.120 --> 00:11:27.228 liver disease in HCC,

NOTE Confidence: 0.861259996891022

00:11:27.230 --> 00:11:30.415 it is important to understand how we

NOTE Confidence: 0.861259996891022

00:11:30.415 --> 00:11:33.451 as clinicians think about the severity

NOTE Confidence: 0.861259996891022

00:11:33.451 --> 00:11:36.091 of their underlying liver disease

NOTE Confidence: 0.861259996891022

00:11:36.091 --> 00:11:39.511 because that is going to be one of the

NOTE Confidence: 0.861259996891022

00:11:39.511 --> 00:11:41.288 key drivers of our decision-making.

NOTE Confidence: 0.861259996891022

00:11:41.288 --> 00:11:42.086 You know,

NOTE Confidence: 0.861259996891022

00:11:42.086 --> 00:11:44.480 the classic clinical system is the

NOTE Confidence: 0.861259996891022

00:11:44.548 --> 00:11:46.556 so-called Child Pugh classification

NOTE Confidence: 0.861259996891022

00:11:46.556 --> 00:11:47.560 of cirrhosis.

NOTE Confidence: 0.861259996891022

00:11:47.560 --> 00:11:50.794 This was this is a very clinically

NOTE Confidence: 0.861259996891022

00:11:50.794 --> 00:11:53.140 driven system that relies on.

NOTE Confidence: 0.861259996891022

00:11:53.140 --> 00:11:55.028 3 lab tests, bilirubin,

NOTE Confidence: 0.861259996891022

00:11:55.028 --> 00:11:55.500 albumin,

NOTE Confidence: 0.861259996891022

00:11:55.500 --> 00:11:57.850 prothrombin time as well as

NOTE Confidence: 0.861259996891022

00:11:57.850 --> 00:11:59.260 two clinical assessments.

NOTE Confidence: 0.861259996891022

00:11:59.260 --> 00:12:01.726 The presence of in severity of

NOTE Confidence: 0.861259996891022

00:12:01.726 --> 00:12:03.901 ascites and Vatican several opathy

NOTE Confidence: 0.861259996891022

00:12:03.901 --> 00:12:06.625 the child Pugh system was originally

NOTE Confidence: 0.861259996891022

00:12:06.625 --> 00:12:08.656 developed to predict mortality

NOTE Confidence: 0.861259996891022

00:12:08.656 --> 00:12:11.040 for portosystemic shunt surgery,

NOTE Confidence: 0.861259996891022

00:12:11.040 --> 00:12:14.320 but it has evolved over years to predict

NOTE Confidence: 0.861259996891022

00:12:14.320 --> 00:12:16.690 mortality after other interventions,

NOTE Confidence: 0.861259996891022

00:12:16.690 --> 00:12:19.090 including liver resection, patients are

NOTE Confidence: 0.861259996891022

00:12:19.090 --> 00:12:22.810 assigned one up to one to three points.

NOTE Confidence: 0.861259996891022

00:12:22.810 --> 00:12:25.340 For each of these criteria.

NOTE Confidence: 0.861259996891022

00:12:25.340 --> 00:12:28.945 Adding up to a scale in their

NOTE Confidence: 0.861259996891022

00:12:28.945 --> 00:12:31.109 classified Childs AB or C.

NOTE Confidence: 0.861259996891022

00:12:31.110 --> 00:12:33.130 In more recent years,

NOTE Confidence: 0.861259996891022

00:12:33.130 --> 00:12:35.655 particularly relating the transplant arena,

NOTE Confidence: 0.861259996891022

00:12:35.660 --> 00:12:38.582 we've adopted the MELD classification so

NOTE Confidence: 0.861259996891022

00:12:38.582 --> 00:12:42.238 called model for in stage liver disease.

NOTE Confidence: 0.861259996891022

00:12:42.240 --> 00:12:45.276 The MELD score is less subjective,

NOTE Confidence: 0.861259996891022

00:12:45.280 --> 00:12:47.680 it is there's no.

NOTE Confidence: 0.861259996891022

00:12:47.680 --> 00:12:49.480 Wrote clinical assessment.

NOTE Confidence: 0.861259996891022

00:12:49.480 --> 00:12:52.678 It relies on 3 lab values,

NOTE Confidence: 0.861259996891022

00:12:52.680 --> 00:12:53.198 creatinine,

NOTE Confidence: 0.861259996891022

00:12:53.198 --> 00:12:54.752 bilirubin and INR.

NOTE Confidence: 0.861259996891022

00:12:54.752 --> 00:12:58.406 Anna calculation and is used and is

NOTE Confidence: 0.861259996891022

00:12:58.406 --> 00:13:01.166 used predominantly as a risk predictor

NOTE Confidence: 0.861259996891022

00:13:01.166 --> 00:13:04.857 in a mortality predictor for patients

NOTE Confidence: 0.861259996891022

00:13:04.857 --> 00:13:07.077 awaiting liver transplantation.

NOTE Confidence: 0.861259996891022

00:13:07.080 --> 00:13:11.244 Both of these indices.

NOTE Confidence: 0.861259996891022

00:13:11.244 --> 00:13:17.490 Provide somewhat different but very accurate.

NOTE Confidence: 0.861259996891022

00:13:17.490 --> 00:13:19.810 Guides for predicting complications

NOTE Confidence: 0.861259996891022

00:13:19.810 --> 00:13:23.290 and mortality for liver surgery in

NOTE Confidence: 0.770419716835022

00:13:23.377 --> 00:13:25.447 the setting of sarot SIS.

NOTE Confidence: 0.770419716835022

00:13:25.450 --> 00:13:27.916 So if you compare them again,

NOTE Confidence: 0.770419716835022

00:13:27.920 --> 00:13:31.959 as I indicated this, this is actually.

NOTE Confidence: 0.770419716835022

00:13:31.960 --> 00:13:34.630 Prediction outcomes based on these

NOTE Confidence: 0.770419716835022

00:13:34.630 --> 00:13:37.300 classifications after replacement of a

NOTE Confidence: 0.770419716835022

00:13:37.380 --> 00:13:40.090 tips device that transjugular prophetic

NOTE Confidence: 0.770419716835022

00:13:40.090 --> 00:13:42.800 portal systemic shunt for ascites,

NOTE Confidence: 0.770419716835022

00:13:42.800 --> 00:13:46.972 both for patients stratified for child Pugh

NOTE Confidence: 0.770419716835022

00:13:46.972 --> 00:13:52.006 score as well as meld above or less than 18.

NOTE Confidence: 0.770419716835022

00:13:52.010 --> 00:13:55.914 And you can see that you know there

NOTE Confidence: 0.770419716835022

00:13:55.914 --> 00:13:59.060 these are different cut offs,

NOTE Confidence: 0.770419716835022

00:13:59.060 --> 00:14:01.892 but they're both quite.

NOTE Confidence: 0.770419716835022

00:14:01.892 --> 00:14:04.016 Predictive of outcome.

NOTE Confidence: 0.770419716835022

00:14:04.020 --> 00:14:05.944 You actually compare them.

NOTE Confidence: 0.770419716835022

00:14:05.944 --> 00:14:08.349 At least this group did,

NOTE Confidence: 0.770419716835022

00:14:08.350 --> 00:14:11.717 and there you know they're very similar.

NOTE Confidence: 0.770419716835022

00:14:11.720 --> 00:14:14.606 The area under the receiver operator

NOTE Confidence: 0.770419716835022

00:14:14.606 --> 00:14:16.530 Curve is essentially equivalent,

NOTE Confidence: 0.770419716835022

00:14:16.530 --> 00:14:19.410 so although one is more clinical,

NOTE Confidence: 0.770419716835022

00:14:19.410 --> 00:14:22.296 one is more strictly lab based.

NOTE Confidence: 0.770419716835022

00:14:22.300 --> 00:14:26.764 They're both very useful and I find them

NOTE Confidence: 0.770419716835022

00:14:26.764 --> 00:14:29.696 somewhat overlapping ways to assess

NOTE Confidence: 0.770419716835022

00:14:29.696 --> 00:14:32.556 risk and underlying liver function.

NOTE Confidence: 0.770419716835022

00:14:32.560 --> 00:14:35.716 So let's turn for a minute

NOTE Confidence: 0.770419716835022

00:14:35.716 --> 00:14:37.294 to liver transplant,

NOTE Confidence: 0.770419716835022

00:14:37.300 --> 00:14:39.680 because this discussion would not

NOTE Confidence: 0.770419716835022

00:14:39.680 --> 00:14:42.060 be complete without mentioning the

NOTE Confidence: 0.770419716835022

00:14:42.135 --> 00:14:44.439 profound importance of evaluating

NOTE Confidence: 0.770419716835022

00:14:44.439 --> 00:14:47.319 patients for liver transplant candidacy.

NOTE Confidence: 0.770419716835022

00:14:47.320 --> 00:14:50.694 And having that in the background in

NOTE Confidence: 0.770419716835022

00:14:50.694 --> 00:14:53.946 and preparing them in moving them

NOTE Confidence: 0.770419716835022

00:14:53.946 --> 00:14:56.796 towards transplant and effective way,

NOTE Confidence: 0.770419716835022

00:14:56.800 --> 00:14:59.348 if they are candidates.

NOTE Confidence: 0.770419716835022

00:14:59.348 --> 00:15:03.870 So the the I think the key.

NOTE Confidence: 0.770419716835022

00:15:03.870 --> 00:15:06.740 Data from the literature is the so

NOTE Confidence: 0.770419716835022

00:15:06.740 --> 00:15:09.538 called Milan study that established the

NOTE Confidence: 0.770419716835022

00:15:09.538 --> 00:15:13.003 Milan criteria which was published in 1996.

NOTE Confidence: 0.770419716835022

00:15:13.010 --> 00:15:15.305 This really established transplant as

NOTE Confidence: 0.770419716835022

00:15:15.305 --> 00:15:18.173 the gold standard for patients with

NOTE Confidence: 0.770419716835022

00:15:18.173 --> 00:15:20.197 significant underlying liver disease

NOTE Confidence: 0.770419716835022

00:15:20.197 --> 00:15:22.727 related to cirrhosis and limited.

NOTE Confidence: 0.770419716835022

00:15:22.730 --> 00:15:25.450 HCC, Milan criteria include patients

NOTE Confidence: 0.770419716835022

00:15:25.450 --> 00:15:28.540 who have one tumor that is.

NOTE Confidence: 0.770419716835022

00:15:28.540 --> 00:15:31.636 Equal or lesser than 5 centimeters

NOTE Confidence: 0.770419716835022

00:15:31.636 --> 00:15:32.668 in diameter,

NOTE Confidence: 0.770419716835022

00:15:32.670 --> 00:15:35.250 or three or fewer tumors,

NOTE Confidence: 0.770419716835022

00:15:35.250 --> 00:15:37.825 all equal to or lesser

NOTE Confidence: 0.770419716835022

00:15:37.825 --> 00:15:39.885 less than 3 centimeters.

NOTE Confidence: 0.770419716835022

00:15:39.890 --> 00:15:42.866 Patients who fit within that criteria

NOTE Confidence: 0.770419716835022

00:15:42.866 --> 00:15:45.570 enjoy excellent post transplant survival,

NOTE Confidence: 0.770419716835022

00:15:45.570 --> 00:15:48.150 ranging around 70 to 75%.

NOTE Confidence: 0.855967879295349

00:15:51.030 --> 00:15:53.221 So even though the focus of this

NOTE Confidence: 0.855967879295349

00:15:53.221 --> 00:15:55.880 topic is is reception specifically,

NOTE Confidence: 0.855967879295349

00:15:55.880 --> 00:15:58.094 it is important to understand that

NOTE Confidence: 0.855967879295349

00:15:58.094 --> 00:16:00.043 transplant in many ways remains

NOTE Confidence: 0.855967879295349

00:16:00.043 --> 00:16:02.048 the optimal treatment for patients

NOTE Confidence: 0.855967879295349

00:16:02.048 --> 00:16:04.360 with limited HCC and cirrhosis.

NOTE Confidence: 0.855967879295349

00:16:04.360 --> 00:16:05.976 For all these reasons,

NOTE Confidence: 0.855967879295349

00:16:05.976 --> 00:16:07.996 patients have an excellent survival.

NOTE Confidence: 0.855967879295349

00:16:08.000 --> 00:16:10.045 Of course, there's nothing like

NOTE Confidence: 0.855967879295349

00:16:10.045 --> 00:16:12.090 a transplant to treat their

NOTE Confidence: 0.855967879295349

00:16:12.160 --> 00:16:14.168 underlying liver failure and.

NOTE Confidence: 0.855967879295349

00:16:14.170 --> 00:16:18.058 One of the shining lights here is that

NOTE Confidence: 0.855967879295349

00:16:18.058 --> 00:16:21.781 living donation does hold future promise

NOTE Confidence: 0.855967879295349

00:16:21.781 --> 00:16:24.437 for increasing organ availability.

NOTE Confidence: 0.855967879295349

00:16:24.440 --> 00:16:26.051 Challenges of course.

NOTE Confidence: 0.855967879295349

00:16:26.051 --> 00:16:28.736 Our organ availability is limited.

NOTE Confidence: 0.855967879295349

00:16:28.740 --> 00:16:31.735 Transplant post transplant care with

NOTE Confidence: 0.855967879295349

00:16:31.735 --> 00:16:34.730 person intensive fault and support.

NOTE Confidence: 0.855967879295349

00:16:34.730 --> 00:16:36.578 And we do have.

NOTE Confidence: 0.855967879295349

00:16:36.578 --> 00:16:39.350 We have learned that extended criteria

NOTE Confidence: 0.855967879295349

00:16:39.436 --> 00:16:42.718 are possible and may allow selective

NOTE Confidence: 0.855967879295349

00:16:42.718 --> 00:16:45.587 increase in eligibility for patients

NOTE Confidence: 0.855967879295349

00:16:45.587 --> 00:16:49.127 who downstage During the course of

NOTE Confidence: 0.855967879295349

00:16:49.127 --> 00:16:53.280 aggressive pre transplant therapies.

NOTE Confidence: 0.855967879295349

00:16:53.280 --> 00:16:55.849 Before we switch to the kind of

NOTE Confidence: 0.855967879295349

00:16:55.849 --> 00:16:57.970 evaluation of patients for reception,

NOTE Confidence: 0.855967879295349

00:16:57.970 --> 00:17:00.343 I think one of the things that

NOTE Confidence: 0.855967879295349

00:17:00.343 --> 00:17:02.802 is unique about HTC that is

NOTE Confidence: 0.855967879295349

00:17:02.802 --> 00:17:04.614 really important to understand,

NOTE Confidence: 0.855967879295349

00:17:04.620 --> 00:17:07.212 and I spend a lot of time talking

NOTE Confidence: 0.855967879295349

00:17:07.212 --> 00:17:09.700 to my residence about this,

NOTE Confidence: 0.855967879295349

00:17:09.700 --> 00:17:12.402 is that these tumors love to invade

NOTE Confidence: 0.855967879295349

00:17:12.402 --> 00:17:14.809 the portal venous system and that.

NOTE Confidence: 0.855967879295349

00:17:14.810 --> 00:17:17.120 You can see that radiographically

NOTE Confidence: 0.855967879295349

00:17:17.120 --> 00:17:18.044 as expensive,

NOTE Confidence: 0.855967879295349

00:17:18.050 --> 00:17:21.284 bulky thrombus is probably in acute thrombus.

NOTE Confidence: 0.855967879295349

00:17:21.290 --> 00:17:24.538 This is a more chronic thrombus and.

NOTE Confidence: 0.855967879295349

00:17:24.540 --> 00:17:27.010 The thrombus maybe tumor itself,

NOTE Confidence: 0.855967879295349

00:17:27.010 --> 00:17:31.426 or a mixture to Marie plot.

NOTE Confidence: 0.855967879295349

00:17:31.430 --> 00:17:34.494 It is in some ways the cynic Winona,

NOTE Confidence: 0.855967879295349

00:17:34.500 --> 00:17:35.516 this disease.

NOTE Confidence: 0.855967879295349

00:17:35.516 --> 00:17:38.564 Acute thrombosis may cause abrupt liver

NOTE Confidence: 0.855967879295349

00:17:38.564 --> 00:17:40.583 decompensation more chronic thrombosis

NOTE Confidence: 0.855967879295349

00:17:40.583 --> 00:17:43.379 like this patient often results in

NOTE Confidence: 0.855967879295349

00:17:43.379 --> 00:17:46.268 liver atrophy in the affected lobar

NOTE Confidence: 0.855967879295349

00:17:46.268 --> 00:17:48.623 segment with compens atory hypertrophy,

NOTE Confidence: 0.855967879295349

00:17:48.630 --> 00:17:51.402 and you're seeing that in the

NOTE Confidence: 0.855967879295349

00:17:51.402 --> 00:17:54.437 left liver in this patient who

NOTE Confidence: 0.855967879295349

00:17:54.437 --> 00:17:57.689 has a right portal vein thrombus.

NOTE Confidence: 0.855967879295349

00:17:57.690 --> 00:18:00.330 This is clearly a marker of

NOTE Confidence: 0.855967879295349

00:18:00.330 --> 00:18:01.650 high risk disease.

NOTE Confidence: 0.855967879295349

00:18:01.650 --> 00:18:03.850 Often these patients you need

NOTE Confidence: 0.855967879295349

00:18:03.850 --> 00:18:06.050 to look for lung lesions.

NOTE Confidence: 0.855967879295349

00:18:06.050 --> 00:18:09.570 That's going to be the next sighted disease,

NOTE Confidence: 0.855967879295349

00:18:09.570 --> 00:18:12.330 but in some ways we as surgeons can

NOTE Confidence: 0.855967879295349

00:18:12.330 --> 00:18:14.745 exploit this atrophy and hypertrophy

NOTE Confidence: 0.855967879295349

00:18:14.745 --> 00:18:17.490 for reception in selected candidates.

NOTE Confidence: 0.888328313827515

00:18:20.900 --> 00:18:25.200 So as we start to think about how do we

NOTE Confidence: 0.888328313827515

00:18:25.315 --> 00:18:29.730 choose patience for potential reception?

NOTE Confidence: 0.888328313827515

00:18:29.730 --> 00:18:32.593 We need to talk about the Barcelona

NOTE Confidence: 0.888328313827515

00:18:32.593 --> 00:18:35.020 Clinic liver Cancer staging system.

NOTE Confidence: 0.888328313827515

00:18:35.020 --> 00:18:39.116 The BCLC, as we often call it, there are

NOTE Confidence: 0.888328313827515

00:18:39.116 --> 00:18:42.637 a variety of of other staging systems.

NOTE Confidence: 0.888328313827515

00:18:42.640 --> 00:18:45.984 But I think most of us who do

NOTE Confidence: 0.888328313827515

00:18:45.984 --> 00:18:48.858 this work on a weekly basis,

NOTE Confidence: 0.888328313827515

00:18:48.860 --> 00:18:51.080 relying on the Barcelona system,

NOTE Confidence: 0.888328313827515

00:18:51.080 --> 00:18:53.999 kind of as our principle go to

NOTE Confidence: 0.888328313827515

00:18:53.999 --> 00:18:55.960 in the decision-making process.

NOTE Confidence: 0.888328313827515

00:18:55.960 --> 00:18:57.292 It's not perfect,

NOTE Confidence: 0.888328313827515

00:18:57.292 --> 00:19:00.400 but I think it's clinically very useful,

NOTE Confidence: 0.888328313827515

00:19:00.400 --> 00:19:03.508 so stage A patients or patients with

NOTE Confidence: 0.888328313827515

00:19:03.508 --> 00:19:05.951 early HCC, relatively small lesions,

NOTE Confidence: 0.888328313827515

00:19:05.951 --> 00:19:08.536 or a few single lesions.

NOTE Confidence: 0.888328313827515

00:19:08.540 --> 00:19:10.180 And these A1 patients are.

NOTE Confidence: 0.888328313827515

00:19:10.180 --> 00:19:13.114 This is really the group we want to operate.

NOTE Confidence: 0.888328313827515

00:19:13.120 --> 00:19:14.098 No portal hypertension.

NOTE Confidence: 0.888328313827515

00:19:14.098 --> 00:19:16.614 Normal billirubin, essentially no sarot sis.

NOTE Confidence: 0.888328313827515

00:19:16.614 --> 00:19:19.410 As we go up and stage,

NOTE Confidence: 0.888328313827515

00:19:19.410 --> 00:19:22.224 the patients tend to get some

NOTE Confidence: 0.888328313827515

00:19:22.224 --> 00:19:24.100 degree of liver disease.

NOTE Confidence: 0.888328313827515

00:19:24.100 --> 00:19:26.435 They may have portal hypertension

NOTE Confidence: 0.888328313827515

00:19:26.435 --> 00:19:29.270 or may they maybe have mild.

NOTE Confidence: 0.888328313827515

00:19:29.270 --> 00:19:31.414 Disease according to Child

NOTE Confidence: 0.888328313827515

00:19:31.414 --> 00:19:32.486 Pugh classifications,

NOTE Confidence: 0.888328313827515

00:19:32.490 --> 00:19:36.249 as we get into stage B2 mercies

NOTE Confidence: 0.888328313827515

00:19:36.249 --> 00:19:37.860 or larger tumors,

NOTE Confidence: 0.888328313827515

00:19:37.860 --> 00:19:40.635 but this stage B classification

NOTE Confidence: 0.888328313827515

00:19:40.635 --> 00:19:43.410 includes a variety of severity

NOTE Confidence: 0.888328313827515

00:19:43.502 --> 00:19:45.917 in the liver disease stage,

NOTE Confidence: 0.888328313827515

00:19:45.920 --> 00:19:49.136 sees advanced cancer and state Steve.

NOTE Confidence: 0.888328313827515

00:19:49.140 --> 00:19:52.899 This is, of course in stage disease.

NOTE Confidence: 0.923724949359894

00:19:56.470 --> 00:19:59.620 So. Is HPB surgeons.

NOTE Confidence: 0.923724949359894

00:19:59.620 --> 00:20:02.840 We are trying to extract as much

NOTE Confidence: 0.923724949359894

00:20:02.934 --> 00:20:06.366 information as we can to make

NOTE Confidence: 0.923724949359894

00:20:06.366 --> 00:20:08.654 safe decisions about reception.

NOTE Confidence: 0.923724949359894

00:20:08.660 --> 00:20:12.164 And there is a real kind of diversity

NOTE Confidence: 0.923724949359894

00:20:12.164 --> 00:20:14.674 of approaches between the Western

NOTE Confidence: 0.923724949359894

00:20:14.674 --> 00:20:17.764 western surgeons in in the Asians.

NOTE Confidence: 0.923724949359894

00:20:17.770 --> 00:20:20.120 Surgeons in China and Japan

NOTE Confidence: 0.923724949359894

00:20:20.120 --> 00:20:22.470 often rely on in design,

NOTE Confidence: 0.923724949359894

00:20:22.470 --> 00:20:26.054 and green retention is a kind of a

NOTE Confidence: 0.923724949359894

00:20:26.054 --> 00:20:28.620 biologic measure of liver function.

NOTE Confidence: 0.923724949359894

00:20:28.620 --> 00:20:31.364 Signing in green clearance seems to be

NOTE Confidence: 0.923724949359894

00:20:31.364 --> 00:20:34.170 less useful in our Western patients,

NOTE Confidence: 0.923724949359894

00:20:34.170 --> 00:20:36.310 although she centers use it,

NOTE Confidence: 0.923724949359894

00:20:36.310 --> 00:20:39.342 it seems to be more effective in this

NOTE Confidence: 0.923724949359894

00:20:39.342 --> 00:20:43.159 group of patients with hep B related disease.

NOTE Confidence: 0.923724949359894

00:20:43.160 --> 00:20:46.310 So there's a disparity in the usage.

NOTE Confidence: 0.923724949359894

00:20:46.310 --> 00:20:48.488 We in the western world tend

NOTE Confidence: 0.923724949359894

00:20:48.488 --> 00:20:51.239 to use a cluster of of indices

NOTE Confidence: 0.923724949359894

00:20:51.239 --> 00:20:53.259 to help us make decisions,

NOTE Confidence: 0.923724949359894

00:20:53.260 --> 00:20:54.940 including serum bilirubin and the

NOTE Confidence: 0.923724949359894

00:20:54.940 --> 00:20:56.620 presence or absence of clinically

NOTE Confidence: 0.923724949359894

00:20:56.674 --> 00:20:58.279 significant portal hypertension.

NOTE Confidence: 0.923724949359894

00:20:58.280 --> 00:20:59.820 Well, what's clinically significant?

NOTE Confidence: 0.923724949359894

00:20:59.820 --> 00:21:00.590 Portal hypertension?

NOTE Confidence: 0.923724949359894

00:21:00.590 --> 00:21:03.678 Well, we look at a number of things.

NOTE Confidence: 0.923724949359894

00:21:03.680 --> 00:21:06.382 You look at the presence or absence

NOTE Confidence: 0.923724949359894

00:21:06.382 --> 00:21:07.540 of splenomegaly thrombocytopenia,

NOTE Confidence: 0.923724949359894

00:21:07.540 --> 00:21:09.871 and we can get a an actual

NOTE Confidence: 0.923724949359894

00:21:09.871 --> 00:21:11.416 quantitative measure using wedge

NOTE Confidence: 0.923724949359894

00:21:11.416 --> 00:21:13.328 product vein pressure gradients,

NOTE Confidence: 0.923724949359894

00:21:13.330 --> 00:21:17.128 and I'll talk about that more in a minute.

NOTE Confidence: 0.923724949359894

00:21:17.130 --> 00:21:20.666 And in some cases we turned to actual

NOTE Confidence: 0.923724949359894

00:21:20.666 --> 00:21:22.978 histopathologic analysis using liver biopsy.

NOTE Confidence: 0.820014655590057

00:21:25.430 --> 00:21:27.438 Um, you know this.

NOTE Confidence: 0.820014655590057

00:21:27.438 --> 00:21:29.948 In designing green clearance is

NOTE Confidence: 0.820014655590057

00:21:29.948 --> 00:21:33.238 one of the reasons we don't this.

NOTE Confidence: 0.820014655590057

00:21:33.240 --> 00:21:35.470 This graphic illustrates the challenge

NOTE Confidence: 0.820014655590057

00:21:35.470 --> 00:21:38.610 with it in a western population,

NOTE Confidence: 0.820014655590057

00:21:38.610 --> 00:21:42.078 there is a broad distribution of.

NOTE Confidence: 0.820014655590057

00:21:42.080 --> 00:21:44.168 Severity scores with overlapping

NOTE Confidence: 0.820014655590057

00:21:44.168 --> 00:21:46.256 in designing green clearance.

NOTE Confidence: 0.820014655590057

00:21:46.260 --> 00:21:50.544 So it it's it's less useful clinically.

NOTE Confidence: 0.820014655590057

00:21:50.550 --> 00:21:54.339 One of the things that we do use a

NOTE Confidence: 0.820014655590057

00:21:54.339 --> 00:21:58.305 lot is simple CT or MRI assessment.

NOTE Confidence: 0.820014655590057

00:21:58.310 --> 00:22:01.172 Patients like this with bulky big

NOTE Confidence: 0.820014655590057

00:22:01.172 --> 00:22:04.130 clearcut verisys in a big spleen.

NOTE Confidence: 0.820014655590057

00:22:04.130 --> 00:22:06.555 We know we're unlikely to

NOTE Confidence: 0.820014655590057

00:22:06.555 --> 00:22:08.010 be surgical candidates.

NOTE Confidence: 0.820014655590057

00:22:08.010 --> 00:22:11.385 Another example of significant upper

NOTE Confidence: 0.820014655590057

00:22:11.385 --> 00:22:13.410 abdominal variceal development.

NOTE Confidence: 0.820014655590057

00:22:13.410 --> 00:22:16.416 So what are my favorite measures?

NOTE Confidence: 0.820014655590057

00:22:16.420 --> 00:22:19.927 In another reason that we really rely

NOTE Confidence: 0.820014655590057

00:22:19.927 --> 00:22:22.496 on a multidisciplinary assessment is

NOTE Confidence: 0.820014655590057

00:22:22.496 --> 00:22:25.933 the use of Patrick Kane wedge pressure.

NOTE Confidence: 0.820014655590057

00:22:25.940 --> 00:22:29.545 This is a procedure that the interventional

NOTE Confidence: 0.820014655590057

00:22:29.545 --> 00:22:31.949 radiologists are quite expert at.

NOTE Confidence: 0.820014655590057

00:22:31.950 --> 00:22:33.954 It involves catheter placed

NOTE Confidence: 0.820014655590057

00:22:33.954 --> 00:22:35.958 through the vena cava,

NOTE Confidence: 0.820014655590057

00:22:35.960 --> 00:22:38.040 usually through transjugular approach,

NOTE Confidence: 0.820014655590057

00:22:38.040 --> 00:22:41.160 and the catheter is directed out

NOTE Confidence: 0.820014655590057

00:22:41.238 --> 00:22:43.508 through the paddock vein wedge.

NOTE Confidence: 0.820014655590057

00:22:43.510 --> 00:22:46.598 And a reading is taken and it's expressed

NOTE Confidence: 0.820014655590057

00:22:46.598 --> 00:22:50.230 as a gradient in reference to the SVC.

NOTE Confidence: 0.820014655590057

00:22:50.230 --> 00:22:52.786 Anything greater than 10 millimeters of

NOTE Confidence: 0.820014655590057

00:22:52.786 --> 00:22:55.804 Mercury represents what we would consider

NOTE Confidence: 0.820014655590057

00:22:55.804 --> 00:22:58.300 clinically significant portal hypertension.

NOTE Confidence: 0.820014655590057

00:22:58.300 --> 00:23:01.892 The data for that is really from a

NOTE Confidence: 0.820014655590057

00:23:01.892 --> 00:23:05.229 classic paper from the Barcelona group,

NOTE Confidence: 0.820014655590057

00:23:05.230 --> 00:23:07.740 Jordi Bruin colleagues that was

NOTE Confidence: 0.820014655590057

00:23:07.740 --> 00:23:10.680 published in many years ago now,

NOTE Confidence: 0.820014655590057

00:23:10.680 --> 00:23:13.893 but they looked at the outcome of

NOTE Confidence: 0.820014655590057

00:23:13.893 --> 00:23:16.620 of patients after liver surgery.

NOTE Confidence: 0.820014655590057

00:23:16.620 --> 00:23:18.960 And compared their preoperative

NOTE Confidence: 0.820014655590057

00:23:18.960 --> 00:23:21.300 paddock vein pressure gradient

NOTE Confidence: 0.820014655590057

00:23:21.300 --> 00:23:23.330 patients who underwent,

NOTE Confidence: 0.820014655590057

00:23:23.330 --> 00:23:27.600 went to surgery with a paddock vein,

NOTE Confidence: 0.820014655590057

00:23:27.600 --> 00:23:30.738 pressure less than 10 generally did

NOTE Confidence: 0.820014655590057

00:23:30.738 --> 00:23:34.310 very well without any decompensation.

NOTE Confidence: 0.820014655590057

00:23:34.310 --> 00:23:37.982 There were a couple who were

NOTE Confidence: 0.820014655590057

00:23:37.982 --> 00:23:40.430 higher but most did.

NOTE Confidence: 0.820014655590057

00:23:40.430 --> 00:23:43.923 Did quite well with his lower group

NOTE Confidence: 0.820014655590057

00:23:43.923 --> 00:23:46.390 patients who decompensated almost all.

NOTE Confidence: 0.820014655590057

00:23:46.390 --> 00:23:49.185 Virtually all have these higher

NOTE Confidence: 0.820014655590057

00:23:49.185 --> 00:23:51.980 preoperative FedEx thing wage pressures

NOTE Confidence: 0.820014655590057

00:23:52.067 --> 00:23:54.881 so that measurement is a is really

NOTE Confidence: 0.820014655590057

00:23:54.881 --> 00:23:57.349 a critical piece of information.

NOTE Confidence: 0.820014655590057

00:23:57.350 --> 00:23:58.778 For for us surgeons,

NOTE Confidence: 0.820014655590057

00:23:58.778 --> 00:24:00.920 as we think about taking these

NOTE Confidence: 0.820014655590057

00:24:00.996 --> 00:24:03.166 patients in the operating room.

NOTE Confidence: 0.820014655590057

00:24:03.170 --> 00:24:05.930 The other thing that can be done at

NOTE Confidence: 0.820014655590057

00:24:05.930 --> 00:24:09.133 the same time as phatic pain wedge

NOTE Confidence: 0.820014655590057

00:24:09.133 --> 00:24:12.200 pressures is this transjugular liver biopsy.

NOTE Confidence: 0.820014655590057

00:24:12.200 --> 00:24:13.469 It's minimally invasive.

NOTE Confidence: 0.820014655590057

00:24:13.469 --> 00:24:16.007 A biopsy instrument can be guided

NOTE Confidence: 0.820014655590057

00:24:16.007 --> 00:24:18.650 into the liver parenchyma through it.

NOTE Confidence: 0.820014655590057

00:24:18.650 --> 00:24:21.320 A transjugular approach in a small

NOTE Confidence: 0.820014655590057

00:24:21.320 --> 00:24:24.397 tissue sample taken that can help us

NOTE Confidence: 0.820014655590057

00:24:24.397 --> 00:24:27.246 grade the degree of fibrosis or cirrhosis,

NOTE Confidence: 0.820014655590057

00:24:27.250 --> 00:24:29.830 which will also help with decisions.

NOTE Confidence: 0.820014655590057

00:24:29.830 --> 00:24:33.550 So overall, as we think about our approach.

NOTE Confidence: 0.820014655590057

00:24:33.550 --> 00:24:35.330 Surgically are the treatment

NOTE Confidence: 0.820014655590057

00:24:35.330 --> 00:24:37.555 really is driven by stage?

NOTE Confidence: 0.820014655590057

00:24:37.560 --> 00:24:40.026 Know this early stage group of

NOTE Confidence: 0.820014655590057

00:24:40.026 --> 00:24:42.250 patients we consider both for

NOTE Confidence: 0.820014655590057

00:24:42.250 --> 00:24:44.250 liver transplant in reception.

NOTE Confidence: 0.820014655590057

00:24:44.250 --> 00:24:46.730 Portal pressures are key here.

NOTE Confidence: 0.820014655590057

00:24:46.730 --> 00:24:49.210 Patients have normal porting pressures.

NOTE Confidence: 0.820014655590057

00:24:49.210 --> 00:24:51.690 Early stage disease can be

NOTE Confidence: 0.820014655590057

00:24:51.690 --> 00:24:53.178 treated with reception.

NOTE Confidence: 0.820014655590057

00:24:53.180 --> 00:24:56.156 Increased pressures need to be evaluated

NOTE Confidence: 0.820014655590057

00:24:56.156 --> 00:24:58.140 for transplantation or ablation.

NOTE Confidence: 0.831802666187286

00:25:02.350 --> 00:25:04.600 So to pull it all together,

NOTE Confidence: 0.831802666187286

00:25:04.600 --> 00:25:07.256 the people that I'm looking for his potential

NOTE Confidence: 0.831802666187286

00:25:07.256 --> 00:25:09.480 candidates are patients without cirrhosis.

NOTE Confidence: 0.831802666187286

00:25:09.480 --> 00:25:12.140 Inhuma major hepat Ectomy can be performed

NOTE Confidence: 0.831802666187286

00:25:12.140 --> 00:25:14.744 without morbidity and I will even operate

NOTE Confidence: 0.831802666187286

00:25:14.744 --> 00:25:16.844 on patients with significant with large

NOTE Confidence: 0.831802666187286

00:25:16.911 --> 00:25:19.227 tumors in this group without cirrhosis.

NOTE Confidence: 0.831802666187286

00:25:19.230 --> 00:25:21.838 These are folks who will tolerate a major

NOTE Confidence: 0.831802666187286

00:25:21.838 --> 00:25:23.835 headache ectomy patients with compensated

NOTE Confidence: 0.831802666187286

00:25:23.835 --> 00:25:25.980 cirrhosis are much more difficult,

NOTE Confidence: 0.831802666187286

00:25:25.980 --> 00:25:27.850 the decision-making is more difficult.

NOTE Confidence: 0.831802666187286

00:25:27.850 --> 00:25:30.562 These are this is a group you have

NOTE Confidence: 0.831802666187286

00:25:30.562 --> 00:25:32.898 to collect all this information.

NOTE Confidence: 0.831802666187286

00:25:32.900 --> 00:25:33.833 In the operative,

NOTE Confidence: 0.831802666187286

00:25:33.833 --> 00:25:35.077 planning is more difficult.

NOTE Confidence: 0.831802666187286

00:25:35.080 --> 00:25:36.635 They generally will not tolerate

NOTE Confidence: 0.831802666187286

00:25:36.635 --> 00:25:38.190 a major help detect me.

NOTE Confidence: 0.831802666187286

00:25:38.190 --> 00:25:40.742 You have to be looking at a segmented

NOTE Confidence: 0.831802666187286

00:25:40.742 --> 00:25:42.847 happy talk to me or an ablation.

NOTE Confidence: 0.831802666187286

00:25:42.850 --> 00:25:45.379 I'm not going to spend a lot of time

NOTE Confidence: 0.831802666187286

00:25:45.379 --> 00:25:47.519 talking about ablation in this talk,

NOTE Confidence: 0.831802666187286

00:25:47.520 --> 00:25:48.764 but it's another important

NOTE Confidence: 0.831802666187286

00:25:48.764 --> 00:25:50.008 tool in our armamentarium.

NOTE Confidence: 0.855990779399872

00:25:52.280 --> 00:25:54.870 So. And our multidisciplinary formats.

NOTE Confidence: 0.855990779399872

00:25:54.870 --> 00:25:57.257 We're looking at all of these things,

NOTE Confidence: 0.855990779399872

00:25:57.260 --> 00:25:59.654 severity of liver disease through child Pugh,

NOTE Confidence: 0.855990779399872

00:25:59.660 --> 00:26:00.980 Mail portal, hypertension, Histology.

NOTE Confidence: 0.855990779399872

00:26:00.980 --> 00:26:03.420 Then we assess the extent of disease,

NOTE Confidence: 0.855990779399872

00:26:03.420 --> 00:26:05.466 size of lesions number, vaster invasions,

NOTE Confidence: 0.855990779399872

00:26:05.470 --> 00:26:07.606 as well as all these other factors that

NOTE Confidence: 0.855990779399872

00:26:07.606 --> 00:26:09.918 we think about surgically comorbidities.

NOTE Confidence: 0.855990779399872

00:26:09.920 --> 00:26:11.630 Do they have heart disease,

NOTE Confidence: 0.855990779399872

00:26:11.630 --> 00:26:13.340 lung disease, or kidney disease,

NOTE Confidence: 0.855990779399872

00:26:13.340 --> 00:26:16.409 as well as the size of the liver remnant?

NOTE Confidence: 0.859463758766651

00:26:18.740 --> 00:26:22.324 So. As we pull these this information

NOTE Confidence: 0.859463758766651

00:26:22.324 --> 00:26:24.265 together, we wind up really getting

NOTE Confidence: 0.859463758766651

00:26:24.265 --> 00:26:26.720 what I would describe as this multi

NOTE Confidence: 0.859463758766651

00:26:26.720 --> 00:26:28.660 parameter assessment for respectability,

NOTE Confidence: 0.859463758766651

00:26:28.660 --> 00:26:31.208 and I won't walk through this all,

NOTE Confidence: 0.859463758766651

00:26:31.210 --> 00:26:34.360 but you can see that really it's a pretty

NOTE Confidence: 0.859463758766651

00:26:34.360 --> 00:26:37.030 small group who are really low risk.

NOTE Confidence: 0.859463758766651

00:26:37.030 --> 00:26:40.250 These are patients who have no portal

NOTE Confidence: 0.859463758766651

00:26:40.250 --> 00:26:43.196 hypertension in minor have to talk to me.

NOTE Confidence: 0.859463758766651

00:26:43.200 --> 00:26:46.042 It's important to understand that in this

NOTE Confidence: 0.859463758766651

00:26:46.042 --> 00:26:49.180 low risk of group group of patients,

NOTE Confidence: 0.859463758766651

00:26:49.180 --> 00:26:51.310 liver resection is very safe.

NOTE Confidence: 0.859463758766651

00:26:51.310 --> 00:26:53.878 Liver related mortality less than 5%.

NOTE Confidence: 0.859463758766651

00:26:53.880 --> 00:26:57.714 As soon as you get up into intermediate risk,

NOTE Confidence: 0.859463758766651

00:26:57.720 --> 00:26:59.850 we're looking at, you know,

NOTE Confidence: 0.859463758766651

00:26:59.850 --> 00:27:02.412 pushing a 30% risk of decompensation

NOTE Confidence: 0.859463758766651

00:27:02.412 --> 00:27:04.126 close to 10% mortality.

NOTE Confidence: 0.859463758766651

00:27:04.126 --> 00:27:06.682 High risk group, greater than a

NOTE Confidence: 0.859463758766651

00:27:06.682 --> 00:27:08.818 30% risk of decompensation Anna.

NOTE Confidence: 0.859463758766651

00:27:08.818 --> 00:27:10.953 Significant risk of surgical mortality.

NOTE Confidence: 0.859463758766651

00:27:10.960 --> 00:27:13.949 So all of this kind of accuracy.

NOTE Confidence: 0.859463758766651

00:27:13.950 --> 00:27:17.274 Indecision making is really

NOTE Confidence: 0.859463758766651

00:27:17.274 --> 00:27:21.429 critical for safe patient outcomes.

NOTE Confidence: 0.859463758766651

00:27:21.430 --> 00:27:23.698 So how do we do this?

NOTE Confidence: 0.859463758766651

00:27:23.700 --> 00:27:26.045 Well, I probably should just use Mario

NOTE Confidence: 0.859463758766651

00:27:26.045 --> 00:27:28.229 slide with this surgical decision,

NOTE Confidence: 0.859463758766651

00:27:28.230 --> 00:27:31.254 making it is more than just the surgeons.

NOTE Confidence: 0.859463758766651

00:27:31.260 --> 00:27:34.460 It takes a team or in his words

NOTE Confidence: 0.859463758766651

00:27:34.460 --> 00:27:36.360 it takes a village.

NOTE Confidence: 0.859463758766651

00:27:36.360 --> 00:27:37.172 You know,

NOTE Confidence: 0.859463758766651

00:27:37.172 --> 00:27:40.420 and I cannot tell you over the years,

NOTE Confidence: 0.859463758766651

00:27:40.420 --> 00:27:43.045 how many times I say HPB surgeon

NOTE Confidence: 0.859463758766651

00:27:43.045 --> 00:27:45.842 have been rained in in my surgical

NOTE Confidence: 0.859463758766651

00:27:45.842 --> 00:27:48.230 enthusiasm by one of my colleagues

NOTE Confidence: 0.859463758766651

00:27:48.310 --> 00:27:50.884 who points out some other pieces

NOTE Confidence: 0.859463758766651

00:27:50.884 --> 00:27:53.410 of the patients history or biology

NOTE Confidence: 0.859463758766651

00:27:53.410 --> 00:27:55.435 that would make surgery unsafe.

NOTE Confidence: 0.859463758766651

00:27:55.440 --> 00:27:56.532 And, you know,

NOTE Confidence: 0.859463758766651

00:27:56.532 --> 00:27:58.716 that's where we all get together

NOTE Confidence: 0.859463758766651

00:27:58.716 --> 00:28:01.128 in our liver tumor conference.

NOTE Confidence: 0.859463758766651

00:28:01.130 --> 00:28:03.160 Hepatology IR pathology, medical oncology,

NOTE Confidence: 0.859463758766651

00:28:03.160 --> 00:28:04.792 thinking about alternative treatments

NOTE Confidence: 0.859463758766651

00:28:04.792 --> 00:28:07.240 are body image Ng colleagues or.

NOTE Confidence: 0.859463758766651

00:28:07.240 --> 00:28:10.390 Very helpful in pointing out.

NOTE Confidence: 0.859463758766651

00:28:10.390 --> 00:28:12.370 The extent of the disease,

NOTE Confidence: 0.859463758766651

00:28:12.370 --> 00:28:14.350 potentially non or extra paddock

NOTE Confidence: 0.859463758766651

00:28:14.350 --> 00:28:15.538 sites of disease.

NOTE Confidence: 0.859463758766651

00:28:15.540 --> 00:28:18.264 Other things that will be deal

NOTE Confidence: 0.859463758766651

00:28:18.264 --> 00:28:19.626 Breakers and then.

NOTE Confidence: 0.859463758766651

00:28:19.630 --> 00:28:21.894 All of the surgical.

NOTE Confidence: 0.859463758766651

00:28:21.894 --> 00:28:24.724 Teens need to be involved.

NOTE Confidence: 0.859463758766651

00:28:24.730 --> 00:28:26.618 Transplant surgeons and surgical

NOTE Confidence: 0.859463758766651

00:28:26.618 --> 00:28:28.978 oncologist both bring kind of

NOTE Confidence: 0.859463758766651

00:28:28.978 --> 00:28:29.881 interdependent overlapping

NOTE Confidence: 0.859463758766651

00:28:29.881 --> 00:28:32.089 expertise to the table and caring

NOTE Confidence: 0.859463758766651

00:28:32.089 --> 00:28:33.990 for this group of patients.

NOTE Confidence: 0.869251012802124

00:28:36.060 --> 00:28:38.916 So I'm going to turn for minute shift

NOTE Confidence: 0.869251012802124

00:28:38.916 --> 00:28:41.989 gears and talk about surgical technique.

NOTE Confidence: 0.869251012802124

00:28:41.990 --> 00:28:44.005 So these are the classic

NOTE Confidence: 0.869251012802124

00:28:44.005 --> 00:28:45.617 major hepat ectomy operations.

NOTE Confidence: 0.869251012802124

00:28:45.620 --> 00:28:48.080 You know, these are the classical

NOTE Confidence: 0.869251012802124

00:28:48.080 --> 00:28:49.720 operations that originally described

NOTE Confidence: 0.869251012802124

00:28:49.783 --> 00:28:51.658 his liver surgery was developed.

NOTE Confidence: 0.869251012802124

00:28:51.660 --> 00:28:53.952 You know this is right now

NOTE Confidence: 0.869251012802124

00:28:53.952 --> 00:28:56.500 protect me left at protect me.

NOTE Confidence: 0.869251012802124

00:28:56.500 --> 00:28:58.822 Extended right hip protect me or

NOTE Confidence: 0.869251012802124

00:28:58.822 --> 00:29:00.845 left lateral segment Or's left

NOTE Confidence: 0.869251012802124

00:29:00.845 --> 00:29:03.287 lateral section ectomy and you know

NOTE Confidence: 0.869251012802124

00:29:03.287 --> 00:29:05.376 these operations are really great

NOTE Confidence: 0.869251012802124

00:29:05.376 --> 00:29:07.776 for patients who are non cirrhotic,

NOTE Confidence: 0.869251012802124

00:29:07.780 --> 00:29:08.959 have larger tumors,

NOTE Confidence: 0.869251012802124

00:29:08.959 --> 00:29:12.220 but as you can tell many of them.

NOTE Confidence: 0.869251012802124

00:29:12.220 --> 00:29:14.560 Involve sacrifices of a major of

NOTE Confidence: 0.869251012802124

00:29:14.560 --> 00:29:16.840 volume of functioning liver and anyone

NOTE Confidence: 0.869251012802124

00:29:16.840 --> 00:29:19.115 any patient who has any degree of

NOTE Confidence: 0.869251012802124

00:29:19.115 --> 00:29:21.624 liver disease will not tolerate these

NOTE Confidence: 0.869251012802124

00:29:21.624 --> 00:29:23.739 things with the exception perhaps

NOTE Confidence: 0.869251012802124

00:29:23.740 --> 00:29:26.980 of the left lateral section ectomy.

NOTE Confidence: 0.869251012802124

00:29:26.980 --> 00:29:29.661 So a key for liver surgeons is

NOTE Confidence: 0.869251012802124

00:29:29.661 --> 00:29:31.370 understanding hepatic segmental anatomy.

NOTE Confidence: 0.869251012802124

00:29:31.370 --> 00:29:33.365 This was originally described by

NOTE Confidence: 0.869251012802124

00:29:33.365 --> 00:29:35.360 the French anatomist Cloud Kanade.

NOTE Confidence: 0.869251012802124

00:29:35.360 --> 00:29:38.146 There are eight segments in the liver.

NOTE Confidence: 0.869251012802124

00:29:38.150 --> 00:29:38.886 The caudate,

NOTE Confidence: 0.869251012802124

00:29:38.886 --> 00:29:41.830 you know two and three on the left

NOTE Confidence: 0.869251012802124

00:29:41.913 --> 00:29:43.948 lateral segment for left medial

NOTE Confidence: 0.869251012802124

00:29:43.948 --> 00:29:46.930 567 and eight on the right side,

NOTE Confidence: 0.869251012802124

00:29:46.930 --> 00:29:49.126 and it's critical to understand that

NOTE Confidence: 0.869251012802124

00:29:49.126 --> 00:29:52.389 we can mix and match and tailor our

NOTE Confidence: 0.869251012802124

00:29:52.389 --> 00:29:54.113 operations very precisely based

NOTE Confidence: 0.869251012802124

00:29:54.113 --> 00:29:56.339 on this segmental anatomy.

NOTE Confidence: 0.869251012802124

00:29:56.340 --> 00:29:58.524 So as we think about segmental

NOTE Confidence: 0.869251012802124

00:29:58.524 --> 00:30:00.439 liver resection for small HCC

NOTE Confidence: 0.869251012802124

00:30:00.439 --> 00:30:01.999 understanding those segments gives

NOTE Confidence: 0.869251012802124

00:30:01.999 --> 00:30:04.799 us a great ability to to do again.

NOTE Confidence: 0.869251012802124

00:30:04.800 --> 00:30:06.948 Taylor or Target the extent of

NOTE Confidence: 0.869251012802124

00:30:06.948 --> 00:30:09.200 the operation to the the size

NOTE Confidence: 0.869251012802124

00:30:09.200 --> 00:30:11.055 and location of the disease.

NOTE Confidence: 0.869251012802124

00:30:11.060 --> 00:30:13.601 This is a perfectly in the posterior

NOTE Confidence: 0.869251012802124

00:30:13.601 --> 00:30:16.160 sector which would be for section in

NOTE Confidence: 0.869251012802124

00:30:16.160 --> 00:30:18.790 segment six and seven poster sector ectomy.

NOTE Confidence: 0.869251012802124

00:30:18.790 --> 00:30:20.940 These are segmental resection from

NOTE Confidence: 0.869251012802124

00:30:20.940 --> 00:30:24.437 the right side and the left side of

NOTE Confidence: 0.869251012802124

00:30:24.437 --> 00:30:26.557 liver segment through segment 2.

NOTE Confidence: 0.869251012802124

00:30:26.560 --> 00:30:27.248 Now,

NOTE Confidence: 0.869251012802124

00:30:27.248 --> 00:30:30.688 the other reason that understanding

NOTE Confidence: 0.869251012802124

00:30:30.688 --> 00:30:34.219 segmental anatomy is important is for.

NOTE Confidence: 0.869251012802124

00:30:34.220 --> 00:30:37.118 The technical element of Disease Control.

NOTE Confidence: 0.869251012802124

00:30:37.120 --> 00:30:40.240 These portal venous branches are a

NOTE Confidence: 0.869251012802124

00:30:40.240 --> 00:30:43.285 key pathway for dissemination of tumor

NOTE Confidence: 0.869251012802124

00:30:43.285 --> 00:30:46.797 cells and can be contaminated by tumor cells.

NOTE Confidence: 0.869251012802124

00:30:46.800 --> 00:30:49.220 So when we're doing parenchymal

NOTE Confidence: 0.869251012802124

00:30:49.220 --> 00:30:50.188 sparing receptions,

NOTE Confidence: 0.869251012802124

00:30:50.190 --> 00:30:53.172 how we conduct that reception is in

NOTE Confidence: 0.869251012802124

00:30:53.172 --> 00:30:56.967 relation to the portal venous branch serving.

NOTE Confidence: 0.869251012802124

00:30:56.970 --> 00:30:58.722 That segment is critical.

NOTE Confidence: 0.869251012802124

00:30:58.722 --> 00:31:01.350 This approach is ideal with a

NOTE Confidence: 0.869251012802124

00:31:01.438 --> 00:31:04.228 complete resection of the involved.

NOTE Confidence: 0.869251012802124

00:31:04.230 --> 00:31:07.345 A portal vein this beta be reception

NOTE Confidence: 0.869251012802124

00:31:07.345 --> 00:31:09.240 would encompass the tumor,

NOTE Confidence: 0.869251012802124

00:31:09.240 --> 00:31:12.040 but not as much portal vein and

NOTE Confidence: 0.869251012802124

00:31:12.040 --> 00:31:15.379 would put the patient at a higher

NOTE Confidence: 0.869251012802124

00:31:15.379 --> 00:31:17.423 risk for local recurrence.

NOTE Confidence: 0.869251012802124

00:31:17.430 --> 00:31:19.700 So patient selection is important,

NOTE Confidence: 0.869251012802124

00:31:19.700 --> 00:31:23.858 but technicalities are important as well.

NOTE Confidence: 0.869251012802124

00:31:23.860 --> 00:31:26.975 Now let's talk for a minute about

NOTE Confidence: 0.869251012802124

00:31:26.975 --> 00:31:29.120 the future liver remnant.

NOTE Confidence: 0.869251012802124

00:31:29.120 --> 00:31:31.962 What we know from liver surgery is

NOTE Confidence: 0.869251012802124

00:31:31.962 --> 00:31:35.970 that the size of the remnant is a

NOTE Confidence: 0.869251012802124

00:31:35.970 --> 00:31:38.675 critical predictor of postoperative outcome.

NOTE Confidence: 0.869251012802124

00:31:38.680 --> 00:31:40.180 Patients who have,

NOTE Confidence: 0.869251012802124

00:31:40.180 --> 00:31:43.180 in healthy patients who have a

NOTE Confidence: 0.869251012802124

00:31:43.180 --> 00:31:46.358 functional liver remnant of less than 20%.

NOTE Confidence: 0.869251012802124

00:31:46.360 --> 00:31:49.524 We have a very high incidence of

NOTE Confidence: 0.869251012802124

00:31:49.524 --> 00:31:50.880 postoperative complications and

NOTE Confidence: 0.869251012802124

00:31:50.952 --> 00:31:52.860 FL are of greater than 20%.

NOTE Confidence: 0.869251012802124

00:31:52.860 --> 00:31:55.290 Generally patients do very well now.

NOTE Confidence: 0.869251012802124

00:31:55.290 --> 00:31:57.320 This is in healthy livers.

NOTE Confidence: 0.869251012802124

00:31:57.320 --> 00:32:01.385 I would say that FLR is 40 to 50% in.

NOTE Confidence: 0.869251012802124

00:32:01.385 --> 00:32:03.815 Anyone with any underlying liver disease.

NOTE Confidence: 0.79510692730546

00:32:05.970 --> 00:32:09.240 Um? Portal vein Embolization is a

NOTE Confidence: 0.79510692730546

00:32:09.240 --> 00:32:12.412 key technique that we use David

NOTE Confidence: 0.79510692730546

00:32:12.412 --> 00:32:15.980 made off is a world expert in this.

NOTE Confidence: 0.79510692730546

00:32:15.980 --> 00:32:17.648 He is really built,

NOTE Confidence: 0.79510692730546

00:32:17.648 --> 00:32:20.748 his career among other things and and

NOTE Confidence: 0.79510692730546

00:32:20.748 --> 00:32:23.308 honing and refining this technique.

NOTE Confidence: 0.79510692730546

00:32:23.310 --> 00:32:27.198 So I'm not going to pretend to be the

NOTE Confidence: 0.79510692730546

00:32:27.198 --> 00:32:30.678 expert on this other than share that.

NOTE Confidence: 0.79510692730546

00:32:30.680 --> 00:32:31.889 As liver surgeons,

NOTE Confidence: 0.79510692730546

00:32:31.889 --> 00:32:34.710 this is our very best friend because

NOTE Confidence: 0.79510692730546

00:32:34.784 --> 00:32:36.688 this technique involves interruption

NOTE Confidence: 0.79510692730546

00:32:36.688 --> 00:32:40.067 of the portal venous flow to the

NOTE Confidence: 0.79510692730546

00:32:40.067 --> 00:32:43.196 affected side of the liver and allows

NOTE Confidence: 0.79510692730546

00:32:43.196 --> 00:32:45.653 hypertrophic growth which allows us

NOTE Confidence: 0.79510692730546

00:32:45.653 --> 00:32:48.258 to respect the contralateral side.

NOTE Confidence: 0.79510692730546

00:32:48.260 --> 00:32:50.549 You know this is a classic example

NOTE Confidence: 0.79510692730546

00:32:50.549 --> 00:32:52.930 of a pre operative left lateral

NOTE Confidence: 0.79510692730546

00:32:52.930 --> 00:32:56.017 segment which would have been a 14%

NOTE Confidence: 0.79510692730546

00:32:56.020 --> 00:32:58.738 small remnant froze up to 21% after

NOTE Confidence: 0.79510692730546

00:32:58.738 --> 00:33:00.290 preoperative Puerto venous embolization.

NOTE Confidence: 0.79510692730546

00:33:00.290 --> 00:33:03.368 This is data in a from an MD Anderson

NOTE Confidence: 0.79510692730546

00:33:03.368 --> 00:33:06.108 paper that David was involved with.

NOTE Confidence: 0.79510692730546

00:33:06.110 --> 00:33:09.338 I suspect he'll show Shell share

NOTE Confidence: 0.79510692730546

00:33:09.338 --> 00:33:12.362 more details when he gives his

NOTE Confidence: 0.79510692730546

00:33:12.362 --> 00:33:15.043 see me in a month or so.

NOTE Confidence: 0.79510692730546

00:33:15.050 --> 00:33:16.084 So, um,

NOTE Confidence: 0.79510692730546

00:33:16.084 --> 00:33:19.186 the French are actually have done

NOTE Confidence: 0.79510692730546

00:33:19.186 --> 00:33:23.057 nice work with this in cirrhotics or.

NOTE Confidence: 0.79510692730546

00:33:23.060 --> 00:33:26.036 PVD for patients with HCC and this is

NOTE Confidence: 0.79510692730546

00:33:26.036 --> 00:33:28.315 a relatively small series from one

NOTE Confidence: 0.79510692730546

00:33:28.315 --> 00:33:31.519 of the groups in Paris that show that

NOTE Confidence: 0.79510692730546

00:33:31.519 --> 00:33:33.859 although between these two groups,

NOTE Confidence: 0.79510692730546

00:33:33.860 --> 00:33:36.260 the volume after Pve was not

NOTE Confidence: 0.79510692730546

00:33:36.260 --> 00:33:37.460 that much greater,

NOTE Confidence: 0.79510692730546

00:33:37.460 --> 00:33:40.196 but the incidence of liver failure

NOTE Confidence: 0.79510692730546

00:33:40.196 --> 00:33:42.768 was significantly less and the stay

NOTE Confidence: 0.79510692730546

00:33:42.768 --> 00:33:45.456 in the ICU and hospital was less so.

NOTE Confidence: 0.79510692730546

00:33:45.460 --> 00:33:48.628 If you were going to do a major help

NOTE Confidence: 0.79510692730546

00:33:48.628 --> 00:33:51.512 protect me in a patient with any

NOTE Confidence: 0.79510692730546

00:33:51.512 --> 00:33:53.870 degree of underlying liver disease.

NOTE Confidence: 0.79510692730546

00:33:53.870 --> 00:34:00.790 A PV is a critical. Potential adjunct.

NOTE Confidence: 0.79510692730546

00:34:00.790 --> 00:34:03.748 The other thing that has come

NOTE Confidence: 0.79510692730546

00:34:03.748 --> 00:34:06.906 forward in recent years is the

NOTE Confidence: 0.79510692730546

00:34:06.906 --> 00:34:09.078 idea of radiation lobectomy.

NOTE Confidence: 0.79510692730546

00:34:09.080 --> 00:34:09.510 Again,

NOTE Confidence: 0.79510692730546

00:34:09.510 --> 00:34:12.520 this is a technique that our IR

NOTE Confidence: 0.79510692730546

00:34:12.520 --> 00:34:15.810 team is extraordinarily adept at.

NOTE Confidence: 0.79510692730546

00:34:15.810 --> 00:34:18.290 It involves treating the tumor

NOTE Confidence: 0.79510692730546

00:34:18.290 --> 00:34:21.939 as well as the involved side of

NOTE Confidence: 0.79510692730546

00:34:21.939 --> 00:34:24.629 the liver with Y-90 microspheres.

NOTE Confidence: 0.79510692730546

00:34:24.630 --> 00:34:28.678 This is a pre operative set of images.

NOTE Confidence: 0.79510692730546

00:34:28.680 --> 00:34:31.160 Actually I'm sorry preoperative

NOTE Confidence: 0.79510692730546

00:34:31.160 --> 00:34:34.260 up pretreatments up here post

NOTE Confidence: 0.79510692730546

00:34:34.260 --> 00:34:37.244 treatment down here it shrinks the

NOTE Confidence: 0.79510692730546

00:34:37.244 --> 00:34:39.514 liver and treats the tumor.

NOTE Confidence: 0.79510692730546

00:34:39.520 --> 00:34:43.291 So that as the the affected side of liver

NOTE Confidence: 0.79510692730546

00:34:43.291 --> 00:34:46.018 atrophy's and the disease is treated,

NOTE Confidence: 0.79510692730546

00:34:46.020 --> 00:34:48.180 the contralateral side of the

NOTE Confidence: 0.79510692730546

00:34:48.180 --> 00:34:49.476 liver hyper hypertrophy's,

NOTE Confidence: 0.79510692730546

00:34:49.480 --> 00:34:51.850 which eventually allows a reception

NOTE Confidence: 0.79510692730546

00:34:51.850 --> 00:34:55.648 of the affected side of the liver with

NOTE Confidence: 0.79510692730546

00:34:55.648 --> 00:34:58.330 this nice large left liver remnant.

NOTE Confidence: 0.79510692730546

00:34:58.330 --> 00:34:58.694 No,

NOTE Confidence: 0.79510692730546

00:34:58.694 --> 00:35:01.606 the the one of the things that's really

NOTE Confidence: 0.79510692730546

00:35:01.606 --> 00:35:03.223 exciting about radiation lobectomy

NOTE Confidence: 0.79510692730546

00:35:03.223 --> 00:35:06.454 is that it allows the tumor to be

NOTE Confidence: 0.79510692730546

00:35:06.454 --> 00:35:08.499 treated with the radiation well,

NOTE Confidence: 0.79510692730546

00:35:08.500 --> 00:35:11.230 the well the the atrophy is occurring,

NOTE Confidence: 0.79510692730546

00:35:11.230 --> 00:35:12.511 and if necessary,

NOTE Confidence: 0.79510692730546

00:35:12.511 --> 00:35:14.219 portal vein embolization can

NOTE Confidence: 0.79510692730546

00:35:14.219 --> 00:35:16.320 be added on top of it.

NOTE Confidence: 0.79510692730546

00:35:16.320 --> 00:35:18.396 I really like this technique in

NOTE Confidence: 0.79510692730546

00:35:18.396 --> 00:35:20.662 bulky tumors and in a patient

NOTE Confidence: 0.79510692730546

00:35:20.662 --> 00:35:23.104 where you may be concerned about

NOTE Confidence: 0.79510692730546

00:35:23.104 --> 00:35:24.530 occult metastatic disease.

NOTE Confidence: 0.79510692730546

00:35:24.530 --> 00:35:27.218 It gives us this window to watch them

NOTE Confidence: 0.79510692730546

00:35:27.218 --> 00:35:29.998 for awhile before committing to surgery.

NOTE Confidence: 0.917013466358185

00:35:32.500 --> 00:35:34.948 So I will share that I think one

NOTE Confidence: 0.917013466358185

00:35:34.948 --> 00:35:37.182 of the greatest steps forward in

NOTE Confidence: 0.917013466358185

00:35:37.182 --> 00:35:40.120 the past 15 years or so is the.

NOTE Confidence: 0.917013466358185

00:35:40.120 --> 00:35:42.428 Application of minimally invasive

NOTE Confidence: 0.917013466358185

00:35:42.428 --> 00:35:44.736 surgical techniques deliver surgery,

NOTE Confidence: 0.917013466358185

00:35:44.740 --> 00:35:48.232 and this has been a continuous

NOTE Confidence: 0.917013466358185

00:35:48.232 --> 00:35:51.110 evolution in the early 90s.

NOTE Confidence: 0.917013466358185

00:35:51.110 --> 00:35:53.530 Surgeons first Gabaldon small wedge.

NOTE Confidence: 0.917013466358185

00:35:53.530 --> 00:35:56.590 Resections of the first major hit

NOTE Confidence: 0.917013466358185

00:35:56.590 --> 00:35:59.818 Ectomy was reported in the mid 90s,

NOTE Confidence: 0.917013466358185

00:35:59.820 --> 00:36:03.054 and this was a pretty crude operation

NOTE Confidence: 0.917013466358185

00:36:03.054 --> 00:36:06.035 that relied a lot on surgical

NOTE Confidence: 0.917013466358185

00:36:06.035 --> 00:36:08.530 staplers and over the years,

NOTE Confidence: 0.917013466358185

00:36:08.530 --> 00:36:10.950 the our approach to laughter

NOTE Confidence: 0.917013466358185

00:36:10.950 --> 00:36:13.370 scopic attacked me is improved.

NOTE Confidence: 0.917013466358185

00:36:13.370 --> 00:36:16.758 We've adapted many of the open techniques,

NOTE Confidence: 0.917013466358185

00:36:16.760 --> 00:36:18.696 including Pringle maneuver techniques

NOTE Confidence: 0.917013466358185

00:36:18.696 --> 00:36:21.116 of dividing liver pouring command.

NOTE Confidence: 0.917013466358185

00:36:21.120 --> 00:36:22.190 So that.

NOTE Confidence: 0.917013466358185

00:36:22.190 --> 00:36:24.330 We've developed standards standards

NOTE Confidence: 0.917013466358185

00:36:24.330 --> 00:36:26.470 of practice and increasingly

NOTE Confidence: 0.917013466358185

00:36:26.547 --> 00:36:29.001 sophisticated anterolateral receptions

NOTE Confidence: 0.917013466358185

00:36:29.001 --> 00:36:31.455 and subsegmental receptions,

NOTE Confidence: 0.917013466358185

00:36:31.460 --> 00:36:34.310 and even in some centres,

NOTE Confidence: 0.917013466358185

00:36:34.310 --> 00:36:36.590 laparoscopic live donor operations.

NOTE Confidence: 0.860897839069366

00:36:39.160 --> 00:36:42.667 So this actually gives a pretty good

NOTE Confidence: 0.860897839069366

00:36:42.667 --> 00:36:45.216 picture of what's happened over

NOTE Confidence: 0.860897839069366

00:36:45.216 --> 00:36:48.534 the years since the turn of the.

NOTE Confidence: 0.860897839069366

00:36:48.540 --> 00:36:51.263 Millennium with a kind of a slow

NOTE Confidence: 0.860897839069366

00:36:51.263 --> 00:36:54.781 and this is this is data from some

NOTE Confidence: 0.860897839069366

00:36:54.781 --> 00:36:58.034 European centres but I think this is

NOTE Confidence: 0.860897839069366

00:36:58.034 --> 00:37:00.740 quite reflective of what's gone on

NOTE Confidence: 0.860897839069366

00:37:00.740 --> 00:37:03.394 in large centers around the world.

NOTE Confidence: 0.860897839069366

00:37:03.394 --> 00:37:05.574 Kind of as a decrease,

NOTE Confidence: 0.860897839069366

00:37:05.580 --> 00:37:07.968 steady decrease in open liver surgery

NOTE Confidence: 0.860897839069366

00:37:07.968 --> 00:37:10.610 and slow but progressive increase in

NOTE Confidence: 0.860897839069366

00:37:10.610 --> 00:37:12.578 and minimally invasive procedures.

NOTE Confidence: 0.860897839069366

00:37:12.580 --> 00:37:15.370 Now I don't think any.

NOTE Confidence: 0.860897839069366

00:37:15.370 --> 00:37:17.206 I I'm certainly not,

NOTE Confidence: 0.860897839069366

00:37:17.206 --> 00:37:19.960 and I don't think any experience

NOTE Confidence: 0.860897839069366

00:37:20.056 --> 00:37:22.918 HPB surgeon would say that open

NOTE Confidence: 0.860897839069366

00:37:22.918 --> 00:37:25.350 liver surgery should go away.

NOTE Confidence: 0.860897839069366

00:37:25.350 --> 00:37:27.740 There are too many complex.

NOTE Confidence: 0.860897839069366

00:37:27.740 --> 00:37:29.645 Situations that I think patients

NOTE Confidence: 0.860897839069366

00:37:29.645 --> 00:37:32.150 are best served with open surgery,

NOTE Confidence: 0.860897839069366

00:37:32.150 --> 00:37:34.880 but clearly this has been developed

NOTE Confidence: 0.860897839069366

00:37:34.880 --> 00:37:37.240 and embraced around the world.

NOTE Confidence: 0.860897839069366

00:37:37.240 --> 00:37:38.940 And over this time,

NOTE Confidence: 0.860897839069366

00:37:38.940 --> 00:37:41.065 many of the early operations

NOTE Confidence: 0.860897839069366

00:37:41.065 --> 00:37:42.620 were small wedges.

NOTE Confidence: 0.860897839069366

00:37:42.620 --> 00:37:45.296 Those of kind of drop down,

NOTE Confidence: 0.860897839069366

00:37:45.300 --> 00:37:48.100 and it's a steady increase in major

NOTE Confidence: 0.860897839069366

00:37:48.100 --> 00:37:50.803 protect knees and an resections in

NOTE Confidence: 0.860897839069366

00:37:50.803 --> 00:37:53.178 the posterior superior segments which

NOTE Confidence: 0.860897839069366

00:37:53.178 --> 00:37:55.897 are much more technically complicated

NOTE Confidence: 0.860897839069366

00:37:55.897 --> 00:37:59.269 because of their location and deliver.

NOTE Confidence: 0.860897839069366

00:37:59.270 --> 00:38:02.060 So laparoscopic appendectomy 20 and 2021.

NOTE Confidence: 0.860897839069366

00:38:02.060 --> 00:38:05.896 I think we can say is safe.

NOTE Confidence: 0.860897839069366

00:38:05.900 --> 00:38:06.842 Um, you know,

NOTE Confidence: 0.860897839069366

00:38:06.842 --> 00:38:07.470 like everything,

NOTE Confidence: 0.860897839069366

00:38:07.470 --> 00:38:10.018 it has to be patient enough to

NOTE Confidence: 0.860897839069366

00:38:10.018 --> 00:38:11.110 be selected carefully.

NOTE Confidence: 0.860897839069366

00:38:11.110 --> 00:38:14.134 I have not gone through all the

NOTE Confidence: 0.860897839069366

00:38:14.134 --> 00:38:17.588 data in this for the sake of time,

NOTE Confidence: 0.860897839069366

00:38:17.590 --> 00:38:20.341 but it's Uncle logically appears to be

NOTE Confidence: 0.860897839069366

00:38:20.341 --> 00:38:22.770 equivalent to open operations again.

NOTE Confidence: 0.860897839069366

00:38:22.770 --> 00:38:24.810 Selected cases there are better fits

NOTE Confidence: 0.860897839069366

00:38:24.810 --> 00:38:27.237 in hospital stay and recovery cost

NOTE Confidence: 0.860897839069366

00:38:27.237 --> 00:38:29.241 benefit analysis suggests significant

NOTE Confidence: 0.860897839069366

00:38:29.241 --> 00:38:31.850 value for appropriately selected patients.

NOTE Confidence: 0.860897839069366

00:38:31.850 --> 00:38:33.574 There are limitations with

NOTE Confidence: 0.860897839069366

00:38:33.574 --> 00:38:34.867 non anatomical sections,

NOTE Confidence: 0.860897839069366

00:38:34.870 --> 00:38:36.166 parenchymal, scarring sections,

NOTE Confidence: 0.860897839069366

00:38:36.166 --> 00:38:37.030 bleeding control,

NOTE Confidence: 0.860897839069366

00:38:37.030 --> 00:38:38.428 and biliary reconstruction

NOTE Confidence: 0.860897839069366

00:38:38.428 --> 00:38:41.224 is can be difficult with the

NOTE Confidence: 0.860897839069366

00:38:41.224 --> 00:38:42.860 laparoscopic instrumentation.

NOTE Confidence: 0.860897839069366

00:38:42.860 --> 00:38:44.081 So what next?

NOTE Confidence: 0.860897839069366

00:38:44.081 --> 00:38:47.479 Many of us are quite excited in doing

NOTE Confidence: 0.860897839069366

00:38:47.479 --> 00:38:50.643 robotic surgery of I think this is

NOTE Confidence: 0.860897839069366

00:38:50.643 --> 00:38:53.639 a rapidly developing technology.

NOTE Confidence: 0.860897839069366

00:38:53.640 --> 00:38:56.090 The Davinci System was introduced

NOTE Confidence: 0.860897839069366

00:38:56.090 --> 00:38:57.070 around 2000.

NOTE Confidence: 0.860897839069366

00:38:57.070 --> 00:38:59.145 Appear to Julia Naughty first

NOTE Confidence: 0.860897839069366

00:38:59.145 --> 00:39:01.739 did the first protect me with

NOTE Confidence: 0.860897839069366

00:39:01.739 --> 00:39:03.919 the robotic platform in 2003.

NOTE Confidence: 0.860897839069366

00:39:03.920 --> 00:39:05.700 This has expanded internationally.

NOTE Confidence: 0.860897839069366

00:39:05.700 --> 00:39:08.370 Now the major focus of robotic

NOTE Confidence: 0.860897839069366

00:39:08.447 --> 00:39:10.572 surgery really has been urology

NOTE Confidence: 0.860897839069366

00:39:10.572 --> 00:39:12.697 gynecology and a liver surgery

NOTE Confidence: 0.860897839069366

00:39:12.768 --> 00:39:14.618 is relatively late in this,

NOTE Confidence: 0.860897839069366

00:39:14.620 --> 00:39:17.490 but many of us are embracing it

NOTE Confidence: 0.860897839069366

00:39:17.490 --> 00:39:20.127 and are excited about it and

NOTE Confidence: 0.860897839069366

00:39:20.127 --> 00:39:22.749 feels that it brings real value.

NOTE Confidence: 0.860897839069366

00:39:22.750 --> 00:39:25.529 The the unique elements of the robotic

NOTE Confidence: 0.860897839069366

00:39:25.529 --> 00:39:27.950 platform are the 3D stereoscopic.

NOTE Confidence: 0.860897839069366

00:39:27.950 --> 00:39:31.130 Vision and the end of risk

NOTE Confidence: 0.860897839069366

00:39:31.130 --> 00:39:33.250 functionality of the instrumentation

NOTE Confidence: 0.860897839069366

00:39:33.342 --> 00:39:37.052 provides a degree of of dexterity and

NOTE Confidence: 0.860897839069366

00:39:37.052 --> 00:39:39.203 flexibility with surgical maneuvers

NOTE Confidence: 0.860897839069366

00:39:39.203 --> 00:39:42.017 inside the body that is just.

NOTE Confidence: 0.860897839069366

00:39:42.020 --> 00:39:43.224 At least for me,

NOTE Confidence: 0.860897839069366

00:39:43.224 --> 00:39:45.030 most of us very difficult to

NOTE Confidence: 0.860897839069366

00:39:45.101 --> 00:39:47.377 duplicate using straight stick

NOTE Confidence: 0.860897839069366

00:39:47.377 --> 00:39:49.653 laparoscopic instruments do precise

NOTE Confidence: 0.860897839069366

00:39:49.653 --> 00:39:51.530 suturing difficult locations.

NOTE Confidence: 0.860897839069366

00:39:51.530 --> 00:39:53.960 The dual console that you're seeing

NOTE Confidence: 0.860897839069366

00:39:53.960 --> 00:39:56.215 here is great for instruction

NOTE Confidence: 0.860897839069366

00:39:56.215 --> 00:39:57.877 and the economic.

NOTE Confidence: 0.860897839069366

00:39:57.880 --> 00:40:01.044 The ergonomics tend to be more favorable.

NOTE Confidence: 0.888548016548157

00:40:03.210 --> 00:40:06.027 Let's see, these are pictures I took in our

NOTE Confidence: 0.888548016548157

00:40:06.027 --> 00:40:08.870 own operating room a couple of weeks ago.

NOTE Confidence: 0.888548016548157

00:40:08.870 --> 00:40:11.187 This is actually a patient who have

NOTE Confidence: 0.888548016548157

00:40:11.187 --> 00:40:13.310 robotic left lateral segment resection.

NOTE Confidence: 0.888548016548157

00:40:13.310 --> 00:40:15.314 This is kind of the setup

NOTE Confidence: 0.888548016548157

00:40:15.314 --> 00:40:17.749 we've got the for robotic arms.

NOTE Confidence: 0.888548016548157

00:40:17.750 --> 00:40:19.970 We still have one of the

NOTE Confidence: 0.888548016548157

00:40:19.970 --> 00:40:21.080 instruments in place.

NOTE Confidence: 0.888548016548157

00:40:21.080 --> 00:40:23.906 This is an assist port that allows us to

NOTE Confidence: 0.888548016548157

00:40:23.906 --> 00:40:25.991 pass additional instruments and sutures

NOTE Confidence: 0.888548016548157

00:40:25.991 --> 00:40:29.688 in the abdomen and this is kind of just

NOTE Confidence: 0.888548016548157

00:40:29.688 --> 00:40:32.180 as we're closing all of the incisions.

NOTE Confidence: 0.888548016548157

00:40:32.180 --> 00:40:34.763 These are for small incisions across the

NOTE Confidence: 0.888548016548157

00:40:34.763 --> 00:40:37.716 abdomen and this is about a 3 centimeter

NOTE Confidence: 0.888548016548157

00:40:37.716 --> 00:40:40.210 extraction port right below the umbilicus.

NOTE Confidence: 0.888548016548157

00:40:40.210 --> 00:40:43.108 Through which we removed the specimen.

NOTE Confidence: 0.888548016548157

00:40:43.110 --> 00:40:46.638 Patient went home in two days.

NOTE Confidence: 0.888548016548157

00:40:46.640 --> 00:40:49.202 So lots of discussion around the

NOTE Confidence: 0.888548016548157

00:40:49.202 --> 00:40:50.483 country robotic laparoscopic,

NOTE Confidence: 0.888548016548157

00:40:50.490 --> 00:40:53.058 you know, like everything in surgery,

NOTE Confidence: 0.888548016548157

00:40:53.060 --> 00:40:55.556 this is a point of surgeons

NOTE Confidence: 0.888548016548157

00:40:55.556 --> 00:40:58.200 love to debate back and forth.

NOTE Confidence: 0.888548016548157

00:40:58.200 --> 00:41:00.340 There are relatively few comparisons.

NOTE Confidence: 0.888548016548157

00:41:00.340 --> 00:41:02.680 This comparison study was done

NOTE Confidence: 0.888548016548157

00:41:02.680 --> 00:41:05.020 at the University of Pittsburgh

NOTE Confidence: 0.888548016548157

00:41:05.098 --> 00:41:06.758 a number of years ago,

NOTE Confidence: 0.888548016548157

00:41:06.760 --> 00:41:10.208 and I think what it shows is that.

NOTE Confidence: 0.888548016548157

00:41:10.210 --> 00:41:14.686 The robotic cases in this study

NOTE Confidence: 0.888548016548157

00:41:14.686 --> 00:41:16.924 were took longer.

NOTE Confidence: 0.888548016548157

00:41:16.930 --> 00:41:18.514 Application rates bloodloss

NOTE Confidence: 0.888548016548157

00:41:18.514 --> 00:41:21.154 outcomes were essentially the same,

NOTE Confidence: 0.888548016548157

00:41:21.160 --> 00:41:24.340 but more cases were completed completely.

NOTE Confidence: 0.888548016548157

00:41:24.340 --> 00:41:25.924 Minimally invasive, Lee,

NOTE Confidence: 0.888548016548157

00:41:25.924 --> 00:41:28.036 using the robotic platform.

NOTE Confidence: 0.888548016548157

00:41:28.040 --> 00:41:31.688 Many of these laparoscopic cases required

NOTE Confidence: 0.888548016548157

00:41:31.688 --> 00:41:35.478 a utility incision or hand port so.

NOTE Confidence: 0.888548016548157

00:41:35.480 --> 00:41:39.248 I think there are merits to both approaches.

NOTE Confidence: 0.888548016548157

00:41:39.250 --> 00:41:42.770 Um, I have found in my own practice.

NOTE Confidence: 0.888548016548157

00:41:42.770 --> 00:41:44.970 As this author points out,

NOTE Confidence: 0.888548016548157

00:41:44.970 --> 00:41:47.170 the robotic approach may facilitate

NOTE Confidence: 0.888548016548157

00:41:47.170 --> 00:41:48.490 parenchymal sparing receptions,

NOTE Confidence: 0.888548016548157

00:41:48.490 --> 00:41:50.250 particularly in these upper

NOTE Confidence: 0.888548016548157

00:41:50.250 --> 00:41:51.130 posterior segments,

NOTE Confidence: 0.888548016548157

00:41:51.130 --> 00:41:53.680 posters appear segments that you can

NOTE Confidence: 0.888548016548157

00:41:53.680 --> 00:41:57.727 get to it to operate on with the robot,

NOTE Confidence: 0.888548016548157

00:41:57.730 --> 00:41:59.050 which is hard.

NOTE Confidence: 0.888548016548157

00:41:59.050 --> 00:42:01.690 Lapre Scopic Lee in this series.

NOTE Confidence: 0.888548016548157

00:42:01.690 --> 00:42:04.357 Over half the cases the robotic series

NOTE Confidence: 0.888548016548157

00:42:04.357 --> 00:42:06.969 work in those difficult segments.

NOTE Confidence: 0.806422650814056

00:42:09.410 --> 00:42:12.266 The other area where I find the robotic

NOTE Confidence: 0.806422650814056

00:42:12.266 --> 00:42:14.168 helpful is anatomically complicated

NOTE Confidence: 0.806422650814056

00:42:14.168 --> 00:42:18.067 procedures that require a lot of careful

NOTE Confidence: 0.806422650814056

00:42:18.067 --> 00:42:20.668 enteropathic dissection and control the

NOTE Confidence: 0.806422650814056

00:42:20.668 --> 00:42:23.128 paddock veins and precise stapling.

NOTE Confidence: 0.806422650814056

00:42:23.130 --> 00:42:26.091 This paper was a nice report of

NOTE Confidence: 0.806422650814056

00:42:26.091 --> 00:42:28.864 outcomes in complex cases of left

NOTE Confidence: 0.806422650814056

00:42:28.864 --> 00:42:31.229 lateral section ectomy where the

NOTE Confidence: 0.806422650814056

00:42:31.229 --> 00:42:34.282 disease is approaching him from the

NOTE Confidence: 0.806422650814056

00:42:34.282 --> 00:42:37.318 veins and they compared robotic left

NOTE Confidence: 0.806422650814056

00:42:37.320 --> 00:42:40.010 lateral segment with left lateral

NOTE Confidence: 0.806422650814056

00:42:40.010 --> 00:42:42.162 laparoscopic left lateral segment.

NOTE Confidence: 0.806422650814056

00:42:42.170 --> 00:42:44.230 Um, you know these?

NOTE Confidence: 0.806422650814056

00:42:44.230 --> 00:42:45.775 This group does.

NOTE Confidence: 0.806422650814056

00:42:45.780 --> 00:42:48.355 Note that the robotic cases

NOTE Confidence: 0.806422650814056

00:42:48.355 --> 00:42:49.900 were more expensive,

NOTE Confidence: 0.806422650814056

00:42:49.900 --> 00:42:52.990 but when the procedures got complicated,

NOTE Confidence: 0.806422650814056

00:42:52.990 --> 00:42:56.230 the robot really seemed to provide

NOTE Confidence: 0.806422650814056

00:42:56.230 --> 00:42:58.390 benefit with reduced blood

NOTE Confidence: 0.806422650814056

00:42:58.483 --> 00:43:01.225 loss and better length of stay.

NOTE Confidence: 0.912183880805969

00:43:03.270 --> 00:43:05.274 So as you think about the

NOTE Confidence: 0.912183880805969

00:43:05.274 --> 00:43:07.620 cost of the value proposition,

NOTE Confidence: 0.912183880805969

00:43:07.620 --> 00:43:10.404 the way the cost of these procedures is

NOTE Confidence: 0.912183880805969

00:43:10.404 --> 00:43:13.147 allocated and understood is really critical.

NOTE Confidence: 0.912183880805969

00:43:13.150 --> 00:43:15.438 And if you know this is one of

NOTE Confidence: 0.912183880805969

00:43:15.438 --> 00:43:17.429 those situations where the robotic

NOTE Confidence: 0.912183880805969

00:43:17.429 --> 00:43:19.237 instrumentation is more expensive,

NOTE Confidence: 0.912183880805969

00:43:19.240 --> 00:43:22.040 but if you can save anything on

NOTE Confidence: 0.912183880805969

00:43:22.040 --> 00:43:24.639 length of stay like this series

NOTE Confidence: 0.912183880805969

00:43:24.639 --> 00:43:27.684 did it more than pays for itself.

NOTE Confidence: 0.912183880805969

00:43:27.690 --> 00:43:30.203 So I'm going to switch gears and

NOTE Confidence: 0.912183880805969

00:43:30.203 --> 00:43:33.276 talk about a few key kind of subsets

NOTE Confidence: 0.912183880805969

00:43:33.276 --> 00:43:36.147 of patients that I think we really

NOTE Confidence: 0.912183880805969

00:43:36.147 --> 00:43:38.775 need to understand as we think

NOTE Confidence: 0.912183880805969

00:43:38.775 --> 00:43:40.863 about surgical candidates for HTC.

NOTE Confidence: 0.912183880805969

00:43:40.863 --> 00:43:43.269 One critical group is this group

NOTE Confidence: 0.912183880805969

00:43:43.269 --> 00:43:46.479 of patients with so called fibro

NOTE Confidence: 0.912183880805969

00:43:46.479 --> 00:43:48.120 lamellar parasailer carcinoma.

NOTE Confidence: 0.912183880805969

00:43:48.120 --> 00:43:50.680 This is is a disease that has a

NOTE Confidence: 0.912183880805969

00:43:50.680 --> 00:43:53.329 bimodal age distribution distribution,

NOTE Confidence: 0.912183880805969

00:43:53.330 --> 00:43:55.500 but it's predominantly young adults,

NOTE Confidence: 0.912183880805969

00:43:55.500 --> 00:43:57.665 although there's a smaller peak

NOTE Confidence: 0.912183880805969

00:43:57.665 --> 00:43:58.964 later in life.

NOTE Confidence: 0.912183880805969

00:43:58.970 --> 00:44:02.008 In the 60s has a male predominant's.

NOTE Confidence: 0.912183880805969

00:44:02.010 --> 00:44:04.175 Most of these patients have

NOTE Confidence: 0.912183880805969

00:44:04.175 --> 00:44:05.474 non cirrhotic livers.

NOTE Confidence: 0.912183880805969

00:44:05.480 --> 00:44:08.808 They often proves in his large bulky tumors

NOTE Confidence: 0.912183880805969

00:44:08.808 --> 00:44:11.617 and surgery is the primary treatment.

NOTE Confidence: 0.912183880805969

00:44:11.620 --> 00:44:13.720 It's easy to mistake these

NOTE Confidence: 0.912183880805969

00:44:13.720 --> 00:44:15.820 tumors for benign liver lesion,

NOTE Confidence: 0.912183880805969

00:44:15.820 --> 00:44:18.340 such as bulky FNH or adenoma.

NOTE Confidence: 0.912183880805969

00:44:18.340 --> 00:44:19.600 They are malignant,

NOTE Confidence: 0.912183880805969

00:44:19.600 --> 00:44:20.440 they're aggressive.

NOTE Confidence: 0.912183880805969

00:44:20.440 --> 00:44:22.540 They need to be respected,

NOTE Confidence: 0.912183880805969

00:44:22.540 --> 00:44:25.137 and they can have an excellent outcome

NOTE Confidence: 0.912183880805969

00:44:25.137 --> 00:44:28.000 with five year survival with reception,

NOTE Confidence: 0.912183880805969

00:44:28.000 --> 00:44:30.520 but they need to be appropriately

NOTE Confidence: 0.912183880805969

00:44:30.520 --> 00:44:31.780 diagnose and manage.

NOTE Confidence: 0.844550490379334

00:44:34.590 --> 00:44:37.170 So this actually is great story.

NOTE Confidence: 0.844550490379334

00:44:37.170 --> 00:44:40.302 This was like a young man who fell off

NOTE Confidence: 0.844550490379334

00:44:40.302 --> 00:44:43.745 a ladder who came to see me after he

NOTE Confidence: 0.844550490379334

00:44:43.745 --> 00:44:46.830 was seen in the emergency Department

NOTE Confidence: 0.844550490379334

00:44:46.830 --> 00:44:49.640 with some bruises and sprains.

NOTE Confidence: 0.844550490379334

00:44:49.640 --> 00:44:52.598 And they had an abdominal CT

NOTE Confidence: 0.844550490379334

00:44:52.598 --> 00:44:55.050 that showed this lesion and.

NOTE Confidence: 0.844550490379334

00:44:55.050 --> 00:44:59.348 You know, had no underlying liver disease.

NOTE Confidence: 0.844550490379334

00:44:59.350 --> 00:45:02.104 And this lesion, which is best

NOTE Confidence: 0.844550490379334

00:45:02.104 --> 00:45:05.554 seen in the venous phase, he went,

NOTE Confidence: 0.844550490379334

00:45:05.554 --> 00:45:09.715 not only was it seen in that phase, but.

NOTE Confidence: 0.844550490379334

00:45:09.715 --> 00:45:11.785 The other thing that was ominous

NOTE Confidence: 0.844550490379334

00:45:11.785 --> 00:45:14.478 about it is that the lower part

NOTE Confidence: 0.844550490379334

00:45:14.478 --> 00:45:16.848 lesion had this extra pet extension.

NOTE Confidence: 0.844550490379334

00:45:16.850 --> 00:45:20.940 So he went to the operating room and had a.

NOTE Confidence: 0.844550490379334

00:45:20.940 --> 00:45:23.919 Right have attacked me with a kind of a

NOTE Confidence: 0.844550490379334

00:45:23.919 --> 00:45:26.155 liberal reception of his retroperitoneal

NOTE Confidence: 0.844550490379334

00:45:26.155 --> 00:45:29.680 tissues to clear that extra pack extension.

NOTE Confidence: 0.844550490379334

00:45:29.680 --> 00:45:30.925 Big bulky specimen.

NOTE Confidence: 0.844550490379334

00:45:30.925 --> 00:45:32.585 He's a healthy guy.

NOTE Confidence: 0.844550490379334

00:45:32.590 --> 00:45:34.670 He did great post operatively.

NOTE Confidence: 0.844550490379334

00:45:34.670 --> 00:45:37.519 I followed him for about five years

NOTE Confidence: 0.844550490379334

00:45:37.519 --> 00:45:41.315 when I was in Portland and he did well.

NOTE Confidence: 0.844550490379334

00:45:41.320 --> 00:45:44.302 Never had a recurrence and then I

NOTE Confidence: 0.844550490379334

00:45:44.302 --> 00:45:47.147 kind of glossed him to follow up,

NOTE Confidence: 0.844550490379334

00:45:47.150 --> 00:45:50.948 but I think this is a perfect example of.

NOTE Confidence: 0.844550490379334

00:45:50.950 --> 00:45:53.050 Many of these patients can do well

NOTE Confidence: 0.844550490379334

00:45:53.050 --> 00:45:55.290 or even be cured with surgery.

NOTE Confidence: 0.844550490379334

00:45:55.290 --> 00:45:57.900 If you look for the disease.

NOTE Confidence: 0.844550490379334

00:45:57.900 --> 00:46:00.784 The other group of patients is agents

NOTE Confidence: 0.844550490379334

00:46:00.784 --> 00:46:04.218 of what I call our our our elders,

NOTE Confidence: 0.844550490379334

00:46:04.220 --> 00:46:05.856 HTC in the elderly.

NOTE Confidence: 0.844550490379334

00:46:05.856 --> 00:46:09.049 I think it needs to be reviewed

NOTE Confidence: 0.844550490379334

00:46:09.049 --> 00:46:12.219 is almost a different disease.

NOTE Confidence: 0.844550490379334

00:46:12.220 --> 00:46:16.920 This lady was sent to me about a month ago.

NOTE Confidence: 0.844550490379334

00:46:16.920 --> 00:46:18.980 Sweet Lady retired nurse.

NOTE Confidence: 0.844550490379334

00:46:18.980 --> 00:46:23.339 Spent most of her career at Saint Raves.

NOTE Confidence: 0.844550490379334

00:46:23.340 --> 00:46:26.056 She has a history of breast cancer

NOTE Confidence: 0.844550490379334

00:46:26.056 --> 00:46:28.285 and she was undergoing evaluation

NOTE Confidence: 0.844550490379334

00:46:28.285 --> 00:46:31.708 and was found to have a left

NOTE Confidence: 0.844550490379334

00:46:31.708 --> 00:46:34.060 lateral segment liver lesion.

NOTE Confidence: 0.844550490379334

00:46:34.060 --> 00:46:36.622 Had an MRI which showed the least

NOTE Confidence: 0.844550490379334

00:46:36.622 --> 00:46:39.775 that you see and there was concerned

NOTE Confidence: 0.844550490379334

00:46:39.775 --> 00:46:42.733 that this is metastatic breast cancer.

NOTE Confidence: 0.844550490379334

00:46:42.740 --> 00:46:45.680 It was biopsied and proved to be

NOTE Confidence: 0.844550490379334

00:46:45.680 --> 00:46:48.338 well differentiated HCC and she has

NOTE Confidence: 0.844550490379334

00:46:48.338 --> 00:46:50.984 undergone a robotic left lateral segment.

NOTE Confidence: 0.844550490379334

00:46:50.990 --> 00:46:52.662 Resection has done great.

NOTE Confidence: 0.844550490379334

00:46:52.662 --> 00:46:55.711 So this was a group of patients

NOTE Confidence: 0.844550490379334

00:46:55.711 --> 00:46:58.840 that I noticed in my prior work.

NOTE Confidence: 0.844550490379334

00:46:58.840 --> 00:47:00.620 And you know you're after.

NOTE Confidence: 0.844550490379334

00:47:00.620 --> 00:47:02.510 Euro would keep seeing these older

NOTE Confidence: 0.844550490379334

00:47:02.510 --> 00:47:04.558 folks from all over the Pacific

NOTE Confidence: 0.844550490379334

00:47:04.558 --> 00:47:06.368 Northwest showing up with his

NOTE Confidence: 0.844550490379334

00:47:06.368 --> 00:47:08.100 liver tumors without cirrhosis.

NOTE Confidence: 0.844550490379334

00:47:08.100 --> 00:47:10.585 Most of them were actually quite healthy,

NOTE Confidence: 0.844550490379334

00:47:10.590 --> 00:47:13.286 so I had one of our residents write

NOTE Confidence: 0.844550490379334

00:47:13.286 --> 00:47:15.930 this up with one of my partners.

NOTE Confidence: 0.844550490379334

00:47:15.930 --> 00:47:17.790 Doctor Mahlon are transplant

NOTE Confidence: 0.844550490379334

00:47:17.790 --> 00:47:19.185 group in Portland.

NOTE Confidence: 0.844550490379334

00:47:19.190 --> 00:47:20.982 And of our series,

NOTE Confidence: 0.844550490379334

00:47:20.982 --> 00:47:22.774 about 50 patients median

NOTE Confidence: 0.844550490379334

00:47:22.774 --> 00:47:24.909 age was 75 years old.

NOTE Confidence: 0.844550490379334

00:47:24.910 --> 00:47:27.435 Only 13% of them had

NOTE Confidence: 0.844550490379334

00:47:27.435 --> 00:47:28.950 underlying liver disease.

NOTE Confidence: 0.844550490379334

00:47:28.950 --> 00:47:30.406 And of that group,

NOTE Confidence: 0.844550490379334

00:47:30.406 --> 00:47:32.226 most of them had some

NOTE Confidence: 0.844550490379334

00:47:32.226 --> 00:47:33.689 alcoholic liver disease.

NOTE Confidence: 0.844550490379334

00:47:33.690 --> 00:47:36.060 Most of them were not viral.

NOTE Confidence: 0.844550490379334

00:47:36.060 --> 00:47:38.165 Hepatitis over 50% were treated

NOTE Confidence: 0.844550490379334

00:47:38.165 --> 00:47:40.799 with the major HEPA type to me,

NOTE Confidence: 0.844550490379334

00:47:40.800 --> 00:47:42.775 and they all enjoyed excellent

NOTE Confidence: 0.844550490379334

00:47:42.775 --> 00:47:43.960 five years survival.

NOTE Confidence: 0.844550490379334

00:47:43.960 --> 00:47:46.330 I think the interesting thing is,

NOTE Confidence: 0.844550490379334

00:47:46.330 --> 00:47:49.330 you know this is a group that's already

NOTE Confidence: 0.844550490379334

00:47:49.330 --> 00:47:51.379 selected themselves as being older

NOTE Confidence: 0.844550490379334

00:47:51.379 --> 00:47:53.839 without having a life limiting comorbidity.

NOTE Confidence: 0.844550490379334

00:47:53.840 --> 00:47:56.240 They get a liver tumor in.

NOTE Confidence: 0.844550490379334

00:47:56.240 --> 00:47:57.170 You know,

NOTE Confidence: 0.844550490379334

00:47:57.170 --> 00:47:59.495 I would contend they merit

NOTE Confidence: 0.844550490379334

00:47:59.495 --> 00:48:00.425 aggressive treatment.

NOTE Confidence: 0.844550490379334

00:48:00.430 --> 00:48:04.714 So just to summarize him wrap up.

NOTE Confidence: 0.844550490379334

00:48:04.720 --> 00:48:07.534 You know surgery is the predominant topic,

NOTE Confidence: 0.844550490379334

00:48:07.540 --> 00:48:09.796 but I'm really need to underscore

NOTE Confidence: 0.844550490379334

00:48:09.796 --> 00:48:11.300 the fact that transplant

NOTE Confidence: 0.845439612865448

00:48:11.365 --> 00:48:13.177 remains a central treatment.

NOTE Confidence: 0.845439612865448

00:48:13.180 --> 00:48:15.526 It is the ideal treatment for

NOTE Confidence: 0.845439612865448

00:48:15.526 --> 00:48:17.090 cirrhotic patients with disease

NOTE Confidence: 0.845439612865448

00:48:17.161 --> 00:48:18.829 within the Milan criteria.

NOTE Confidence: 0.845439612865448

00:48:18.830 --> 00:48:20.830 Reception is an excellent treatment

NOTE Confidence: 0.845439612865448

00:48:20.830 --> 00:48:22.830 for patients with limited disease

NOTE Confidence: 0.845439612865448

00:48:22.895 --> 00:48:24.870 and well preserved liver function.

NOTE Confidence: 0.845439612865448

00:48:24.870 --> 00:48:27.570 We talked a lot about multidisciplinary

NOTE Confidence: 0.845439612865448

00:48:27.570 --> 00:48:29.852 assessment and the importance of

NOTE Confidence: 0.845439612865448

00:48:29.852 --> 00:48:31.917 the absence of portal hypertension.

NOTE Confidence: 0.845439612865448

00:48:31.920 --> 00:48:33.906 We talked about Portal vein embolization,

NOTE Confidence: 0.845439612865448

00:48:33.910 --> 00:48:35.890 and radio ablation to augment

NOTE Confidence: 0.845439612865448

00:48:35.890 --> 00:48:37.078 the plan remnant.

NOTE Confidence: 0.845439612865448

00:48:37.080 --> 00:48:39.545 A discussion of minimally invasive

NOTE Confidence: 0.845439612865448

00:48:39.545 --> 00:48:42.010 surgical techniques and you know,

NOTE Confidence: 0.845439612865448

00:48:42.010 --> 00:48:44.943 I'll share that my bias has been

NOTE Confidence: 0.845439612865448

00:48:44.943 --> 00:48:48.046 moved to move my own practice

NOTE Confidence: 0.845439612865448

00:48:48.046 --> 00:48:50.386 towards the robotic platform.

NOTE Confidence: 0.845439612865448

00:48:50.390 --> 00:48:52.390 Although laparoscopic approaches or

NOTE Confidence: 0.845439612865448

00:48:52.390 --> 00:48:55.390 equally valid we talked about fibro

NOTE Confidence: 0.845439612865448

00:48:55.464 --> 00:48:57.789 lamellar disease and elderly HCC,

NOTE Confidence: 0.845439612865448

00:48:57.790 --> 00:49:00.926 so I'm going to wrap up there

NOTE Confidence: 0.845439612865448

00:49:00.926 --> 00:49:04.513 and say thank you to my partners

NOTE Confidence: 0.845439612865448

00:49:04.513 --> 00:49:07.178 in the liver tumor program.

NOTE Confidence: 0.845439612865448

00:49:07.180 --> 00:49:07.914 And Mario,

NOTE Confidence: 0.845439612865448

00:49:07.914 --> 00:49:09.749 for his leadership and Renee

NOTE Confidence: 0.845439612865448

00:49:09.749 --> 00:49:12.223 for helping us put this on and

NOTE Confidence: 0.845439612865448

00:49:12.223 --> 00:49:13.848 ask if there any questions.

NOTE Confidence: 0.800886929035187

00:49:14.770 --> 00:49:17.090 You thank you, Kevin.

NOTE Confidence: 0.800886929035187

00:49:17.090 --> 00:49:19.990 This was a fantastic talk.

NOTE Confidence: 0.800886929035187

00:49:19.990 --> 00:49:23.470 Just if if there are questions,

NOTE Confidence: 0.800886929035187

00:49:23.470 --> 00:49:26.950 please write them in the chat.

NOTE Confidence: 0.800886929035187

00:49:26.950 --> 00:49:30.206 I read them and.

NOTE Confidence: 0.800886929035187

00:49:30.206 --> 00:49:33.665 And coming will respond.

NOTE Confidence: 0.800886929035187

00:49:33.665 --> 00:49:36.688 I just, I mean, well,

NOTE Confidence: 0.800886929035187

00:49:36.688 --> 00:49:39.700 I want to thank you Kevin,

NOTE Confidence: 0.800886929035187

00:49:39.700 --> 00:49:42.332 not only for this is cool shows

NOTE Confidence: 0.800886929035187

00:49:42.332 --> 00:49:44.285 in the master sophisticated

NOTE Confidence: 0.800886929035187

00:49:44.285 --> 00:49:47.229 and newer surgical technology,

NOTE Confidence: 0.800886929035187

00:49:47.230 --> 00:49:48.878 but most of all,

NOTE Confidence: 0.800886929035187

00:49:48.878 --> 00:49:51.968 for your accent on how match that

NOTE Confidence: 0.800886929035187

00:49:51.968 --> 00:49:54.578 she's Young's how many decisions

NOTE Confidence: 0.800886929035187

00:49:54.578 --> 00:49:57.770 are into a surgical indication,

NOTE Confidence: 0.800886929035187

00:49:57.770 --> 00:50:01.786 how many eyes look at the same slide,

NOTE Confidence: 0.800886929035187

00:50:01.790 --> 00:50:05.318 the same data, and how much discussion.

NOTE Confidence: 0.800886929035187

00:50:05.320 --> 00:50:08.904 I would dare to say that this

NOTE Confidence: 0.800886929035187

00:50:08.904 --> 00:50:12.056 is as important as the scale

NOTE Confidence: 0.800886929035187

00:50:12.056 --> 00:50:14.546 of the of the surgeon.

NOTE Confidence: 0.882825970649719

00:50:18.070 --> 00:50:21.770 Well, what I will say is surgical

NOTE Confidence: 0.882825970649719

00:50:21.770 --> 00:50:24.926 technique and precision is very important.

NOTE Confidence: 0.882825970649719

00:50:24.930 --> 00:50:28.098 These are operations that really need.

NOTE Confidence: 0.882825970649719

00:50:28.100 --> 00:50:31.268 You need to be extremely meticulous,

NOTE Confidence: 0.882825970649719

00:50:31.270 --> 00:50:34.847 but the the patient selection of the

NOTE Confidence: 0.882825970649719

00:50:34.847 --> 00:50:37.080 decision-making is absolutely central,

NOTE Confidence: 0.882825970649719

00:50:37.080 --> 00:50:41.296 and that's where I could not agree more.

NOTE Confidence: 0.882825970649719

00:50:41.300 --> 00:50:45.398 You need a thoughtful team and.

NOTE Confidence: 0.882825970649719

00:50:45.400 --> 00:50:48.616 You need all these valuation techniques,

NOTE Confidence: 0.882825970649719

00:50:48.620 --> 00:50:51.668 particularly really good image Ng assessment

NOTE Confidence: 0.882825970649719

00:50:51.668 --> 00:50:54.346 of liver function clinical assessment

NOTE Confidence: 0.882825970649719

00:50:54.346 --> 00:50:57.206 by hepatologist wedge vein pressures.

NOTE Confidence: 0.882825970649719

00:50:57.210 --> 00:51:01.004 All all of that makes a difference.

NOTE Confidence: 0.882825970649719

00:51:01.010 --> 00:51:03.074 And that's why.

NOTE Confidence: 0.882825970649719

00:51:03.074 --> 00:51:07.202 Am centers such as ours are.

NOTE Confidence: 0.882825970649719

00:51:07.210 --> 00:51:10.330 We get good outcomes.

NOTE Confidence: 0.88408887386322

00:51:10.940 --> 00:51:14.876 A few questions, I'm gonna read it so.

NOTE Confidence: 0.667909979820251

00:51:17.900 --> 00:51:20.140 Doctor Chi is nice talk.

NOTE Confidence: 0.667909979820251

00:51:20.140 --> 00:51:23.934 Why not fold the results in ATC?

NOTE Confidence: 0.667909979820251

00:51:23.940 --> 00:51:27.580 How to treat it and?

NOTE Confidence: 0.667909979820251

00:51:27.580 --> 00:51:30.124 This is if I can answer

NOTE Confidence: 0.667909979820251

00:51:30.124 --> 00:51:31.820 that question for you.

NOTE Confidence: 0.667909979820251

00:51:31.820 --> 00:51:34.652 We wish to know that we

NOTE Confidence: 0.667909979820251

00:51:34.652 --> 00:51:36.350 are heavily investigating.

NOTE Confidence: 0.667909979820251

00:51:36.350 --> 00:51:40.544 And if you want to add something on this,

NOTE Confidence: 0.667909979820251

00:51:40.550 --> 00:51:43.763 but then is that there's another question

NOTE Confidence: 0.667909979820251

00:51:43.763 --> 00:51:47.088 here for satisfied can rate told Kevin

NOTE Confidence: 0.667909979820251

00:51:47.088 --> 00:51:49.423 in addition to radiation lobectomy.

NOTE Confidence: 0.667909979820251

00:51:49.430 --> 00:51:52.928 Any thoughts on using ethereal embolization?

NOTE Confidence: 0.667909979820251

00:51:52.930 --> 00:51:56.602 On bridge to protect me for ATC in large,

NOTE Confidence: 0.667909979820251

00:51:56.610 --> 00:51:57.430 bulky tumors.

NOTE Confidence: 0.807775259017944

00:51:59.810 --> 00:52:02.918 No such thanks for the question.

NOTE Confidence: 0.910751283168793

00:52:05.120 --> 00:52:10.080 You know I, I will say, I think it. It is.

NOTE Confidence: 0.910751283168793

00:52:10.080 --> 00:52:13.308 It's probably a very reasonable approach.

NOTE Confidence: 0.910751283168793

00:52:13.310 --> 00:52:17.430 In these large bulky tumors.

NOTE Confidence: 0.910751283168793

00:52:17.430 --> 00:52:21.438 I guess I will share that my experiences

NOTE Confidence: 0.910751283168793

00:52:21.438 --> 00:52:25.352 been more towards a Y-90 approach

NOTE Confidence: 0.910751283168793

00:52:25.352 --> 00:52:28.160 to radiation lobectomy approach.

NOTE Confidence: 0.910751283168793

00:52:28.160 --> 00:52:32.230 And maybe that was the bias of the IR group

NOTE Confidence: 0.910751283168793

00:52:32.332 --> 00:52:36.028 that I worked with closely in Portland.

NOTE Confidence: 0.910751283168793

00:52:36.030 --> 00:52:39.734 I do think there's some merit to it,

NOTE Confidence: 0.910751283168793

00:52:39.740 --> 00:52:42.974 because with the search or why 90,

NOTE Confidence: 0.910751283168793

00:52:42.980 --> 00:52:46.748 you're not going to get an acute necrosis

NOTE Confidence: 0.910751283168793

00:52:46.748 --> 00:52:49.920 or ischemic effect in a large tumor.

NOTE Confidence: 0.910751283168793

00:52:49.920 --> 00:52:52.698 It's a. It's a more gradual

NOTE Confidence: 0.910751283168793

00:52:52.698 --> 00:52:54.550 cytotoxic tumor killing effect.

NOTE Confidence: 0.910751283168793

00:52:54.550 --> 00:52:56.880 I think the patients tolerate

NOTE Confidence: 0.910751283168793

00:52:56.880 --> 00:52:59.210 it pretty well and then.

NOTE Confidence: 0.910751283168793

00:52:59.210 --> 00:53:01.592 Then you get this benefit of

NOTE Confidence: 0.910751283168793

00:53:01.592 --> 00:53:03.680 of liver atrophy as well,

NOTE Confidence: 0.910751283168793

00:53:03.680 --> 00:53:06.249 probably in a way that you don't

NOTE Confidence: 0.910751283168793

00:53:06.249 --> 00:53:09.181 get in the Saint to the same

NOTE Confidence: 0.910751283168793

00:53:09.181 --> 00:53:11.791 degree with with tastes you know.

NOTE Confidence: 0.910751283168793

00:53:11.800 --> 00:53:13.830 And I'll I will share.

NOTE Confidence: 0.910751283168793

00:53:13.830 --> 00:53:15.855 I've operated on at least

NOTE Confidence: 0.910751283168793

00:53:15.855 --> 00:53:17.475 two or three patients,

NOTE Confidence: 0.910751283168793

00:53:17.480 --> 00:53:21.296 six or eight months after radio ablation and.

NOTE Confidence: 0.910751283168793

00:53:21.300 --> 00:53:23.580 At least in one patient I can remember,

NOTE Confidence: 0.910751283168793

00:53:23.580 --> 00:53:25.360 there's no viable tumor left, so.

NOTE Confidence: 0.910751283168793

00:53:25.360 --> 00:53:27.110 I'm not sure they all

NOTE Confidence: 0.910751283168793

00:53:27.110 --> 00:53:28.160 eventually need surgery,

NOTE Confidence: 0.910751283168793

00:53:28.160 --> 00:53:30.700 but it's it's kind of.

NOTE Confidence: 0.910751283168793

00:53:30.700 --> 00:53:32.177 Hard to know till you've done it.

NOTE Confidence: 0.850983679294586

00:53:33.030 --> 00:53:35.823 Well, a couple more of a very

NOTE Confidence: 0.850983679294586

00:53:35.823 --> 00:53:37.020 sophisticated questions here.

NOTE Confidence: 0.850983679294586

00:53:37.020 --> 00:53:38.732 One is from Stacy.

NOTE Confidence: 0.850983679294586

00:53:38.732 --> 00:53:41.300 What do you think about the

NOTE Confidence: 0.850983679294586

00:53:41.402 --> 00:53:43.638 use of systemic therapy?

NOTE Confidence: 0.850983679294586

00:53:43.640 --> 00:53:45.710 They specifically immune therapy as

NOTE Confidence: 0.850983679294586

00:53:45.710 --> 00:53:47.780 a neoadjuvant therapy or argument

NOTE Confidence: 0.850983679294586

00:53:47.847 --> 00:53:49.647 therapy to prevent recurrence.

NOTE Confidence: 0.896741032600403

00:53:51.010 --> 00:53:55.400 Well, you know, I think.

NOTE Confidence: 0.896741032600403

00:53:55.400 --> 00:53:58.830 If you look at the history of.

NOTE Confidence: 0.896741032600403

00:53:58.830 --> 00:54:01.270 Multidisciplinary therapy in GI cancers.

NOTE Confidence: 0.896741032600403

00:54:01.270 --> 00:54:04.198 We're all moving in every disease,

NOTE Confidence: 0.896741032600403

00:54:04.200 --> 00:54:05.499 more twords neoadjuvant,

NOTE Confidence: 0.896741032600403

00:54:05.499 --> 00:54:09.190 and I think as we see the efficacy

NOTE Confidence: 0.896741032600403

00:54:09.190 --> 00:54:12.010 of treatment in HTC improving,

NOTE Confidence: 0.896741032600403

00:54:12.010 --> 00:54:14.926 we probably will get to that.

NOTE Confidence: 0.896741032600403

00:54:14.930 --> 00:54:18.686 I don't think we're there yet.

NOTE Confidence: 0.896741032600403

00:54:18.690 --> 00:54:21.458 Um? You know,

NOTE Confidence: 0.896741032600403

00:54:21.458 --> 00:54:24.850 so wrapping it just was not active enough.

NOTE Confidence: 0.896741032600403

00:54:24.850 --> 00:54:27.520 A tease. Oh Bev, maybe.

NOTE Confidence: 0.896741032600403

00:54:27.520 --> 00:54:28.828 And then I think,

NOTE Confidence: 0.896741032600403

00:54:28.828 --> 00:54:31.274 you know we'll probably get there with

NOTE Confidence: 0.896741032600403

00:54:31.274 --> 00:54:33.359 the postoperative adamant as well.

NOTE Confidence: 0.896741032600403

00:54:33.360 --> 00:54:34.848 I, I'll be honest,

NOTE Confidence: 0.896741032600403

00:54:34.848 --> 00:54:36.336 ACI's inspector trials underway

NOTE Confidence: 0.896741032600403

00:54:36.336 --> 00:54:38.191 that you are probably more

NOTE Confidence: 0.896741032600403

00:54:38.191 --> 00:54:39.926 acquainted with than I am.

NOTE Confidence: 0.752213828265667

00:54:41.050 --> 00:54:44.977 I just just. So remember that we

NOTE Confidence: 0.752213828265667

00:54:44.977 --> 00:54:48.469 do have atrial here that Stacy

NOTE Confidence: 0.752213828265667

00:54:48.469 --> 00:54:51.835 is the PII in to understand

NOTE Confidence: 0.752213828265667

00:54:51.835 --> 00:54:55.390 the answer to this question.

NOTE Confidence: 0.752213828265667

00:54:55.390 --> 00:54:57.414 So patient after surgery.

NOTE Confidence: 0.752213828265667

00:54:57.414 --> 00:54:59.438 Weather immunotherapy can can

NOTE Confidence: 0.752213828265667

00:54:59.438 --> 00:55:01.589 help preventing the recurrence.

NOTE Confidence: 0.752213828265667

00:55:01.590 --> 00:55:04.838 Because this is the problem with this

NOTE Confidence: 0.752213828265667

00:55:04.838 --> 00:55:07.648 cancer that recurs so Thomas Daddy.

NOTE Confidence: 0.752213828265667

00:55:07.650 --> 00:55:10.380 Is ask is congratulating for your talk,

NOTE Confidence: 0.752213828265667

00:55:10.380 --> 00:55:12.720 but interesting how many people with

NOTE Confidence: 0.752213828265667

00:55:12.720 --> 00:55:15.060 hepatitis C have been treated and

NOTE Confidence: 0.752213828265667

00:55:15.060 --> 00:55:17.400 there she knows is well compensated.

NOTE Confidence: 0.752213828265667

00:55:17.400 --> 00:55:19.248 They remain at risk.

NOTE Confidence: 0.752213828265667

00:55:19.248 --> 00:55:21.558 Do you favor surgery over

NOTE Confidence: 0.752213828265667

00:55:21.558 --> 00:55:23.450 ablation for smoke humor?

NOTE Confidence: 0.899248242378235

00:55:25.440 --> 00:55:28.386 You know, I think there are

NOTE Confidence: 0.899248242378235

00:55:28.386 --> 00:55:31.319 a couple of pieces in that.

NOTE Confidence: 0.899248242378235

00:55:31.320 --> 00:55:35.980 Question and my own.

NOTE Confidence: 0.899248242378235

00:55:35.980 --> 00:55:39.355 I think in this group of patients who are

NOTE Confidence: 0.899248242378235

00:55:39.355 --> 00:55:42.109 treated for hepatitis C at their risk.

NOTE Confidence: 0.899248242378235

00:55:42.110 --> 00:55:45.071 For developing, HTC does go down and

NOTE Confidence: 0.899248242378235

00:55:45.071 --> 00:55:47.874 I suspect that the hepatologist know

NOTE Confidence: 0.899248242378235

00:55:47.874 --> 00:55:51.241 those numbers much better than I do.

NOTE Confidence: 0.899248242378235

00:55:51.250 --> 00:55:54.820 What I can tell you is.

NOTE Confidence: 0.899248242378235

00:55:54.820 --> 00:55:57.466 Having operated on many patients over

NOTE Confidence: 0.899248242378235

00:55:57.466 --> 00:56:00.710 the years have had in a sustained

NOTE Confidence: 0.899248242378235

00:56:00.710 --> 00:56:03.494 virologic response to hep C treatment.

NOTE Confidence: 0.899248242378235

00:56:03.500 --> 00:56:06.225 They are much better surgical

NOTE Confidence: 0.899248242378235

00:56:06.225 --> 00:56:09.008 candidates or livers, or healthier.

NOTE Confidence: 0.899248242378235

00:56:09.008 --> 00:56:11.878 They tolerate surgery much more

NOTE Confidence: 0.899248242378235

00:56:11.878 --> 00:56:14.611 readily than either non treated

NOTE Confidence: 0.899248242378235

00:56:14.611 --> 00:56:17.365 patients or or patients who did

NOTE Confidence: 0.899248242378235

00:56:17.365 --> 00:56:20.408 not have some adequate response.

NOTE Confidence: 0.899248242378235

00:56:20.410 --> 00:56:23.140 I do think they remain at

NOTE Confidence: 0.899248242378235

00:56:23.140 --> 00:56:24.505 risk regarding ablation.

NOTE Confidence: 0.899248242378235

00:56:24.510 --> 00:56:27.324 You know I didn't spend a lot

NOTE Confidence: 0.899248242378235

00:56:27.324 --> 00:56:29.969 of time talking about ablation,

NOTE Confidence: 0.899248242378235

00:56:29.970 --> 00:56:34.056 but I think it is a very useful modality,

NOTE Confidence: 0.899248242378235

00:56:34.060 --> 00:56:36.210 either by the interventional radiologists

NOTE Confidence: 0.899248242378235

00:56:36.210 --> 00:56:39.070 or in some cases by surgeons,

NOTE Confidence: 0.899248242378235

00:56:39.070 --> 00:56:40.696 in difficult locations.

NOTE Confidence: 0.899248242378235

00:56:40.696 --> 00:56:45.259 And I think for small tumors it's a very.

NOTE Confidence: 0.899248242378235

00:56:45.260 --> 00:56:47.530 It's a very reasonable approach,

NOTE Confidence: 0.899248242378235

00:56:47.530 --> 00:56:50.290 and I think there's really abundant

NOTE Confidence: 0.899248242378235

00:56:50.290 --> 00:56:52.520 data that indicates that for,

NOTE Confidence: 0.899248242378235

00:56:52.520 --> 00:56:55.698 you know, for a 2 centimeter tumor,

NOTE Confidence: 0.899248242378235

00:56:55.700 --> 00:56:58.424 the outcome is going to be

NOTE Confidence: 0.899248242378235

00:56:58.424 --> 00:56:59.786 a essentially equivalent.

NOTE Confidence: 0.899248242378235

00:56:59.790 --> 00:57:03.360 So I I think it's a very

NOTE Confidence: 0.899248242378235

00:57:03.360 --> 00:57:04.380 reasonable alternative.

NOTE Confidence: 0.899248242378235

00:57:04.380 --> 00:57:04.770 Yeah,

NOTE Confidence: 0.899248242378235

00:57:04.770 --> 00:57:07.114 there's no patience is safe Surgical

NOTE Confidence: 0.899248242378235

00:57:07.114 --> 00:57:09.460 candidate and they have minimal disease.

NOTE Confidence: 0.899248242378235

00:57:09.460 --> 00:57:11.420 Name would like a reception.

NOTE Confidence: 0.899248242378235

00:57:11.420 --> 00:57:13.370 Sometimes there is satisfaction to

NOTE Confidence: 0.899248242378235

00:57:13.370 --> 00:57:16.109 having the disease out of their body,

NOTE Confidence: 0.899248242378235

00:57:16.110 --> 00:57:18.070 and I think it's reasonable.

NOTE Confidence: 0.899248242378235

00:57:18.070 --> 00:57:20.410 But then there's the fact of

NOTE Confidence: 0.899248242378235

00:57:20.410 --> 00:57:22.754 comorbidities too, so locks goes good,

NOTE Confidence: 0.899248242378235

00:57:22.754 --> 00:57:23.927 goes into the

NOTE Confidence: 0.806935369968414

00:57:23.930 --> 00:57:27.058 decision. We have three more questions to go,

NOTE Confidence: 0.806935369968414

00:57:27.060 --> 00:57:29.740 one from David Madoff.

NOTE Confidence: 0.806935369968414

00:57:29.740 --> 00:57:31.629 Only the only issue with additional

NOTE Confidence: 0.806935369968414

00:57:31.629 --> 00:57:34.410 back to me is that we do not know

NOTE Confidence: 0.806935369968414

00:57:34.487 --> 00:57:37.019 that kinetic growth rate of deliver.

NOTE Confidence: 0.806935369968414

00:57:37.020 --> 00:57:40.826 There is literature on PBE, an sequential

NOTE Confidence: 0.806935369968414

00:57:40.826 --> 00:57:43.467 days combined with PVA, hopefully.

NOTE Confidence: 0.806935369968414

00:57:43.467 --> 00:57:47.203 We have this figure out the sample and

NOTE Confidence: 0.806935369968414

00:57:47.203 --> 00:57:51.186 that's more common than thank you bye.

NOTE Confidence: 0.806935369968414

00:57:51.186 --> 00:57:52.798 And Sue Chan.

NOTE Confidence: 0.806935369968414

00:57:52.798 --> 00:57:54.434 From our pathology Department

NOTE Confidence: 0.806935369968414

00:57:54.434 --> 00:57:57.360 has to do this action matching.

NOTE Confidence: 0.806935369968414

00:57:57.360 --> 00:57:59.436 What is the minimum distance in

NOTE Confidence: 0.806935369968414

00:57:59.436 --> 00:58:01.247 millimeters of tumor to resection

NOTE Confidence: 0.806935369968414

00:58:01.247 --> 00:58:03.042 margin you prefer to call

NOTE Confidence: 0.806935369968414

00:58:03.042 --> 00:58:04.840 negative any data for that.

NOTE Confidence: 0.588032841682434

00:58:07.120 --> 00:58:14.030 Yeah. Yeah. There, I guess the way

NOTE Confidence: 0.588032841682434

00:58:14.030 --> 00:58:17.128 I would answer that question is

NOTE Confidence: 0.588032841682434

00:58:17.128 --> 00:58:20.377 that what I try to aim for is a.

NOTE Confidence: 0.588032841682434

00:58:20.380 --> 00:58:23.292 Is a centimeter margin.

NOTE Confidence: 0.588032841682434

00:58:23.292 --> 00:58:26.522 Often you know, depending on

NOTE Confidence: 0.588032841682434

00:58:26.522 --> 00:58:29.127 the location of the disease,

NOTE Confidence: 0.588032841682434

00:58:29.130 --> 00:58:32.256 in the proximity to other structures,

NOTE Confidence: 0.588032841682434

00:58:32.260 --> 00:58:34.204 that is not achievable.

NOTE Confidence: 0.588032841682434

00:58:34.204 --> 00:58:37.795 I think for most HCC and narrow

NOTE Confidence: 0.588032841682434

00:58:37.795 --> 00:58:41.197 margin of even a couple of

NOTE Confidence: 0.588032841682434

00:58:41.197 --> 00:58:43.920 minutes millimeters is adequate.

NOTE Confidence: 0.588032841682434

00:58:43.920 --> 00:58:48.141 Certainly a positive margin is a marker

NOTE Confidence: 0.588032841682434

00:58:48.141 --> 00:58:51.510 is associated with poor outcomes.

NOTE Confidence: 0.588032841682434

00:58:51.510 --> 00:58:53.676 But it is. I will say,

NOTE Confidence: 0.588032841682434

00:58:53.680 --> 00:58:55.485 it's difficult to know in

NOTE Confidence: 0.588032841682434

00:58:55.485 --> 00:58:56.929 some of these situations.

NOTE Confidence: 0.588032841682434

00:58:56.930 --> 00:58:59.810 Is is it the margin that's the driver,

NOTE Confidence: 0.588032841682434

00:58:59.810 --> 00:59:02.698 the outcome or the biology of the disease.

NOTE Confidence: 0.816351175308228

00:59:05.440 --> 00:59:07.806 So I I don't think that answers

NOTE Confidence: 0.816351175308228

00:59:07.806 --> 00:59:08.820 the question completely,

NOTE Confidence: 0.816351175308228

00:59:08.820 --> 00:59:11.516 but what I would say is like I,

NOTE Confidence: 0.816351175308228

00:59:11.520 --> 00:59:13.548 I tried to get a centimeter

NOTE Confidence: 0.816351175308228

00:59:13.550 --> 00:59:15.800 of margin and finally we have

NOTE Confidence: 0.816351175308228

00:59:15.800 --> 00:59:18.060 a question from John Kuntzman.

NOTE Confidence: 0.816351175308228

00:59:18.060 --> 00:59:20.340 Another of our surgical oncologist.

NOTE Confidence: 0.816351175308228

00:59:20.340 --> 00:59:23.469 I generally consider a section to be

NOTE Confidence: 0.816351175308228

00:59:23.469 --> 00:59:25.360 contraindicated in multifocal agency,

NOTE Confidence: 0.816351175308228

00:59:25.360 --> 00:59:27.180 even in non cirrhotic.

NOTE Confidence: 0.816351175308228

00:59:27.180 --> 00:59:29.455 Would you agree with that?

NOTE Confidence: 0.0910807773470879

00:59:33.270 --> 00:59:34.130 Um?

NOTE Confidence: 0.705260784365237

00:59:38.350 --> 00:59:45.433 In general. Yes. Um? Although.

NOTE Confidence: 0.705260784365237

00:59:45.433 --> 00:59:49.777 John, you know as well as I do.

NOTE Confidence: 0.705260784365237

00:59:49.780 --> 00:59:52.944 There are no absolutes in surgical oncology.

NOTE Confidence: 0.705260784365237

00:59:52.950 --> 00:59:56.282 You know, I think some of that

NOTE Confidence: 0.705260784365237

00:59:56.282 --> 00:59:59.332 depends on the size, the location,

NOTE Confidence: 0.705260784365237

00:59:59.332 --> 01:00:02.772 the health of the patient, their age,

NOTE Confidence: 0.705260784365237

01:00:02.772 --> 01:00:05.227 the technicalities of the operation,

NOTE Confidence: 0.705260784365237

01:00:05.230 --> 01:00:09.423 kind of all those other intangibles that

NOTE Confidence: 0.705260784365237

01:00:09.423 --> 01:00:13.539 would that would go into the decision.

NOTE Confidence: 0.705260784365237

01:00:13.540 --> 01:00:17.150 Domino's rephrased

NOTE Confidence: 0.79789012670517

01:00:17.150 --> 01:00:21.020 It doesn't give you quarter here, So what are

NOTE Confidence: 0.79789012670517

01:00:21.020 --> 01:00:21.820 your exceptions?

NOTE Confidence: 0.79789012670517

01:00:21.820 --> 01:00:24.620 Oh, you know I would say in

NOTE Confidence: 0.79789012670517

01:00:24.620 --> 01:00:27.664 in someone who has two regions

NOTE Confidence: 0.79789012670517

01:00:27.664 --> 01:00:30.219 that are resectable safely with.

NOTE Confidence: 0.79789012670517

01:00:30.220 --> 01:00:33.810 Even a right hepat ectomy.

NOTE Confidence: 0.79789012670517

01:00:33.810 --> 01:00:35.952 You know, I would probably send the

NOTE Confidence: 0.79789012670517

01:00:35.952 --> 01:00:38.495 patient to Stacy and maybe have them have

NOTE Confidence: 0.79789012670517

01:00:38.495 --> 01:00:40.590 her treat them with systemic therapy.

NOTE Confidence: 0.79789012670517

01:00:40.590 --> 01:00:43.820 Kind of in an ad hoc way for you know,

NOTE Confidence: 0.79789012670517

01:00:43.820 --> 01:00:45.758 the question came up about neoadjuvant.

NOTE Confidence: 0.79789012670517

01:00:45.760 --> 01:00:48.014 Well, this is the case where yeah,

NOTE Confidence: 0.79789012670517

01:00:48.020 --> 01:00:51.250 I'd figure out a way to do some new agents.

NOTE Confidence: 0.79789012670517

01:00:51.250 --> 01:00:52.865 So you were watching the

NOTE Confidence: 0.79789012670517

01:00:52.865 --> 01:00:54.480 patient for a few months.

NOTE Confidence: 0.79789012670517

01:00:54.480 --> 01:00:56.594 Make sure that they don't have lung

NOTE Confidence: 0.79789012670517

01:00:56.594 --> 01:00:59.006 lesions or bone lesions, and if there

NOTE Confidence: 0.79789012670517

01:00:59.006 --> 01:01:00.938 was no new disease or progression.

NOTE Confidence: 0.79789012670517

01:01:00.940 --> 01:01:02.473 Yeah, it operate.

NOTE Confidence: 0.79789012670517

01:01:02.473 --> 01:01:05.028 I bet you would too.

NOTE Confidence: 0.79789012670517

01:01:05.030 --> 01:01:06.060 Alright, well

NOTE Confidence: 0.81672477722168

01:01:06.060 --> 01:01:09.102 thank you very much Kevin for

NOTE Confidence: 0.81672477722168

01:01:09.102 --> 01:01:12.787 taking time out of your very busy

NOTE Confidence: 0.81672477722168

01:01:12.787 --> 01:01:15.883 day to give and deliver this.

NOTE Confidence: 0.81672477722168

01:01:15.890 --> 01:01:18.475 This lessons about novelty and

NOTE Confidence: 0.81672477722168

01:01:18.475 --> 01:01:21.060 what is establishing in surgery.

NOTE Confidence: 0.81672477722168

01:01:21.060 --> 01:01:24.056 Ann and thank you to the audience

NOTE Confidence: 0.81672477722168

01:01:24.056 --> 01:01:27.896 and thank you to Renee for another

NOTE Confidence: 0.81672477722168

01:01:27.896 --> 01:01:30.356 outstanding organization of this.

NOTE Confidence: 0.81672477722168

01:01:30.360 --> 01:01:35.040 We will meet again in a month to here.

NOTE Confidence: 0.81672477722168

01:01:35.040 --> 01:01:39.440 David Mouth, yes I thank you again everybody.

NOTE Confidence: 0.81672477722168

01:01:39.440 --> 01:01:43.296 Thank you alright have a good one.