WEBVTT

NOTE duration:"00:59:26.6130000"

NOTE language:en-us

NOTE Confidence: 0.881473302841187

00:00:00.000 --> 00:00:02.580 Agenda welcome everyone to Cancer

NOTE Confidence: 0.881473302841187

00:00:02.580 --> 00:00:05.160 Center grand rounds and really

NOTE Confidence: 0.881473302841187

00:00:05.250 --> 00:00:08.400 pleased to have three various themed

NOTE Confidence: 0.881473302841187

00:00:08.400 --> 00:00:11.548 colleagues presenting and I, you know,

NOTE Confidence: 0.881473302841187

00:00:11.548 --> 00:00:15.216 I think if there's one particular theme

NOTE Confidence: 0.881473302841187

00:00:15.216 --> 00:00:18.921 that I think emerges among many from

NOTE Confidence: 0.881473302841187

00:00:18.921 --> 00:00:22.619 today's forum is that we have what's

NOTE Confidence: 0.881473302841187

00:00:22.619 --> 00:00:26.217 really great is the number of talented

NOTE Confidence: 0.881473302841187

00:00:26.220 --> 00:00:28.140 people across multiple disciplines.

NOTE Confidence: 0.881473302841187

00:00:28.140 --> 00:00:31.522 Who are making progress on pivotal questions

NOTE Confidence: 0.881473302841187

00:00:31.522 --> 00:00:34.108 in cancer care in Cancer Research,

NOTE Confidence: 0.881473302841187

00:00:34.110 --> 00:00:36.830 and I think today's forum is just you

NOTE Confidence: 0.881473302841187

00:00:36.830 --> 00:00:39.802 know one very clear of many examples

NOTE Confidence: 0.881473302841187

00:00:39.802 --> 00:00:42.470 of three individuals doing great work,

NOTE Confidence: 0.881473302841187

00:00:42.470 --> 00:00:44.997 each coming from it from a different

NOTE Confidence: 0.881473302841187

00:00:44.997 --> 00:00:46.926 discipline but working together towards

NOTE Confidence: 0.881473302841187

00:00:46.926 --> 00:00:49.272 really making a difference for patients

NOTE Confidence: 0.881473302841187

00:00:49.272 --> 00:00:52.264 for the field and and obviously advancing

NOTE Confidence: 0.881473302841187

00:00:52.264 --> 00:00:54.404 our research and educational agenda.

NOTE Confidence: 0.881473302841187

00:00:54.410 --> 00:00:56.798 And I I would, I'll do.

NOTE Confidence: 0.881473302841187

00:00:56.800 --> 00:00:59.188 I'd like to do is really.

NOTE Confidence: 0.881473302841187

00:00:59.190 --> 00:01:01.998 Introduce one of our speakers and ask him

NOTE Confidence: 0.881473302841187

00:01:01.998 --> 00:01:04.919 to then introduce the other colleague.

NOTE Confidence: 0.881473302841187

00:01:04.920 --> 00:01:07.368 So let me introduce Kevin Billingslea,

NOTE Confidence: 0.881473302841187

00:01:07.370 --> 00:01:10.226 who I think frankly in the past.

NOTE Confidence: 0.881473302841187

00:01:10.230 --> 00:01:13.093 I guess nine months or so really

NOTE Confidence: 0.881473302841187

00:01:13.093 --> 00:01:14.320 needs no introduction.

NOTE Confidence: 0.881473302841187

00:01:14.320 --> 00:01:16.780 Kevin, as many of you know,

NOTE Confidence: 0.881473302841187

00:01:16.780 --> 00:01:20.196 joined us in in or about January.

NOTE Confidence: 0.881473302841187

00:01:20.200 --> 00:01:23.168 As our chief medical officer for the Yale

NOTE Confidence: 0.881473302841187

00:01:23.168 --> 00:01:25.798 Cancer Center and Smilow Cancer Hospital.

NOTE Confidence: 0.881473302841187

00:01:25.800 --> 00:01:28.482 And is also a professor in

NOTE Confidence: 0.881473302841187

00:01:28.482 --> 00:01:30.270 the Department of surgery.

NOTE Confidence: 0.881473302841187

00:01:30.270 --> 00:01:32.505 Kevin is responsible for our

NOTE Confidence: 0.881473302841187

00:01:32.505 --> 00:01:33.399 clinical enterprise,

NOTE Confidence: 0.881473302841187

00:01:33.400 --> 00:01:35.630 working with our leaders in

NOTE Confidence: 0.881473302841187

00:01:35.630 --> 00:01:37.414 nursing and other disciplines,

NOTE Confidence: 0.881473302841187

00:01:37.420 --> 00:01:40.102 and has really done an extraordinary

NOTE Confidence: 0.881473302841187

00:01:40.102 --> 00:01:41.890 job and certainly working.

NOTE Confidence: 0.881473302841187

00:01:41.890 --> 00:01:42.786 You know,

NOTE Confidence: 0.881473302841187

00:01:42.786 --> 00:01:45.474 arriving here and nothing less stepping

NOTE Confidence: 0.881473302841187

00:01:45.474 --> 00:01:48.150 into the frying pan with Kovid.

NOTE Confidence: 0.881473302841187

00:01:48.150 --> 00:01:50.904 And really the need to work

NOTE Confidence: 0.881473302841187

00:01:50.904 --> 00:01:52.740 collaboratively across so many

NOTE Confidence: 0.881473302841187

00:01:52.821 --> 00:01:55.747 people to execute on what was heroic.

NOTE Confidence: 0.881473302841187

00:01:55.750 --> 00:01:58.886 An extraordinary response on so many parts.

NOTE Confidence: 0.881473302841187

00:01:58.890 --> 00:01:59.347 Kevin,

NOTE Confidence: 0.881473302841187

00:01:59.347 --> 00:02:01.632 beyond his success as our

NOTE Confidence: 0.881473302841187

00:02:01.632 --> 00:02:03.003 chief medical officer,

NOTE Confidence: 0.881473302841187

00:02:03.010 --> 00:02:05.375 is an international leader in

NOTE Confidence: 0.881473302841187

00:02:05.375 --> 00:02:07.740 the clinical care and research

NOTE Confidence: 0.881473302841187

00:02:07.827 --> 00:02:09.877 of patients with a paddle,

NOTE Confidence: 0.881473302841187

00:02:09.880 --> 00:02:10.796 biliary cancers,

NOTE Confidence: 0.881473302841187

00:02:10.796 --> 00:02:13.086 as well as gastrointestinal ligatures.

NOTE Confidence: 0.881473302841187

00:02:13.090 --> 00:02:15.380 Legacies before joining us here,

NOTE Confidence: 0.881473302841187

00:02:15.380 --> 00:02:18.248 Kevin was a professor at Oregon

NOTE Confidence: 0.881473302841187

00:02:18.248 --> 00:02:20.160 Health and Science University

NOTE Confidence: 0.881473302841187

00:02:20.247 --> 00:02:22.785 where he was the medical director

NOTE Confidence: 0.881473302841187

00:02:22.785 --> 00:02:25.466 of the Knight Cancer Institute and

NOTE Confidence: 0.881473302841187

00:02:25.466 --> 00:02:27.738 the chief of surgical oncology,

NOTE Confidence: 0.881473302841187

00:02:27.740 --> 00:02:30.060 and Kevin is going to.

NOTE Confidence: 0.881473302841187

00:02:30.060 --> 00:02:32.310 Take over with our discussion of

NOTE Confidence: 0.881473302841187

00:02:32.310 --> 00:02:33.435 evolving multidisciplinary management

NOTE Confidence: 0.881473302841187

00:02:33.435 --> 00:02:35.309 of colorectal liver metastases,

NOTE Confidence: 0.881473302841187

00:02:35.310 --> 00:02:37.942 and I'll let Kevin take over and

NOTE Confidence: 0.881473302841187

00:02:37.942 --> 00:02:40.159 introduce the other great faculty,

NOTE Confidence: 0.881473302841187

00:02:40.160 --> 00:02:42.131 Kevin, thank you.

NOTE Confidence: 0.881473302841187

00:02:42.131 --> 00:02:42.788 Charlie,

NOTE Confidence: 0.85429435968399

00:02:42.790 --> 00:02:46.423 thanks, thank you so much for that

NOTE Confidence: 0.85429435968399

00:02:46.423 --> 00:02:47.980 really gracious introduction.

NOTE Confidence: 0.85429435968399

00:02:47.980 --> 00:02:50.440 I'm thrilled to be here.

NOTE Confidence: 0.85429435968399

00:02:50.440 --> 00:02:52.528 We're going to do kind of A tag

NOTE Confidence: 0.85429435968399

00:02:52.528 --> 00:02:54.147 team screen sharing here and let me

NOTE Confidence: 0.85429435968399

00:02:54.147 --> 00:02:55.990 see if I can get going with that.

NOTE Confidence: 0.879898011684418

00:03:09.560 --> 00:03:11.450 OK, is that working for folks?

NOTE Confidence: 0.863857507705688

00:03:11.990 --> 00:03:16.850 I I only see you Kevin. OK.

NOTE Confidence: 0.82470452785492

00:03:37.480 --> 00:03:47.088 There you go. Got

NOTE Confidence: 0.82470452785492

00:03:47.088 --> 00:03:54.560 it, how about that OK? Well, you

NOTE Confidence: 0.859428763389587

00:03:54.560 --> 00:03:56.990 know it's as Charlie alluded to.

NOTE Confidence: 0.859428763389587

00:03:56.990 --> 00:04:00.239 I've had the pleasure of spending much of my

NOTE Confidence: 0.859428763389587

00:04:00.239 --> 00:04:03.297 career as hepatobiliary surgical oncologist.

NOTE Confidence: 0.859428763389587

00:04:03.300 --> 00:04:06.243 And you know, I will share that one of

NOTE Confidence: 0.859428763389587

00:04:06.243 --> 00:04:09.363 the most gratifying aspects of my time

NOTE Confidence: 0.859428763389587

00:04:09.363 --> 00:04:11.771 in surgical oncology is participating

NOTE Confidence: 0.859428763389587

00:04:11.771 --> 00:04:14.381 and witnessing the dramatic advances

NOTE Confidence: 0.859428763389587

00:04:14.381 --> 00:04:18.198 that we have had in the multidisciplinary

NOTE Confidence: 0.859428763389587

00:04:18.198 --> 00:04:21.654 care of patients with colorectal liver

NOTE Confidence: 0.859428763389587

00:04:21.654 --> 00:04:24.415 metastases and one of the things that

NOTE Confidence: 0.859428763389587

00:04:24.415 --> 00:04:27.395 I was most excited about is I prepared

NOTE Confidence: 0.859428763389587

00:04:27.395 --> 00:04:30.134 for my transition to the ill Cancer

NOTE Confidence: 0.859428763389587

00:04:30.134 --> 00:04:31.616 Center in Smilow.

NOTE Confidence: 0.859428763389587

00:04:31.616 --> 00:04:33.592 Cancer Hospital was the

NOTE Confidence: 0.859428763389587

00:04:33.592 --> 00:04:35.858 fact that we truly have.

NOTE Confidence: 0.859428763389587

00:04:35.860 --> 00:04:36.758 Kind of.

NOTE Confidence: 0.859428763389587

00:04:36.758 --> 00:04:39.452 We essentially have a world class

NOTE Confidence: 0.859428763389587

00:04:39.452 --> 00:04:42.117 team of experts across disciplines

NOTE Confidence: 0.859428763389587

00:04:42.117 --> 00:04:45.459 who are contributing to the care

NOTE Confidence: 0.859428763389587

00:04:45.459 --> 00:04:48.807 of this unique group of patients.

NOTE Confidence: 0.859428763389587

00:04:48.810 --> 00:04:53.260 And we have all of the elements here and I

NOTE Confidence: 0.859428763389587

00:04:53.371 --> 00:04:57.718 want to with that as a jumping off point.

NOTE Confidence: 0.859428763389587

00:04:57.720 --> 00:05:00.528 Introduce my two partners in this

NOTE Confidence: 0.859428763389587

00:05:00.528 --> 00:05:01.932 multidisciplinary grand rounds.

NOTE Confidence: 0.859428763389587

00:05:01.940 --> 00:05:04.800 Doctor Michael Cicchini is a.

NOTE Confidence: 0.859428763389587

00:05:04.800 --> 00:05:07.150 A seasoned veteran of Yale,

NOTE Confidence: 0.859428763389587

00:05:07.150 --> 00:05:09.964 he's a graduate of the Albert

NOTE Confidence: 0.859428763389587

00:05:09.964 --> 00:05:11.840 Einstein School of Medicine,

NOTE Confidence: 0.859428763389587

00:05:11.840 --> 00:05:15.116 came here to New Haven for residency,

NOTE Confidence: 0.859428763389587

00:05:15.120 --> 00:05:16.932 stayed on for fellowship,

NOTE Confidence: 0.859428763389587

00:05:16.932 --> 00:05:19.650 and has just continued to rocket

NOTE Confidence: 0.859428763389587

00:05:19.728 --> 00:05:21.680 to prominence from there.

NOTE Confidence: 0.859428763389587

00:05:21.680 --> 00:05:24.242 Michael profited as many of our

NOTE Confidence: 0.859428763389587

00:05:24.242 --> 00:05:26.551 fellows have from the mentorship

NOTE Confidence: 0.859428763389587

00:05:26.551 --> 00:05:29.659 and guidance of doctor Jill Lacey,

NOTE Confidence: 0.859428763389587

00:05:29.660 --> 00:05:32.936 who is as most of you know,

NOTE Confidence: 0.859428763389587

00:05:32.940 --> 00:05:36.230 the Dean of our GI medical Oncologist.

NOTE Confidence: 0.859428763389587

00:05:36.230 --> 00:05:38.974 Michael has carved out a really unique

NOTE Confidence: 0.859428763389587

00:05:38.974 --> 00:05:41.730 spot for himself and our organization,

NOTE Confidence: 0.859428763389587

00:05:41.730 --> 00:05:43.840 an increasingly across the country.

NOTE Confidence: 0.859428763389587

00:05:43.840 --> 00:05:46.282 In a mix of traditional clinical

NOTE Confidence: 0.859428763389587

00:05:46.282 --> 00:05:48.371 research and GI medical oncology

NOTE Confidence: 0.859428763389587

00:05:48.371 --> 00:05:51.066 as well as phase one clinical trial

NOTE Confidence: 0.859428763389587

00:05:51.066 --> 00:05:53.150 work and drug development.

NOTE Confidence: 0.859428763389587

00:05:53.150 --> 00:05:56.139 So delighted to have him with me

NOTE Confidence: 0.859428763389587

00:05:56.139 --> 00:05:59.330 today and as a clinical partner.

NOTE Confidence: 0.859428763389587

00:05:59.330 --> 00:05:59.867 Next,

NOTE Confidence: 0.859428763389587

00:05:59.867 --> 00:06:03.626 doctor David made off is a relatively

NOTE Confidence: 0.859428763389587

00:06:03.626 --> 00:06:06.340 recent addition to the Yale team.

NOTE Confidence: 0.859428763389587

00:06:06.340 --> 00:06:10.348 When I was preparing for my move here,

NOTE Confidence: 0.859428763389587

00:06:10.350 --> 00:06:14.382 he was one of the most one of the

NOTE Confidence: 0.859428763389587

00:06:14.382 --> 00:06:17.746 people that I was most excited

NOTE Confidence: 0.859428763389587

00:06:17.746 --> 00:06:19.426 to partner with.

NOTE Confidence: 0.859428763389587

00:06:19.430 --> 00:06:20.005 David,

NOTE Confidence: 0.859428763389587

00:06:20.005 --> 00:06:22.880 his essentially written the book

NOTE Confidence: 0.859428763389587

00:06:22.880 --> 00:06:25.480 on portal vein, embolization, and.

NOTE Confidence: 0.859428763389587

00:06:25.480 --> 00:06:27.655 And optimization of the hepatic

NOTE Confidence: 0.859428763389587

00:06:27.655 --> 00:06:30.268 remnant for in preparation for

NOTE Confidence: 0.859428763389587

00:06:30.268 --> 00:06:32.116 complex hepatobiliary surgery,

NOTE Confidence: 0.859428763389587

00:06:32.120 --> 00:06:34.913 he spent much there earlier part of

NOTE Confidence: 0.859428763389587

00:06:34.913 --> 00:06:38.640 his career at the MD Anderson Cancer Center,

NOTE Confidence: 0.859428763389587

00:06:38.640 --> 00:06:41.376 then transitioned back here to the

NOTE Confidence: 0.859428763389587

00:06:41.376 --> 00:06:44.039 East Coast where he's at Cornell

NOTE Confidence: 0.859428763389587

00:06:44.039 --> 00:06:47.039 for a number of years and then more

NOTE Confidence: 0.859428763389587

00:06:47.123 --> 00:06:49.403 recently we've been fortunate to

NOTE Confidence: 0.859428763389587

00:06:49.403 --> 00:06:52.804 recruit him as the vice chair for

NOTE Confidence: 0.859428763389587

00:06:52.804 --> 00:06:55.589 clinical research and the section

NOTE Confidence: 0.859428763389587

00:06:55.589 --> 00:06:58.180 chief of Interventional radiology.

NOTE Confidence: 0.859428763389587

00:06:58.180 --> 00:07:01.057 And I will say kind of quickly.

NOTE Confidence: 0.859428763389587

00:07:01.060 --> 00:07:03.500 Is this side note one of the things

NOTE Confidence: 0.859428763389587

00:07:03.500 --> 00:07:06.733 that I enjoy most about caring for

NOTE Confidence: 0.859428763389587

00:07:06.733 --> 00:07:09.278 patients with colorectal liver metastases?

NOTE Confidence: 0.859428763389587

00:07:09.280 --> 00:07:12.568 Is that it really is a team sport.

NOTE Confidence: 0.859428763389587

00:07:12.570 --> 00:07:14.238 This multidisciplinary grand rounds

NOTE Confidence: 0.859428763389587

00:07:14.238 --> 00:07:17.575 does highlight a number of us who are

NOTE Confidence: 0.859428763389587

00:07:17.575 --> 00:07:19.618 involved from surgery, medical oncology,

NOTE Confidence: 0.859428763389587

00:07:19.618 --> 00:07:20.506 Interventional radiology.

NOTE Confidence: 0.859428763389587

00:07:20.506 --> 00:07:23.540 I do feel little remiss in not

NOTE Confidence: 0.859428763389587

00:07:23.540 --> 00:07:25.626 having some other folks on a panel

NOTE Confidence: 0.859428763389587

00:07:25.626 --> 00:07:27.350 who were important contributors

NOTE Confidence: 0.859428763389587

00:07:27.350 --> 00:07:29.466 such as radiation oncology.

NOTE Confidence: 0.859428763389587

00:07:29.470 --> 00:07:30.964 And other disciplines,

NOTE Confidence: 0.859428763389587

00:07:30.964 --> 00:07:34.450 but I know we'll have other opportunities.

NOTE Confidence: 0.859428763389587

00:07:34.450 --> 00:07:37.446 So this is a very comprehensive field.

NOTE Confidence: 0.859428763389587

00:07:37.450 --> 00:07:40.460 We're not going to cover everything today.

NOTE Confidence: 0.859428763389587

00:07:40.460 --> 00:07:43.600 Our goal is a team is to kind of give

NOTE Confidence: 0.882687389850616

00:07:43.688 --> 00:07:46.363 you some broad brush overviews

NOTE Confidence: 0.882687389850616

00:07:46.363 --> 00:07:49.038 of developments and high points.

NOTE Confidence: 0.882687389850616

00:07:49.040 --> 00:07:50.368 I will be talking.

NOTE Confidence: 0.882687389850616

00:07:50.368 --> 00:07:52.913 I'll be giving an overview and talking

NOTE Confidence: 0.882687389850616

00:07:52.913 --> 00:07:55.318 about some surgical strategies mainly

NOTE Confidence: 0.882687389850616

00:07:55.318 --> 00:07:58.469 focusing on patients with advanced disease.

NOTE Confidence: 0.882687389850616

00:07:58.470 --> 00:08:01.326 Doctor made off will be talking about

NOTE Confidence: 0.882687389850616

00:08:01.326 --> 00:08:04.630 his real area of world class expertise.

NOTE Confidence: 0.882687389850616

00:08:04.630 --> 00:08:07.626 Which is various techniques to optimize the

NOTE Confidence: 0.882687389850616

00:08:07.626 --> 00:08:10.838 liver remnant to support complex resection.

NOTE Confidence: 0.882687389850616

00:08:10.840 --> 00:08:12.864 Role of Interventional radiology

NOTE Confidence: 0.882687389850616

00:08:12.864 --> 00:08:16.516 and Michael will be updating us on

NOTE Confidence: 0.882687389850616

00:08:16.516 --> 00:08:19.166 the numerous advances and systemic

NOTE Confidence: 0.882687389850616

00:08:19.166 --> 00:08:21.286 chemotherapy for the disease.

NOTE Confidence: 0.882687389850616

00:08:21.290 --> 00:08:24.344 Well, the idea of resecting colorectal

NOTE Confidence: 0.882687389850616

00:08:24.344 --> 00:08:26.800 liver metastases is not new.

NOTE Confidence: 0.882687389850616

00:08:26.800 --> 00:08:29.215 You know surgeons have been

NOTE Confidence: 0.882687389850616

00:08:29.215 --> 00:08:32.310 doing this for 40 plus years.

NOTE Confidence: 0.882687389850616

00:08:32.310 --> 00:08:35.268 What is exciting is the developments

NOTE Confidence: 0.882687389850616

00:08:35.268 --> 00:08:38.831 that have been made in the safety

NOTE Confidence: 0.882687389850616

00:08:38.831 --> 00:08:40.328 of these operations.

NOTE Confidence: 0.882687389850616

00:08:40.330 --> 00:08:43.162 The number and variety of technical

NOTE Confidence: 0.882687389850616

00:08:43.162 --> 00:08:46.206 approaches and the slow but steady

NOTE Confidence: 0.882687389850616

00:08:46.206 --> 00:08:48.886 increase in long-term survival that

NOTE Confidence: 0.882687389850616

00:08:48.886 --> 00:08:51.939 patients enjoy after these procedures.

NOTE Confidence: 0.882687389850616

00:08:51.940 --> 00:08:54.514 Why would we focus on aggressive

NOTE Confidence: 0.882687389850616

00:08:54.514 --> 00:08:56.820 liver directed therapy for this

NOTE Confidence: 0.882687389850616

00:08:56.820 --> 00:08:58.856 patient with liver metastases?

NOTE Confidence: 0.882687389850616

00:08:58.860 --> 00:08:59.320 Well,

NOTE Confidence: 0.882687389850616

00:08:59.320 --> 00:09:01.620 as many of you understand,

NOTE Confidence: 0.882687389850616

00:09:01.620 --> 00:09:04.100 the liver disease in metastatic

NOTE Confidence: 0.882687389850616

00:09:04.100 --> 00:09:06.580 colorectal cancer often serves as

NOTE Confidence: 0.882687389850616

00:09:06.662 --> 00:09:09.224 as the main source of Morbidity

NOTE Confidence: 0.882687389850616

00:09:09.224 --> 00:09:11.894 and mortality and affect the driver

NOTE Confidence: 0.882687389850616

00:09:11.894 --> 00:09:14.528 demise for folks with this disease.

NOTE Confidence: 0.882687389850616

00:09:14.530 --> 00:09:18.218 And this occurs through a number of pathways.

NOTE Confidence: 0.882687389850616

00:09:18.220 --> 00:09:20.535 Patients with bulky disease can

NOTE Confidence: 0.882687389850616

00:09:20.535 --> 00:09:22.850 experience liver failure more commonly.

NOTE Confidence: 0.882687389850616

00:09:22.850 --> 00:09:25.575 They suffer from progressive biliary

NOTE Confidence: 0.882687389850616

00:09:25.575 --> 00:09:27.755 obstruction which is understandable,

NOTE Confidence: 0.882687389850616

00:09:27.760 --> 00:09:28.306 untreatable,

NOTE Confidence: 0.882687389850616

00:09:28.306 --> 00:09:32.128 and once this occurs an they're jaundice,

NOTE Confidence: 0.882687389850616

00:09:32.130 --> 00:09:34.870 it is very difficult to.

NOTE Confidence: 0.882687389850616

00:09:34.870 --> 00:09:36.490 Provide ongoing effective

NOTE Confidence: 0.882687389850616

00:09:36.490 --> 00:09:37.570 systemic chemotherapy,

NOTE Confidence: 0.882687389850616

00:09:37.570 --> 00:09:43.213 and it leads to kind of a downhill spiral.

NOTE Confidence: 0.882687389850616

00:09:43.220 --> 00:09:48.180 The good news is that from multiple currents.

NOTE Confidence: 0.882687389850616

00:09:48.180 --> 00:09:51.090 Case series we know that complete

NOTE Confidence: 0.882687389850616

00:09:51.090 --> 00:09:53.555 resection of colorectal liver metastases

NOTE Confidence: 0.882687389850616

00:09:53.555 --> 00:09:56.628 patients can enjoy up to and sometimes

NOTE Confidence: 0.882687389850616

00:09:56.628 --> 00:09:59.652 more of 50% five year survival rate,

NOTE Confidence: 0.882687389850616

00:09:59.652 --> 00:10:01.950 yet, there remain significant challenges.

NOTE Confidence: 0.882687389850616

00:10:01.950 --> 00:10:02.410 Roughly,

NOTE Confidence: 0.882687389850616

00:10:02.410 --> 00:10:05.146 only 20% of patients with this

NOTE Confidence: 0.882687389850616

00:10:05.146 --> 00:10:07.495 disease process are resectable at

NOTE Confidence: 0.882687389850616

00:10:07.495 --> 00:10:09.287 the time that presentation,

NOTE Confidence: 0.882687389850616

00:10:09.290 --> 00:10:11.590 and even with aggressive surgical

NOTE Confidence: 0.882687389850616

00:10:11.590 --> 00:10:12.510 therapy recurrence,

NOTE Confidence: 0.882687389850616

00:10:12.510 --> 00:10:13.884 remains frustratingly high.

NOTE Confidence: 0.882687389850616

00:10:13.884 --> 00:10:16.860 Often you know 80% at about

NOTE Confidence: 0.882687389850616

00:10:16.860 --> 00:10:19.140 the five year mark.

NOTE Confidence: 0.882687389850616

00:10:19.140 --> 00:10:21.858 I don't want to steal doctor

NOTE Confidence: 0.882687389850616

00:10:21.858 --> 00:10:23.217 Cecchini's Thunder here,

NOTE Confidence: 0.882687389850616

00:10:23.220 --> 00:10:26.836 and I apologize for stepping on his turf,

NOTE Confidence: 0.882687389850616

00:10:26.840 --> 00:10:29.160 but no self respecting surgical

NOTE Confidence: 0.882687389850616

00:10:29.160 --> 00:10:31.480 oncologist would talk about progress

NOTE Confidence: 0.882687389850616

00:10:31.554 --> 00:10:34.613 in this area without some mention of

NOTE Confidence: 0.882687389850616

00:10:34.613 --> 00:10:36.873 the groundbreaking advances that have

NOTE Confidence: 0.882687389850616

00:10:36.873 --> 00:10:39.068 been made in systemic chemotherapy.

NOTE Confidence: 0.882687389850616

00:10:39.070 --> 00:10:41.788 I think this timeline kind of

NOTE Confidence: 0.882687389850616

00:10:41.788 --> 00:10:43.147 tells the story.

NOTE Confidence: 0.882687389850616

00:10:43.150 --> 00:10:46.314 We've gone from the 5F U era,

NOTE Confidence: 0.882687389850616

00:10:46.320 --> 00:10:49.968 which was the case for many years is.

NOTE Confidence: 0.882687389850616

00:10:49.970 --> 00:10:50.508 Really,

NOTE Confidence: 0.882687389850616

00:10:50.508 --> 00:10:52.660 the only chemotherapeutic option

NOTE Confidence: 0.882687389850616

00:10:52.660 --> 00:10:56.777 in this disease with a 12 to 14

NOTE Confidence: 0.882687389850616

00:10:56.777 --> 00:10:59.441 month median survival to our current

NOTE Confidence: 0.882687389850616

00:10:59.441 --> 00:11:01.859 modern regiments with Folfox,

NOTE Confidence: 0.882687389850616

00:11:01.860 --> 00:11:03.928 Folfiri and increasingly triplet

NOTE Confidence: 0.882687389850616

00:11:03.928 --> 00:11:05.996 chemotherapy or patients even

NOTE Confidence: 0.882687389850616

00:11:05.996 --> 00:11:07.030 without surgery,

NOTE Confidence: 0.882687389850616

00:11:07.030 --> 00:11:11.758 are enjoying survival of 29 plus months so.

NOTE Confidence: 0.882687389850616

00:11:11.760 --> 00:11:13.890 As much as we have,

NOTE Confidence: 0.882687389850616

00:11:13.890 --> 00:11:15.393 surgeons congratulate ourselves

NOTE Confidence: 0.882687389850616

00:11:15.393 --> 00:11:18.399 on our technical wizardry of big

NOTE Confidence: 0.882687389850616

00:11:18.399 --> 00:11:21.364 piece of the progress in the

NOTE Confidence: 0.882687389850616

00:11:21.364 --> 00:11:23.272 background is effective chemotherapy.

NOTE Confidence: 0.882687389850616

00:11:23.280 --> 00:11:27.010 So this is what I is, a surgical oncologist.

NOTE Confidence: 0.882687389850616

00:11:27.010 --> 00:11:29.290 Love to see a patient with

NOTE Confidence: 0.882687389850616

00:11:29.290 --> 00:11:31.039 easily resectable disease,

NOTE Confidence: 0.882687389850616

00:11:31.040 --> 00:11:32.520 limited number of tumors,

NOTE Confidence: 0.882687389850616

00:11:32.520 --> 00:11:34.740 one maybe two tumors that are

NOTE Confidence: 0.882687389850616

00:11:34.811 --> 00:11:37.231 peripherally placed not in close

NOTE Confidence: 0.882687389850616

00:11:37.231 --> 00:11:39.651 proximity to major vascular structures,

NOTE Confidence: 0.882687389850616

00:11:39.660 --> 00:11:42.018 and these folks are amenable to

NOTE Confidence: 0.882687389850616

00:11:42.018 --> 00:11:44.400 an atomic or segmental resection.

NOTE Confidence: 0.882687389850616

00:11:44.400 --> 00:11:46.555 The surgical options for manageing

NOTE Confidence: 0.882687389850616

00:11:46.555 --> 00:11:48.710 folks like this are manifold.

NOTE Confidence: 0.835261046886444

00:11:48.710 --> 00:11:51.296 They can be treated well within

NOTE Confidence: 0.835261046886444

00:11:51.296 --> 00:11:53.522 traditional open operation. Lapre Scopic.

NOTE Confidence: 0.835261046886444

00:11:53.522 --> 00:11:56.784 Liver resection is now in the mainstream,

NOTE Confidence: 0.835261046886444

00:11:56.790 --> 00:11:59.042 and increasingly we're used

NOTE Confidence: 0.835261046886444

00:11:59.042 --> 00:12:01.294 utilizing the robotic platform

NOTE Confidence: 0.835261046886444

00:12:01.294 --> 00:12:04.217 to address some of these tumors.

NOTE Confidence: 0.835261046886444

00:12:04.220 --> 00:12:05.438 Now more commonly,

NOTE Confidence: 0.835261046886444

00:12:05.438 --> 00:12:07.468 what we see particularly at

NOTE Confidence: 0.835261046886444

00:12:07.468 --> 00:12:09.419 large academic medical centers,

NOTE Confidence: 0.835261046886444

00:12:09.420 --> 00:12:12.597 such as we work in our patients who have

NOTE Confidence: 0.835261046886444

00:12:12.597 --> 00:12:15.048 advanced colorectal liver metastases.

NOTE Confidence: 0.835261046886444

00:12:15.050 --> 00:12:18.074 These are patients with multi focal disease.

NOTE Confidence: 0.835261046886444

00:12:18.080 --> 00:12:20.140 Often the diseases bilateral on

NOTE Confidence: 0.835261046886444

00:12:20.140 --> 00:12:23.143 both sides of the liver and often

NOTE Confidence: 0.835261046886444

00:12:23.143 --> 00:12:25.747 their bulky lesions which are in

NOTE Confidence: 0.835261046886444

00:12:25.747 --> 00:12:28.233 close proximity to major vascular

NOTE Confidence: 0.835261046886444

00:12:28.233 --> 00:12:30.285 structures or portal pedicles.

NOTE Confidence: 0.835261046886444

00:12:30.290 --> 00:12:33.122 So I'm going to share the story of

NOTE Confidence: 0.835261046886444

00:12:33.122 --> 00:12:36.767 a 48 year old woman who I treated

NOTE Confidence: 0.835261046886444

00:12:36.767 --> 00:12:39.660 in Portland about eight years ago.

NOTE Confidence: 0.835261046886444

00:12:39.660 --> 00:12:41.360 She presented with bulky,

NOTE Confidence: 0.835261046886444

00:12:41.360 --> 00:12:42.635 complex liver disease,

NOTE Confidence: 0.835261046886444

00:12:42.640 --> 00:12:44.612 Anna sigmoid non obstructed

NOTE Confidence: 0.835261046886444

00:12:44.612 --> 00:12:47.077 sigmoid primary cancer in place.

NOTE Confidence: 0.835261046886444

00:12:47.080 --> 00:12:49.817 So not to dwell on too many

NOTE Confidence: 0.835261046886444

00:12:49.817 --> 00:12:50.599 liver technicalities,

NOTE Confidence: 0.835261046886444

00:12:50.600 --> 00:12:52.973 but she had a high central liver

NOTE Confidence: 0.835261046886444

00:12:52.973 --> 00:12:55.362 lesion in close proximity to the

NOTE Confidence: 0.835261046886444

00:12:55.362 --> 00:12:57.948 vena cava sitting right under the

NOTE Confidence: 0.835261046886444

00:12:57.948 --> 00:13:00.368 confluence of the three hepatic veins.

NOTE Confidence: 0.835261046886444

00:13:00.370 --> 00:13:02.625 Should an additional bulky lesion

NOTE Confidence: 0.835261046886444

00:13:02.625 --> 00:13:05.350 in segment for the liver sitting

NOTE Confidence: 0.835261046886444

00:13:05.350 --> 00:13:08.073 in proximity to one of the pedicles

NOTE Confidence: 0.835261046886444

00:13:08.073 --> 00:13:11.029 in the in the middle hepatic vein?

NOTE Confidence: 0.835261046886444

00:13:11.030 --> 00:13:13.268 And then she had another bulky

NOTE Confidence: 0.835261046886444

00:13:13.268 --> 00:13:15.443 lesion in segment five and six

NOTE Confidence: 0.835261046886444

00:13:15.443 --> 00:13:17.578 on the right side of the liver.

NOTE Confidence: 0.835261046886444

00:13:17.580 --> 00:13:20.412 So this is a perfect segue into the

NOTE Confidence: 0.835261046886444

00:13:20.412 --> 00:13:22.529 need for multidisciplinary multi

NOTE Confidence: 0.835261046886444

00:13:22.529 --> 00:13:25.173 disciplinary strategies to address

NOTE Confidence: 0.835261046886444

00:13:25.173 --> 00:13:28.643 patients like this with advanced

NOTE Confidence: 0.835261046886444

00:13:28.643 --> 00:13:30.878 colorectal liver metastases.

NOTE Confidence: 0.835261046886444

00:13:30.880 --> 00:13:34.592 And I'm going to talk today in my

NOTE Confidence: 0.835261046886444

00:13:34.592 --> 00:13:37.867 section about 3 strategies to to

NOTE Confidence: 0.835261046886444

00:13:37.867 --> 00:13:40.667 approach this group of patients,

NOTE Confidence: 0.835261046886444

00:13:40.670 --> 00:13:43.430 all requiring the integration

NOTE Confidence: 0.835261046886444

00:13:43.430 --> 00:13:45.500 of multiple disciplines.

NOTE Confidence: 0.835261046886444

00:13:45.500 --> 00:13:49.189 Probably the most common is what we

NOTE Confidence: 0.835261046886444

00:13:49.189 --> 00:13:52.030 described is conversion chemotherapy,

NOTE Confidence: 0.835261046886444

00:13:52.030 --> 00:13:55.005 which involves the upfront utilization

NOTE Confidence: 0.835261046886444

00:13:55.005 --> 00:13:56.790 of multiagent chemotherapy.

NOTE Confidence: 0.835261046886444

00:13:56.790 --> 00:13:59.700 Usually oxaliplatin based to downstage

NOTE Confidence: 0.835261046886444

00:13:59.700 --> 00:14:04.050 tumors within the range of respectability.

NOTE Confidence: 0.835261046886444

00:14:04.050 --> 00:14:06.225 Another approach that is increasingly

NOTE Confidence: 0.835261046886444

00:14:06.225 --> 00:14:09.186 used at high volume centers around the

NOTE Confidence: 0.835261046886444

00:14:09.186 --> 00:14:12.026 world is what we call staged habit ectomy.

NOTE Confidence: 0.835261046886444

00:14:12.030 --> 00:14:13.780 This is breaking the surgical

NOTE Confidence: 0.835261046886444

00:14:13.780 --> 00:14:15.530 treatment up into two sessions

NOTE Confidence: 0.835261046886444

00:14:15.591 --> 00:14:17.399 with an intervening procedure

NOTE Confidence: 0.835261046886444

00:14:17.399 --> 00:14:19.207 called portal vein embolization,

NOTE Confidence: 0.835261046886444

00:14:19.210 --> 00:14:21.415 which leads to optimization of

NOTE Confidence: 0.835261046886444

00:14:21.415 --> 00:14:24.310 growth of the plant hepatic remnant.

NOTE Confidence: 0.835261046886444

00:14:24.310 --> 00:14:26.683 And then the last topic I will

NOTE Confidence: 0.835261046886444

00:14:26.683 --> 00:14:28.839 touch on briefly is something that

NOTE Confidence: 0.835261046886444

00:14:28.839 --> 00:14:31.317 many of us around the world are

NOTE Confidence: 0.835261046886444

00:14:31.389 --> 00:14:34.419 starting to do which is complex

NOTE Confidence: 0.835261046886444

00:14:34.419 --> 00:14:35.934 parenchymal sparing receptions,

NOTE Confidence: 0.835261046886444

00:14:35.940 --> 00:14:37.968 which allow simultaneous resection

NOTE Confidence: 0.835261046886444

00:14:37.968 --> 00:14:40.503 of multiple sites of disease.

NOTE Confidence: 0.835261046886444

00:14:40.510 --> 00:14:42.388 So the patient I described did

NOTE Confidence: 0.835261046886444

00:14:42.388 --> 00:14:45.182 go on to have eight cycles of

NOTE Confidence: 0.835261046886444

00:14:45.182 --> 00:14:47.134 Folfox with bevacizumab Avastin,

NOTE Confidence: 0.835261046886444

00:14:47.140 --> 00:14:49.972 and she was in the subset of patients

NOTE Confidence: 0.835261046886444

00:14:49.972 --> 00:14:52.210 who enjoyed a stunning response.

NOTE Confidence: 0.835261046886444

00:14:52.210 --> 00:14:53.770 As you can see,

NOTE Confidence: 0.835261046886444

00:14:53.770 --> 00:14:55.720 the central lesion shrunk dramatically.

NOTE Confidence: 0.835261046886444

00:14:55.720 --> 00:14:59.620 You can start to see some width on the Ivy,

NOTE Confidence: 0.835261046886444

00:14:59.620 --> 00:15:02.446 see a little more space around

NOTE Confidence: 0.835261046886444

00:15:02.446 --> 00:15:04.330 the dip attic veins.

NOTE Confidence: 0.835261046886444

00:15:04.330 --> 00:15:06.195 This lesion is now shrunk

NOTE Confidence: 0.835261046886444

00:15:06.195 --> 00:15:08.060 away from the left portal.

NOTE Confidence: 0.835261046886444

00:15:08.060 --> 00:15:10.436 Pedicle involves the caudate lobe of

NOTE Confidence: 0.835261046886444

00:15:10.436 --> 00:15:13.608 the liver which is a bit of a tricky

NOTE Confidence: 0.835261046886444

00:15:13.608 --> 00:15:16.638 place to operate but now has good clearances.

NOTE Confidence: 0.835261046886444

00:15:16.640 --> 00:15:18.525 The left pedicle segment for

NOTE Confidence: 0.835261046886444

00:15:18.525 --> 00:15:20.033 lesion significantly smaller and

NOTE Confidence: 0.835261046886444

00:15:20.033 --> 00:15:21.860 the right side liver lesion,

NOTE Confidence: 0.835261046886444

00:15:21.860 --> 00:15:22.570 also smaller.

NOTE Confidence: 0.835261046886444

00:15:22.570 --> 00:15:25.410 This allowed us to take her to the

NOTE Confidence: 0.835261046886444

00:15:25.486 --> 00:15:28.516 operating room and one operative setting.

NOTE Confidence: 0.835261046886444

00:15:28.520 --> 00:15:30.458 Treat her with a left hip.

NOTE Confidence: 0.722936868667603

00:15:30.460 --> 00:15:32.952 It ectomy a caudate lobe resection segment

NOTE Confidence: 0.722936868667603

00:15:32.952 --> 00:15:35.577 6 or section in a sigmoid colectomy.

NOTE Confidence: 0.722936868667603

00:15:35.580 --> 00:15:38.682 This was her diseases that appeared

NOTE Confidence: 0.722936868667603

00:15:38.682 --> 00:15:41.266 in the operating room, stomach,

NOTE Confidence: 0.722936868667603

00:15:41.266 --> 00:15:43.846 liver, Gallbladder, and the caudate.

NOTE Confidence: 0.722936868667603

00:15:43.850 --> 00:15:47.010 Lesion shrunken in partially calcified.

NOTE Confidence: 0.722936868667603

00:15:47.010 --> 00:15:50.125 The segment 56 lesion again nice response

NOTE Confidence: 0.722936868667603

00:15:50.125 --> 00:15:52.794 partially calcified and what she wound

NOTE Confidence: 0.722936868667603

00:15:52.794 --> 00:15:55.308 up with his complex bilateral resection,

NOTE Confidence: 0.722936868667603

00:15:55.310 --> 00:15:58.061 but with plenty of good healthy liver

NOTE Confidence: 0.722936868667603

00:15:58.061 --> 00:16:00.783 remnant left and I know everyone

NOTE Confidence: 0.722936868667603

00:16:00.783 --> 00:16:02.739 reports their greatest success.

NOTE Confidence: 0.722936868667603

00:16:02.740 --> 00:16:05.080 What happened with this lady is

NOTE Confidence: 0.722936868667603

00:16:05.080 --> 00:16:08.071 she had a single side of recurrent

NOTE Confidence: 0.722936868667603

00:16:08.071 --> 00:16:11.200 disease about two years after that we

NOTE Confidence: 0.722936868667603

00:16:11.290 --> 00:16:14.026 treated with a little wedge resection

NOTE Confidence: 0.722936868667603

00:16:14.026 --> 00:16:17.251 and she is disease free at last.

NOTE Confidence: 0.722936868667603

00:16:17.251 --> 00:16:20.053 Follow up about 8 years out.

NOTE Confidence: 0.722936868667603

00:16:20.060 --> 00:16:22.406 So what we've learned over the

NOTE Confidence: 0.722936868667603

00:16:22.406 --> 00:16:25.149 years in the French are really led

NOTE Confidence: 0.722936868667603

00:16:25.149 --> 00:16:27.718 the way in this is that patients

NOTE Confidence: 0.722936868667603

00:16:27.801 --> 00:16:30.456 can enjoy even after chemotherapy.

NOTE Confidence: 0.722936868667603

00:16:30.460 --> 00:16:32.956 Conversion can enjoy a very high

NOTE Confidence: 0.722936868667603

00:16:32.956 --> 00:16:34.620 rate of long-term survival.

NOTE Confidence: 0.722936868667603

00:16:34.620 --> 00:16:36.700 This is data from Renee.

NOTE Confidence: 0.722936868667603

00:16:36.700 --> 00:16:39.196 A damn now presented years ago,

NOTE Confidence: 0.722936868667603

00:16:39.200 --> 00:16:40.668 but makes the point.

NOTE Confidence: 0.722936868667603

00:16:40.668 --> 00:16:42.870 They looked at their subset of

NOTE Confidence: 0.722936868667603

00:16:42.950 --> 00:16:45.220 patients from their entire spectrum

NOTE Confidence: 0.722936868667603

00:16:45.220 --> 00:16:48.286 of liver metastases who are respected

NOTE Confidence: 0.722936868667603

00:16:48.286 --> 00:16:50.449 after conversion chemotherapy.

NOTE Confidence: 0.722936868667603

00:16:50.450 --> 00:16:52.982 And although this group of patients

NOTE Confidence: 0.722936868667603

00:16:52.982 --> 00:16:55.231 who were converted to Resectable

NOTE Confidence: 0.722936868667603

00:16:55.231 --> 00:16:58.117 did not enjoy the survival that

NOTE Confidence: 0.722936868667603

00:16:58.117 --> 00:16:59.940 the primary population did,

NOTE Confidence: 0.722936868667603

00:16:59.940 --> 00:17:04.540 33% five year survival in a subset of

NOTE Confidence: 0.722936868667603

00:17:04.540 --> 00:17:07.445 patients extending out into the eight

NOTE Confidence: 0.722936868667603

00:17:07.445 --> 00:17:11.250 to 10 year mark as my patient did.

NOTE Confidence: 0.722936868667603

00:17:11.250 --> 00:17:12.970 I'd only just you.

NOTE Confidence: 0.722936868667603

00:17:12.970 --> 00:17:15.600 While I was there, my partner,

NOTE Confidence: 0.722936868667603

00:17:15.600 --> 00:17:19.240 Sky Mayo and I took a kind of

NOTE Confidence: 0.722936868667603

00:17:19.351 --> 00:17:21.565 a new is old or old.

NOTE Confidence: 0.722936868667603

00:17:21.570 --> 00:17:24.150 Is new approach to kind of

NOTE Confidence: 0.722936868667603

00:17:24.150 --> 00:17:25.440 optimizing this approach.

NOTE Confidence: 0.722936868667603

00:17:25.440 --> 00:17:27.160 We started a hepatic

NOTE Confidence: 0.722936868667603

00:17:27.160 --> 00:17:28.450 arterial infusion program.

NOTE Confidence: 0.722936868667603

00:17:28.450 --> 00:17:30.600 As many of you know,

NOTE Confidence: 0.722936868667603

00:17:30.600 --> 00:17:32.886 this involves the placement of a

NOTE Confidence: 0.722936868667603

00:17:32.886 --> 00:17:34.948 chemotherapy pump in a catheter

NOTE Confidence: 0.722936868667603

00:17:34.948 --> 00:17:37.732 into the hepatic artery to deliver

NOTE Confidence: 0.722936868667603

00:17:37.732 --> 00:17:39.630 focus chemotherapy with the

NOTE Confidence: 0.722936868667603

00:17:39.630 --> 00:17:41.350 aim of converting patients.

NOTE Confidence: 0.722936868667603

00:17:41.350 --> 00:17:43.680 It's a complex operation involves

NOTE Confidence: 0.722936868667603

00:17:43.680 --> 00:17:46.010 dissection of the hepatic artery

NOTE Confidence: 0.722936868667603

00:17:46.088 --> 00:17:49.252 placement at the pump in a subcutaneous

NOTE Confidence: 0.722936868667603

00:17:49.252 --> 00:17:51.179 pocket with installation of FDR.

NOTE Confidence: 0.722936868667603

00:17:51.180 --> 00:17:54.252 We did this in combination with

NOTE Confidence: 0.722936868667603

00:17:54.252 --> 00:17:56.300 systemic chemotherapy with Folfox.

NOTE Confidence: 0.722936868667603

00:17:56.300 --> 00:17:59.359 I'm just going to quickly report these

NOTE Confidence: 0.722936868667603

00:17:59.359 --> 00:18:01.930 results we placed about 27 pumps.

NOTE Confidence: 0.722936868667603

00:18:01.930 --> 00:18:04.528 At this time we analyze data.

NOTE Confidence: 0.722936868667603

00:18:04.530 --> 00:18:07.128 We looked at the 1st 20.

NOTE Confidence: 0.722936868667603

00:18:07.130 --> 00:18:09.340 Two of these pumps, all.

NOTE Confidence: 0.722936868667603

00:18:09.340 --> 00:18:14.980 A subset for unresectable disease.

NOTE Confidence: 0.722936868667603

00:18:14.980 --> 00:18:17.878 Many of these were high risk disease,

NOTE Confidence: 0.722936868667603

00:18:17.880 --> 00:18:20.358 36% with the K Ras mutant.

NOTE Confidence: 0.722936868667603

00:18:20.360 --> 00:18:22.016 All had synchronous disease.

NOTE Confidence: 0.722936868667603

00:18:22.016 --> 00:18:24.086 All had multiple liver lesions.

NOTE Confidence: 0.722936868667603

00:18:24.090 --> 00:18:27.695 The point relate relative to this talk

NOTE Confidence: 0.722936868667603

00:18:27.695 --> 00:18:31.420 that I'd like to point out is that.

NOTE Confidence: 0.722936868667603

00:18:31.420 --> 00:18:33.982 Of the 13 patients that we were

NOTE Confidence: 0.722936868667603

00:18:33.982 --> 00:18:36.499 aiming to convert to respectability,

NOTE Confidence: 0.722936868667603

00:18:36.500 --> 00:18:38.810 a subset we were able to eventually

NOTE Confidence: 0.722936868667603

00:18:38.810 --> 00:18:41.511 get to the operating room with

NOTE Confidence: 0.722936868667603

00:18:41.511 --> 00:18:43.687 very extensive bilateral disease,

NOTE Confidence: 0.722936868667603

00:18:43.690 --> 00:18:46.504 so this is yet another kind of

NOTE Confidence: 0.722936868667603

00:18:46.504 --> 00:18:48.234 regional chemotherapy strategy to

NOTE Confidence: 0.722936868667603

00:18:48.234 --> 00:18:50.030 convert patients to Resectable.

NOTE Confidence: 0.722936868667603

00:18:50.030 --> 00:18:52.315 Another approach that is done

NOTE Confidence: 0.722936868667603

00:18:52.315 --> 00:18:54.600 throughout the world that is

NOTE Confidence: 0.722936868667603

00:18:54.685 --> 00:18:56.735 facilitated by David's work is

NOTE Confidence: 0.722936868667603

00:18:56.735 --> 00:18:59.339 a two stage HEPA tech to me.

NOTE Confidence: 0.722936868667603

00:18:59.340 --> 00:19:02.220 This is for patients with complex.

NOTE Confidence: 0.722936868667603

00:19:02.220 --> 00:19:02.860 Lateral disease,

NOTE Confidence: 0.722936868667603

00:19:02.860 --> 00:19:05.420 they go to the operating room in one

NOTE Confidence: 0.722936868667603

00:19:05.481 --> 00:19:07.617 session and either have reception of

NOTE Confidence: 0.722936868667603

00:19:07.617 --> 00:19:09.829 the left liver disease or ablation.

NOTE Confidence: 0.722936868667603

00:19:09.830 --> 00:19:12.598 Then they go on to portal vein embolization,

NOTE Confidence: 0.722936868667603

00:19:12.600 --> 00:19:14.310 which leads to hypertrophy of

NOTE Confidence: 0.722936868667603

00:19:14.310 --> 00:19:16.020 the left liver and the

NOTE Confidence: 0.855382919311523

00:19:16.090 --> 00:19:18.065 remainder of the disease is

NOTE Confidence: 0.855382919311523

00:19:18.065 --> 00:19:20.040 respected in a second operation.

NOTE Confidence: 0.855382919311523

00:19:20.040 --> 00:19:23.113 And this is a strategy that allows

NOTE Confidence: 0.855382919311523

00:19:23.113 --> 00:19:27.528 us to treat what can be otherwise

NOTE Confidence: 0.855382919311523

00:19:27.528 --> 00:19:29.778 completely unrespectable disease.

NOTE Confidence: 0.855382919311523

00:19:29.780 --> 00:19:32.062 So series from around the world to

NOTE Confidence: 0.855382919311523

00:19:32.062 --> 00:19:33.971 demonstrate that even for patients

NOTE Confidence: 0.855382919311523

00:19:33.971 --> 00:19:35.715 with advanced bilateral disease,

NOTE Confidence: 0.855382919311523

00:19:35.720 --> 00:19:38.680 if we can complete the two stage resection,

NOTE Confidence: 0.855382919311523

00:19:38.680 --> 00:19:40.535 we can provide patients with

NOTE Confidence: 0.855382919311523

00:19:40.535 --> 00:19:41.648 excellent long-term survival.

NOTE Confidence: 0.855382919311523

00:19:41.650 --> 00:19:44.290 There is always going to be a subset

NOTE Confidence: 0.855382919311523

00:19:44.290 --> 00:19:47.078 of patients who dropped out due to

NOTE Confidence: 0.855382919311523

00:19:47.078 --> 00:19:48.726 progression between the operations

NOTE Confidence: 0.855382919311523

00:19:48.726 --> 00:19:50.926 or in the course of therapy.

NOTE Confidence: 0.855382919311523

00:19:50.930 --> 00:19:51.670 And unfortunately,

NOTE Confidence: 0.855382919311523

00:19:51.670 --> 00:19:53.520 those folks don't do well,

NOTE Confidence: 0.855382919311523

00:19:53.520 --> 00:19:56.460 but this is a great strategy to

NOTE Confidence: 0.855382919311523

00:19:56.460 --> 00:19:59.520 get patients to the operating room.

NOTE Confidence: 0.855382919311523

00:19:59.520 --> 00:20:01.800 One of the things that I in a

NOTE Confidence: 0.855382919311523

00:20:01.800 --> 00:20:03.667 number of other surgeons that

NOTE Confidence: 0.855382919311523

00:20:03.667 --> 00:20:06.103 started to do in recent years,

NOTE Confidence: 0.855382919311523

00:20:06.110 --> 00:20:08.160 is exploit the concept of

NOTE Confidence: 0.855382919311523

00:20:08.160 --> 00:20:09.800 the R1 Vascular margin.

NOTE Confidence: 0.855382919311523

00:20:09.800 --> 00:20:12.560 This is related to the fact that there

NOTE Confidence: 0.855382919311523

00:20:12.560 --> 00:20:15.307 is going to be a subset of patients

NOTE Confidence: 0.855382919311523

00:20:15.307 --> 00:20:17.873 like this who have bulky tumors and

NOTE Confidence: 0.855382919311523

00:20:17.873 --> 00:20:20.207 the diseases in close proximity to

NOTE Confidence: 0.855382919311523

00:20:20.207 --> 00:20:22.400 a major vein or poorly pedicle.

NOTE Confidence: 0.855382919311523

00:20:22.400 --> 00:20:25.172 But it is possible if you can get a

NOTE Confidence: 0.855382919311523

00:20:25.172 --> 00:20:27.258 wide resection margin on the rest

NOTE Confidence: 0.855382919311523

00:20:27.258 --> 00:20:30.282 of it and get a very narrow margin

NOTE Confidence: 0.855382919311523

00:20:30.282 --> 00:20:33.194 that's positive only on the vein to

NOTE Confidence: 0.855382919311523

00:20:33.200 --> 00:20:34.900 get excellent local Disease Control

NOTE Confidence: 0.855382919311523

00:20:34.900 --> 00:20:38.090 in that part of the liver and still

NOTE Confidence: 0.855382919311523

00:20:38.090 --> 00:20:39.994 preserve significant liver parenchyma.

NOTE Confidence: 0.855382919311523

00:20:40.000 --> 00:20:42.000 My Friend Doctor Guido Tort

NOTE Confidence: 0.855382919311523

00:20:42.000 --> 00:20:44.465 Caelian Milano has been kind of

NOTE Confidence: 0.855382919311523

00:20:44.465 --> 00:20:46.430 the primary proponent of this,

NOTE Confidence: 0.855382919311523

00:20:46.430 --> 00:20:49.414 and I think that this is a strategy

NOTE Confidence: 0.855382919311523

00:20:49.414 --> 00:20:52.227 that is gaining traction and many

NOTE Confidence: 0.855382919311523

00:20:52.227 --> 00:20:55.191 HP be centers around the world.

NOTE Confidence: 0.855382919311523

00:20:55.200 --> 00:20:58.434 Guido and his team have reported their

NOTE Confidence: 0.855382919311523

00:20:58.434 --> 00:21:01.433 experience and one of the things that

NOTE Confidence: 0.855382919311523

00:21:01.433 --> 00:21:04.328 I think his striking is that patients

NOTE Confidence: 0.855382919311523

00:21:04.328 --> 00:21:07.460 who have you compare their survival.

NOTE Confidence: 0.855382919311523

00:21:07.460 --> 00:21:10.344 When you compare R0 resection with R1

NOTE Confidence: 0.855382919311523

00:21:10.344 --> 00:21:12.910 resection from the liver parenchyma,

NOTE Confidence: 0.855382919311523

00:21:12.910 --> 00:21:15.180 there's clearly decrement in survival.

NOTE Confidence: 0.855382919311523

00:21:15.180 --> 00:21:15.624 However,

NOTE Confidence: 0.855382919311523

00:21:15.624 --> 00:21:18.732 the group that have an R1 margin

NOTE Confidence: 0.855382919311523

00:21:18.732 --> 00:21:21.990 only on a vessel have a survival.

NOTE Confidence: 0.855382919311523

00:21:21.990 --> 00:21:24.695 It is virtually identical to

NOTE Confidence: 0.855382919311523

00:21:24.695 --> 00:21:27.400 those that are R0 resection.

NOTE Confidence: 0.855382919311523

00:21:27.400 --> 00:21:29.984 I think that this is a great example

NOTE Confidence: 0.855382919311523

00:21:29.984 --> 00:21:33.745 of a theme that we see across surgical

NOTE Confidence: 0.855382919311523

00:21:33.745 --> 00:21:36.949 oncology and multiple diseases breast cancer.

NOTE Confidence: 0.855382919311523

00:21:36.950 --> 00:21:39.068 The most notable here where we

NOTE Confidence: 0.855382919311523

00:21:39.068 --> 00:21:42.221 overtime have gone to a multi modality

NOTE Confidence: 0.855382919311523

00:21:42.221 --> 00:21:43.886 approach involving chemotherapy,

NOTE Confidence: 0.855382919311523

00:21:43.890 --> 00:21:45.980 radiation and much more limited

NOTE Confidence: 0.855382919311523

00:21:45.980 --> 00:21:48.070 surgery going from radical mastectomy

NOTE Confidence: 0.855382919311523

00:21:48.135 --> 00:21:49.530 to breast conservation.

NOTE Confidence: 0.855382919311523

00:21:49.530 --> 00:21:52.512 Now moving towards even eliminate ING the

NOTE Confidence: 0.855382919311523

00:21:52.512 --> 00:21:55.607 axle airy component of breast cancer surgery.

NOTE Confidence: 0.855382919311523

00:21:55.610 --> 00:21:57.840 Same in head and neck.

NOTE Confidence: 0.855382919311523

00:21:57.840 --> 00:21:58.812 Laryngeal preservation,

NOTE Confidence: 0.855382919311523

00:21:58.812 --> 00:22:00.756 possibly preservation of the

NOTE Confidence: 0.855382919311523

00:22:00.756 --> 00:22:02.700 rectum in Rectal carcinomas.

NOTE Confidence: 0.855382919311523

00:22:02.700 --> 00:22:04.644 Sarcomas off ajil cancer.

NOTE Confidence: 0.855382919311523

00:22:04.644 --> 00:22:06.588 The theme is consistent

NOTE Confidence: 0.855382919311523

00:22:06.588 --> 00:22:07.560 throughout integration.

NOTE Confidence: 0.855382919311523

00:22:07.560 --> 00:22:09.504 Multi modality therapy allows

NOTE Confidence: 0.855382919311523

00:22:09.504 --> 00:22:11.448 a more conservative operation,

NOTE Confidence: 0.855382919311523

00:22:11.450 --> 00:22:14.732 and I think we're getting there

NOTE Confidence: 0.855382919311523

00:22:14.732 --> 00:22:16.373 and liver cancer.

NOTE Confidence: 0.855382919311523

00:22:16.380 --> 00:22:18.748 This was one of my cases from Portland,

NOTE Confidence: 0.855382919311523

00:22:18.750 --> 00:22:19.930 not a great picture,

NOTE Confidence: 0.855382919311523

00:22:19.930 --> 00:22:22.300 but a patient who I took care of.

NOTE Confidence: 0.855382919311523

00:22:22.300 --> 00:22:23.956 You had multifocal disease in the

NOTE Confidence: 0.855382919311523

00:22:23.956 --> 00:22:26.058 upper part of the right side of

NOTE Confidence: 0.855382919311523

00:22:26.058 --> 00:22:27.942 the liver and left liver requiring

NOTE Confidence: 0.855382919311523

00:22:27.942 --> 00:22:29.745 reception down on to the hepatic

NOTE Confidence: 0.855382919311523

00:22:29.745 --> 00:22:31.180 veins and right point medical.

NOTE Confidence: 0.855382919311523

00:22:31.180 --> 00:22:33.835 Kind of a wedge resection on the left side,

NOTE Confidence: 0.855382919311523

00:22:33.840 --> 00:22:37.467 all able to do this in a single operation.

NOTE Confidence: 0.855382919311523

00:22:37.470 --> 00:22:39.115 The greatest thing about this

NOTE Confidence: 0.855382919311523

00:22:39.115 --> 00:22:40.760 is that all of these

NOTE Confidence: 0.871058881282806

00:22:40.833 --> 00:22:43.798 strategies do require multidisciplinary care.

NOTE Confidence: 0.871058881282806

00:22:43.800 --> 00:22:46.971 An integration, as I take off my

NOTE Confidence: 0.871058881282806

00:22:46.971 --> 00:22:50.129 surgeon hat and put on my CMO hat,

NOTE Confidence: 0.871058881282806

00:22:50.130 --> 00:22:52.470 all of these strategies come together

NOTE Confidence: 0.871058881282806

00:22:52.470 --> 00:22:55.553 in the fact that our aim at the

NOTE Confidence: 0.871058881282806

00:22:55.553 --> 00:22:57.719 Yale Cancer Center through both our

NOTE Confidence: 0.871058881282806

00:22:57.798 --> 00:23:00.792 care signature effort as well as

NOTE Confidence: 0.871058881282806

00:23:00.792 --> 00:23:02.788 our multidisciplinary disease teams,

NOTE Confidence: 0.871058881282806

00:23:02.790 --> 00:23:05.541 is to create a wrap around set

NOTE Confidence: 0.871058881282806

00:23:05.541 --> 00:23:07.920 of services for our patients.

NOTE Confidence: 0.871058881282806

00:23:07.920 --> 00:23:10.699 As I mentioned, it's not just liver

NOTE Confidence: 0.871058881282806

00:23:10.699 --> 00:23:12.620 surgery and medical oncology.

NOTE Confidence: 0.871058881282806

00:23:12.620 --> 00:23:13.904 An Interventional radiology.

NOTE Confidence: 0.871058881282806

00:23:13.904 --> 00:23:16.472 We need to coordinate care for

NOTE Confidence: 0.871058881282806

00:23:16.472 --> 00:23:18.169 many of these patients,

NOTE Confidence: 0.871058881282806

00:23:18.170 --> 00:23:19.448 including radiation therapy.

NOTE Confidence: 0.871058881282806

00:23:19.448 --> 00:23:21.584 Image Ng, including nuclear medicine.

NOTE Confidence: 0.871058881282806

00:23:21.584 --> 00:23:23.292 Of course, oncology, nursing,

NOTE Confidence: 0.871058881282806

00:23:23.292 --> 00:23:24.570 pathology, social work,

NOTE Confidence: 0.871058881282806

00:23:24.570 --> 00:23:26.695 our colleagues in colorectal cancer

NOTE Confidence: 0.871058881282806

00:23:26.695 --> 00:23:29.700 surgery need to be involved in genetics,

NOTE Confidence: 0.871058881282806

00:23:29.700 --> 00:23:32.256 and I think that's the promise.

NOTE Confidence: 0.871058881282806

00:23:32.260 --> 00:23:34.816 An fun of what we're doing,

NOTE Confidence: 0.871058881282806

00:23:34.820 --> 00:23:37.795 so I'd like to hand off now

NOTE Confidence: 0.871058881282806

00:23:37.795 --> 00:23:39.580 to doctor made off.

NOTE Confidence: 0.871058881282806

00:23:39.580 --> 00:23:40.369 Thank you David.

NOTE Confidence: 0.912310719490051

00:23:42.690 --> 00:23:43.878 I guess I need

NOTE Confidence: 0.900341939926147

00:23:43.880 --> 00:23:46.040 to stop my screen. Share

NOTE Confidence: 0.852466821670532

00:23:46.040 --> 00:23:47.060 my screen here.

NOTE Confidence: 0.788426756858826

00:23:47.760 --> 00:23:54.440 And.

NOTE Confidence: 0.904296815395355

00:23:57.470 --> 00:24:00.498 OK, so can you can

NOTE Confidence: 0.904296815395355

00:24:00.500 --> 00:24:02.920 you will hear me.

NOTE Confidence: 0.923315286636353

00:24:05.810 --> 00:24:08.600 Yes, we can hear you. So what I would

NOTE Confidence: 0.832684814929962

00:24:08.600 --> 00:24:10.826 first like to thank Charlie and Kevin,

NOTE Confidence: 0.832684814929962

00:24:10.830 --> 00:24:13.302 as well as my for giving me the

NOTE Confidence: 0.832684814929962

00:24:13.302 --> 00:24:15.274 opportunity today to speak at the

NOTE Confidence: 0.832684814929962

00:24:15.274 --> 00:24:16.884 El Cancer Center grand rounds.

NOTE Confidence: 0.832684814929962

00:24:16.890 --> 00:24:17.978 As you may recall,

NOTE Confidence: 0.832684814929962

00:24:17.978 --> 00:24:19.610 I didn't discuss this topic of

NOTE Confidence: 0.832684814929962

00:24:19.675 --> 00:24:21.680 liver regeneration in last December,

NOTE Confidence: 0.832684814929962

00:24:21.680 --> 00:24:23.824 but today I will be focusing on how

NOTE Confidence: 0.832684814929962

00:24:23.824 --> 00:24:25.436 these techniques relate to optimizing

NOTE Confidence: 0.832684814929962

00:24:25.436 --> 00:24:27.136 the anticipated future liver remnant

NOTE Confidence: 0.832684814929962

00:24:27.136 --> 00:24:29.008 prior to resection in patients,

NOTE Confidence: 0.832684814929962

00:24:29.010 --> 00:24:30.930 really with only colorectal liver metastases.

NOTE Confidence: 0.832684814929962

00:24:30.930 --> 00:24:33.720 Very happy to be here in terms of the

NOTE Confidence: 0.832684814929962

00:24:33.720 --> 00:24:36.030 fact that this is, like Kevin said,

NOTE Confidence: 0.832684814929962

00:24:36.030 --> 00:24:37.950 this is really in my life's.

NOTE Confidence: 0.832684814929962

00:24:37.950 --> 00:24:40.962 Work and passion and having the

NOTE Confidence: 0.832684814929962

00:24:40.962 --> 00:24:45.570 opportunity is for me very, very nice.

NOTE Confidence: 0.832684814929962

00:24:45.570 --> 00:24:50.190 So. As you just heard from Kevin,

NOTE Confidence: 0.832684814929962

00:24:50.190 --> 00:24:51.490 there have been tremendous

NOTE Confidence: 0.832684814929962

00:24:51.490 --> 00:24:52.790 advances and Pat ability.

NOTE Confidence: 0.832684814929962

00:24:52.790 --> 00:24:53.765 Every surgical techniques,

NOTE Confidence: 0.832684814929962

00:24:53.765 --> 00:24:56.040 such that death is now considered rare.

NOTE Confidence: 0.832684814929962

00:24:56.040 --> 00:24:56.365 However,

NOTE Confidence: 0.832684814929962

00:24:56.365 --> 00:24:57.990 complications such as fluid retention,

NOTE Confidence: 0.832684814929962

00:24:57.990 --> 00:24:58.626 Cola stasis,

NOTE Confidence: 0.832684814929962

00:24:58.626 --> 00:25:00.216 an impaired synthetic function still

NOTE Confidence: 0.832684814929962

00:25:00.216 --> 00:25:01.890 contribute to prolong recovery times.

NOTE Confidence: 0.832684814929962

00:25:01.890 --> 00:25:03.218 An extended hospital stays.

NOTE Confidence: 0.832684814929962

00:25:03.218 --> 00:25:04.546 This is particularly true

NOTE Confidence: 0.832684814929962

00:25:04.546 --> 00:25:05.790 instead of an extent,

NOTE Confidence: 0.832684814929962

00:25:05.790 --> 00:25:08.390 but did have a tech to me where 5 or

NOTE Confidence: 0.832684814929962

00:25:08.462 --> 00:25:10.988 more per node segments are removed,

NOTE Confidence: 0.832684814929962

00:25:10.990 --> 00:25:11.965 and in fact,

NOTE Confidence: 0.832684814929962

00:25:11.965 --> 00:25:13.265 as you can see,

NOTE Confidence: 0.832684814929962

00:25:13.270 --> 00:25:15.430 the mortality in this setting

NOTE Confidence: 0.832684814929962

00:25:15.430 --> 00:25:17.590 can approach 8 to 10%.

NOTE Confidence: 0.832684814929962

00:25:17.590 --> 00:25:20.446 This can be seen from this French study.

NOTE Confidence: 0.832684814929962

00:25:20.450 --> 00:25:22.485 There is direct correlation between

NOTE Confidence: 0.832684814929962

00:25:22.485 --> 00:25:24.520 the number of overall complications

NOTE Confidence: 0.832684814929962

00:25:24.587 --> 00:25:26.540 and the size of the liver remnant,

NOTE Confidence: 0.832684814929962

00:25:26.540 --> 00:25:28.860 and this is not in regards to the

NOTE Confidence: 0.832684814929962

00:25:28.860 --> 00:25:31.188 severity of the overall complications,

NOTE Confidence: 0.832684814929962

00:25:31.190 --> 00:25:33.956 but really only the complication rate.

NOTE Confidence: 0.832684814929962

00:25:33.960 --> 00:25:36.243 So at this time there's really

NOTE Confidence: 0.832684814929962

00:25:36.243 --> 00:25:38.910 no limit to how smaller liver in.

NOTE Confidence: 0.803383648395538

00:25:47.180 --> 00:25:50.628 In order to reduce the morbidity of Petra

NOTE Confidence: 0.803383648395538

00:25:50.628 --> 00:25:53.601 section at least 20% mushrooming in patients

NOTE Confidence: 0.803383648395538

00:25:53.601 --> 00:25:56.163 with normal underlying liver that is.

NOTE Confidence: 0.803383648395538

00:25:56.170 --> 00:25:58.492 For example, patients that have colon

NOTE Confidence: 0.803383648395538

00:25:58.492 --> 00:26:01.539 cancer Mets to the liver without ever

NOTE Confidence: 0.803383648395538

00:26:01.539 --> 00:26:04.210 having touch chemotherapy 30% in injured

NOTE Confidence: 0.803383648395538

00:26:04.210 --> 00:26:07.290 liver such as those that have had extensive

NOTE Confidence: 0.803383648395538

00:26:07.364 --> 00:26:09.799 chemotherapy or Seattle hepatitis and

NOTE Confidence: 0.803383648395538

00:26:09.799 --> 00:26:12.430 40% in those with underlying cirrhosis.

NOTE Confidence: 0.803383648395538

00:26:12.430 --> 00:26:14.525 So there's many preoperative strategies

NOTE Confidence: 0.803383648395538

00:26:14.525 --> 00:26:17.610 to prepare the liver for resection and.

NOTE Confidence: 0.803383648395538

00:26:17.610 --> 00:26:19.206 These include Portland Embolization,

NOTE Confidence: 0.803383648395538

00:26:19.206 --> 00:26:20.802 which was briefly discussed

NOTE Confidence: 0.803383648395538

00:26:20.802 --> 00:26:22.760 by Kevin radiation lobectomy.

NOTE Confidence: 0.803383648395538

00:26:22.760 --> 00:26:25.280 There's an apps procedure that will

NOTE Confidence: 0.803383648395538

00:26:25.280 --> 00:26:28.365 get into briefly and also something

NOTE Confidence: 0.803383648395538

00:26:28.365 --> 00:26:30.348 called liberties deprivation.

NOTE Confidence: 0.803383648395538

00:26:30.350 --> 00:26:31.719 Support and embolization is

NOTE Confidence: 0.803383648395538

00:26:31.719 --> 00:26:32.748 the original strategy,

NOTE Confidence: 0.803383648395538

00:26:32.750 --> 00:26:34.590 first described by professional recruiters

NOTE Confidence: 0.803383648395538

00:26:34.590 --> 00:26:37.210 group from the University of Tokyo in 1990.

NOTE Confidence: 0.803383648395538

00:26:37.210 --> 00:26:39.506 It's been used to redirect portal blood

NOTE Confidence: 0.803383648395538

00:26:39.506 --> 00:26:42.357 flow to the future liver remnant or FLR,

NOTE Confidence: 0.803383648395538

00:26:42.360 --> 00:26:43.656 and by doing so,

NOTE Confidence: 0.803383648395538

00:26:43.656 --> 00:26:45.600 initiate hypertrophy of the non embolized

NOTE Confidence: 0.803383648395538

00:26:45.660 --> 00:26:47.940 segments and by doing this we can reduce

NOTE Confidence: 0.803383648395538

00:26:47.940 --> 00:26:49.792 the number of overall perioperative

NOTE Confidence: 0.803383648395538

00:26:49.792 --> 00:26:51.832 complications and increase the pool

NOTE Confidence: 0.803383648395538

00:26:51.832 --> 00:26:53.649 of potential surgical candidates who

NOTE Confidence: 0.803383648395538

00:26:53.649 --> 00:26:55.647 have what we call marginal anticipated

NOTE Confidence: 0.803383648395538

00:26:55.647 --> 00:26:57.098 future liver remnant volumes.

NOTE Confidence: 0.803383648395538

00:26:57.100 --> 00:26:59.270 Please note that the goal is really

NOTE Confidence: 0.803383648395538

00:26:59.270 --> 00:27:01.422 not to improve the overall survival

NOTE Confidence: 0.803383648395538

00:27:01.422 --> 00:27:03.347 after resection is compared to

NOTE Confidence: 0.803383648395538

00:27:03.347 --> 00:27:05.360 those that did not require PV.

NOTE Confidence: 0.803383648395538

00:27:05.360 --> 00:27:07.634 It's just really to achieve similar

NOTE Confidence: 0.803383648395538

00:27:07.634 --> 00:27:09.616 survival rates to those patients

NOTE Confidence: 0.803383648395538

00:27:09.616 --> 00:27:11.596 who want to undergo surgery.

NOTE Confidence: 0.803383648395538

00:27:11.600 --> 00:27:13.550 It did not actually require

NOTE Confidence: 0.803383648395538

00:27:13.550 --> 00:27:15.500 PV an ultimate until recently.

NOTE Confidence: 0.803383648395538

00:27:15.500 --> 00:27:18.620 The general consensus was the PV was the

NOTE Confidence: 0.803383648395538

00:27:18.620 --> 00:27:21.350 standard of care at most had ability,

NOTE Confidence: 0.803383648395538

00:27:21.350 --> 00:27:23.290 every centers worldwide or safe

NOTE Confidence: 0.803383648395538

00:27:23.290 --> 00:27:24.842 and effective generate generation

NOTE Confidence: 0.803383648395538

00:27:24.842 --> 00:27:27.336 or generation of the FLR.

NOTE Confidence: 0.803383648395538

00:27:27.336 --> 00:27:29.958 It's now been over a decade since

NOTE Confidence: 0.803383648395538

00:27:29.958 --> 00:27:32.048 the first meta analysis of usefulness

NOTE Confidence: 0.803383648395538

00:27:32.048 --> 00:27:33.476 of PV was published,

NOTE Confidence: 0.803383648395538

00:27:33.480 --> 00:27:36.096 and in this study they would do 37

NOTE Confidence: 0.803383648395538

00:27:36.096 --> 00:27:37.814 publications with over 1000 patients

NOTE Confidence: 0.803383648395538

00:27:37.814 --> 00:27:40.145 and found a previous states with a

NOTE Confidence: 0.803383648395538

00:27:40.212 --> 00:27:42.059 low mortality and morbidity rate.

NOTE Confidence: 0.803383648395538

00:27:42.060 --> 00:27:42.363 Further,

NOTE Confidence: 0.803383648395538

00:27:42.363 --> 00:27:44.484 85% of the patients were able to

NOTE Confidence: 0.803383648395538

00:27:44.484 --> 00:27:46.169 get their proposed surgery.

NOTE Confidence: 0.803383648395538

00:27:46.170 --> 00:27:46.452 However,

NOTE Confidence: 0.803383648395538

00:27:46.452 --> 00:27:48.708 as you can see down here is that

NOTE Confidence: 0.803383648395538

00:27:48.708 --> 00:27:50.833 there was a substantial group of

NOTE Confidence: 0.803383648395538

00:27:50.833 --> 00:27:52.608 patients that were not respected

NOTE Confidence: 0.803383648395538

00:27:52.669 --> 00:27:55.322 and this was due mostly to disease

NOTE Confidence: 0.803383648395538

00:27:55.322 --> 00:27:56.459 progression or insufficient.

NOTE Confidence: 0.803383648395538

00:27:56.460 --> 00:27:59.088 I purchased it.

NOTE Confidence: 0.803383648395538

00:27:59.090 --> 00:28:01.442 I stated previously the goal of PV

NOTE Confidence: 0.803383648395538

00:28:01.442 --> 00:28:03.673 in the setting of colorectal cancer

NOTE Confidence: 0.803383648395538

00:28:03.673 --> 00:28:06.361 is to get similar survival rates to

NOTE Confidence: 0.803383648395538

00:28:06.431 --> 00:28:08.965 those patients who do not require PV.

NOTE Confidence: 0.803383648395538

00:28:08.970 --> 00:28:11.166 Here we see two actually French

NOTE Confidence: 0.803383648395538

00:28:11.166 --> 00:28:12.630 studies and pretty old.

NOTE Confidence: 0.803383648395538

00:28:12.630 --> 00:28:14.350 There actually showed where

NOTE Confidence: 0.803383648395538

00:28:14.350 --> 00:28:16.500 these outcomes were born out.

NOTE Confidence: 0.803383648395538

00:28:16.500 --> 00:28:18.905 Now PV E not only causes the

NOTE Confidence: 0.803383648395538

00:28:18.905 --> 00:28:19.934 Liberty purchase fee,

NOTE Confidence: 0.803383648395538

00:28:19.940 --> 00:28:21.776 but it also results in improved

NOTE Confidence: 0.803383648395538

00:28:21.776 --> 00:28:24.068 function of the FLR and this has

NOTE Confidence: 0.803383648395538

00:28:24.068 --> 00:28:25.748 been shown by nuclear medicine

NOTE Confidence: 0.803383648395538

00:28:25.748 --> 00:28:27.614 studies with alobar function shifted

NOTE Confidence: 0.803383648395538

00:28:27.614 --> 00:28:29.882 from the embolized than an embolism

NOTE Confidence: 0.803383648395538

00:28:29.882 --> 00:28:31.980 for after tbe further in patients

NOTE Confidence: 0.803383648395538

00:28:31.980 --> 00:28:33.356 with Hilar Cholangio Carcinoma,

NOTE Confidence: 0.803383648395538

00:28:33.360 --> 00:28:35.388 who had biliary drainage catheters more

NOTE Confidence: 0.803383648395538

00:28:35.388 --> 00:28:37.832 bile is produced in the non embolized

NOTE Confidence: 0.803383648395538

00:28:37.832 --> 00:28:40.240 bourbon in the embolized liver and Lastly.

NOTE Confidence: 0.803383648395538

00:28:40.240 --> 00:28:43.024 We can see that less alterations in liver

NOTE Confidence: 0.803383648395538

00:28:43.024 --> 00:28:44.836 function tests after resection occur

NOTE Confidence: 0.803383648395538

00:28:44.836 --> 00:28:47.530 following PV even knows in which P VE.

NOTE Confidence: 0.803383648395538

00:28:47.530 --> 00:28:48.577 Was not performed.

NOTE Confidence: 0.803383648395538

00:28:48.577 --> 00:28:51.020 So for decades CT has been the

NOTE Confidence: 0.803383648395538

00:28:51.092 --> 00:28:53.332 cornerstone for surgical planning and

NOTE Confidence: 0.803383648395538

00:28:53.332 --> 00:28:56.674 when assessing the FL are we do our

NOTE Confidence: 0.803383648395538

00:28:56.674 --> 00:28:59.061 calculations based only on the size of

NOTE Confidence: 0.822804689407349

00:28:59.070 --> 00:29:01.254 the liver. Remaining siti does directly

NOTE Confidence: 0.822804689407349

00:29:01.254 --> 00:29:03.795 measure the future liver remnant and the

NOTE Confidence: 0.822804689407349

00:29:03.795 --> 00:29:06.182 total liver volume is not actually measured,

NOTE Confidence: 0.822804689407349

00:29:06.190 --> 00:29:07.995 but rather it's estimated from

NOTE Confidence: 0.822804689407349

00:29:07.995 --> 00:29:09.439 the Association between the

NOTE Confidence: 0.822804689407349

00:29:09.439 --> 00:29:10.820 liver and patient size.

NOTE Confidence: 0.822804689407349

00:29:10.820 --> 00:29:13.668 And this is based on body waiting patients,

NOTE Confidence: 0.822804689407349

00:29:13.670 --> 00:29:15.638 body surface area or a larger

NOTE Confidence: 0.822804689407349

00:29:15.638 --> 00:29:17.940 patient would need a large deliver.

NOTE Confidence: 0.822804689407349

00:29:17.940 --> 00:29:20.446 Smaller patient may need a smaller liver.

NOTE Confidence: 0.822804689407349

00:29:20.450 --> 00:29:22.543 The FL R2 total estimated liver volume

NOTE Confidence: 0.822804689407349

00:29:22.543 --> 00:29:25.137 ratio can then allow for uniform comparison.

NOTE Confidence: 0.822804689407349

00:29:25.140 --> 00:29:27.150 Adefa lower volume parts of resection,

NOTE Confidence: 0.822804689407349

00:29:27.150 --> 00:29:29.160 whether or not PVE was performed.

NOTE Confidence: 0.822804689407349

00:29:29.160 --> 00:29:30.973 And this is the formula which is

NOTE Confidence: 0.822804689407349

00:29:30.973 --> 00:29:33.079 based on a linear regression equation

NOTE Confidence: 0.822804689407349

00:29:33.079 --> 00:29:35.189 from over 500 Western adults.

NOTE Confidence: 0.822804689407349

00:29:35.190 --> 00:29:37.085 It's critical to understand the

NOTE Confidence: 0.822804689407349

00:29:37.085 --> 00:29:39.561 denominator does not change on the pre

NOTE Confidence: 0.822804689407349

00:29:39.561 --> 00:29:42.230 and post CT scans because it is an estimate.

NOTE Confidence: 0.822804689407349

00:29:42.230 --> 00:29:44.534 One must realize that PV E does cause

NOTE Confidence: 0.822804689407349

00:29:44.534 --> 00:29:46.517 atrophy of the emboli segments that

NOTE Confidence: 0.822804689407349

00:29:46.517 --> 00:29:48.997 there have been cases where the total

NOTE Confidence: 0.822804689407349

00:29:48.997 --> 00:29:50.997 liver volume is directly measured.

NOTE Confidence: 0.822804689407349

00:29:51.000 --> 00:29:53.376 And went down after PV E.

NOTE Confidence: 0.822804689407349

00:29:53.380 --> 00:29:53.775 Therefore,

NOTE Confidence: 0.822804689407349

00:29:53.775 --> 00:29:56.940 even if the numerator is unchanged, the FL,

NOTE Confidence: 0.822804689407349

00:29:56.940 --> 00:29:58.915 our percentage may inadvertently increase,

NOTE Confidence: 0.822804689407349

00:29:58.920 --> 00:30:01.242 giving once a false sense of

NOTE Confidence: 0.822804689407349

00:30:01.242 --> 00:30:03.280 belief that hypertrophy did occur.

NOTE Confidence: 0.822804689407349

00:30:03.280 --> 00:30:05.260 And unfortunately patients have died

NOTE Confidence: 0.822804689407349

00:30:05.260 --> 00:30:07.240 after surgery when this happens.

NOTE Confidence: 0.822804689407349

00:30:07.240 --> 00:30:10.344 So if we look at this patient with

NOTE Confidence: 0.822804689407349

00:30:10.344 --> 00:30:12.102 colorectal liver metastases here

NOTE Confidence: 0.822804689407349

00:30:12.102 --> 00:30:14.796 we see approximately 4 weeks later

NOTE Confidence: 0.822804689407349

00:30:14.796 --> 00:30:17.529 that the FLR grew from 17 to 30%

NOTE Confidence: 0.822804689407349

00:30:17.530 --> 00:30:19.906 or degree of hypertrophy of 13%.

NOTE Confidence: 0.822804689407349

00:30:19.910 --> 00:30:21.358 This patient also had.

NOTE Confidence: 0.822804689407349

00:30:21.358 --> 00:30:23.168 Kinetic growth rate of 3.5%,

NOTE Confidence: 0.822804689407349

00:30:23.170 --> 00:30:25.613 which is a good indicator and this

NOTE Confidence: 0.822804689407349

00:30:25.613 --> 00:30:27.637 will be discussed in much more

NOTE Confidence: 0.822804689407349

00:30:27.637 --> 00:30:29.147 detail in a little bit.

NOTE Confidence: 0.811400353908539

00:30:31.500 --> 00:30:32.403 In recent years,

NOTE Confidence: 0.811400353908539

00:30:32.403 --> 00:30:33.908 there's actually been controversy as

NOTE Confidence: 0.811400353908539

00:30:33.908 --> 00:30:36.197 to be appropriate limit for resection,

NOTE Confidence: 0.811400353908539

00:30:36.200 --> 00:30:38.510 and this may depend on the institution

NOTE Confidence: 0.811400353908539

00:30:38.510 --> 00:30:40.239 and the formula being used.

NOTE Confidence: 0.811400353908539

00:30:40.240 --> 00:30:42.000 In Europe, for example, therapies

NOTE Confidence: 0.811400353908539

00:30:42.000 --> 00:30:44.938 uses the cut off for the need for pbe.

NOTE Confidence: 0.811400353908539

00:30:44.940 --> 00:30:47.217 That said, we showed during my time at MD

NOTE Confidence: 0.811400353908539

00:30:47.217 --> 00:30:48.923 Anderson there statistically significant

NOTE Confidence: 0.811400353908539

00:30:48.923 --> 00:30:50.990 differences in outcome, whether it

NOTE Confidence: 0.811400353908539

00:30:50.990 --> 00:30:53.000 be from liver insufficiency or death.

NOTE Confidence: 0.811400353908539

00:30:53.000 --> 00:30:55.690 If you have less than percent, FL are,

NOTE Confidence: 0.811400353908539

00:30:55.690 --> 00:30:57.365 however, no differences were found.

NOTE Confidence: 0.811400353908539

00:30:57.370 --> 00:30:59.386 Once you had more than 20%

NOTE Confidence: 0.811400353908539

00:30:59.390 --> 00:31:02.170 of your FL are remaining.

NOTE Confidence: 0.811400353908539

00:31:02.170 --> 00:31:02.738 And further,

NOTE Confidence: 0.811400353908539

00:31:02.738 --> 00:31:04.726 we wanted to see the impact of

NOTE Confidence: 0.811400353908539

00:31:04.726 --> 00:31:06.719 PV in the patient population

NOTE Confidence: 0.811400353908539

00:31:06.719 --> 00:31:08.359 in this patient population.

NOTE Confidence: 0.811400353908539

00:31:08.360 --> 00:31:10.418 We found that in those patients

NOTE Confidence: 0.811400353908539

00:31:10.418 --> 00:31:12.150 that had at least 20%,

NOTE Confidence: 0.811400353908539

00:31:12.150 --> 00:31:13.860 meaning that they already either

NOTE Confidence: 0.811400353908539

00:31:13.860 --> 00:31:16.620 had 20% not requiring PV or had 20%,

NOTE Confidence: 0.811400353908539

00:31:16.620 --> 00:31:18.615 and in those days we did it

NOTE Confidence: 0.811400353908539

00:31:18.615 --> 00:31:20.765 with a higher environment to see

NOTE Confidence: 0.811400353908539

00:31:20.765 --> 00:31:22.805 if there was any difference,

NOTE Confidence: 0.811400353908539

00:31:22.810 --> 00:31:25.267 and we compared them to those patients

NOTE Confidence: 0.811400353908539

00:31:25.267 --> 00:31:27.969 who had less than 20% and actually had

NOTE Confidence: 0.811400353908539

00:31:27.969 --> 00:31:30.720 at least 20% and did not require PV,

NOTE Confidence: 0.811400353908539

00:31:30.720 --> 00:31:33.496 E and compared them to those also that.

NOTE Confidence: 0.811400353908539

00:31:33.500 --> 00:31:36.636 And did not have 20% and needed PV E.

NOTE Confidence: 0.811400353908539

00:31:36.636 --> 00:31:39.486 And we found that as long as the

NOTE Confidence: 0.811400353908539

00:31:39.486 --> 00:31:41.670 patient after PV at least 20%

NOTE Confidence: 0.811400353908539

00:31:41.670 --> 00:31:43.440 of the future liver remnant,

NOTE Confidence: 0.811400353908539

00:31:43.440 --> 00:31:46.542 it really was no difference in

NOTE Confidence: 0.811400353908539

00:31:46.542 --> 00:31:48.610 what happened after resection.

NOTE Confidence: 0.811400353908539

00:31:48.610 --> 00:31:50.416 So we talked about the brief

NOTE Confidence: 0.811400353908539

00:31:50.416 --> 00:31:51.620 hypertrophy a little earlier.

NOTE Confidence: 0.811400353908539

00:31:51.620 --> 00:31:53.727 So what is the degree of purchasing?

NOTE Confidence: 0.811400353908539

00:31:53.730 --> 00:31:53.973 Well,

NOTE Confidence: 0.811400353908539

00:31:53.973 --> 00:31:56.160 it's the post PV efl R minus the pre

NOTE Confidence: 0.811400353908539

00:31:56.219 --> 00:31:58.284 PV EOFLR which gives you a dynamic

NOTE Confidence: 0.811400353908539

00:31:58.284 --> 00:31:59.935 measure of liver regeneration and

NOTE Confidence: 0.811400353908539

00:31:59.935 --> 00:32:01.700 this is important because there

NOTE Confidence: 0.811400353908539

00:32:01.700 --> 00:32:03.964 is an amount of high purchase that

NOTE Confidence: 0.811400353908539

00:32:03.964 --> 00:32:05.168 is necessary to review.

NOTE Confidence: 0.811400353908539

00:32:05.170 --> 00:32:07.221 If you have complications in our study

NOTE Confidence: 0.811400353908539

00:32:07.221 --> 00:32:09.078 published in MD Anderson in 2007,

NOTE Confidence: 0.811400353908539

00:32:09.080 --> 00:32:10.952 you can see that those patients

NOTE Confidence: 0.811400353908539

00:32:10.952 --> 00:32:13.389 that have more than 5% degree if I

NOTE Confidence: 0.811400353908539

00:32:13.389 --> 00:32:15.054 purchase he had significantly less

NOTE Confidence: 0.811400353908539

00:32:15.054 --> 00:32:17.021 complications that had more than 5% FL.

NOTE Confidence: 0.811400353908539

00:32:17.021 --> 00:32:20.810 So here we have a tale of two rivers,

NOTE Confidence: 0.811400353908539

00:32:20.810 --> 00:32:22.262 one patient with Cirrhosis,

NOTE Confidence: 0.811400353908539

00:32:22.262 --> 00:32:24.440 and HTC who underwent a right

NOTE Confidence: 0.811400353908539

00:32:24.509 --> 00:32:25.529 hip attacked me,

NOTE Confidence: 0.811400353908539

00:32:25.530 --> 00:32:27.345 the other with colorectal liver

NOTE Confidence: 0.811400353908539

00:32:27.345 --> 00:32:29.521 metastases and only had 5% steatosis

NOTE Confidence: 0.811400353908539

00:32:29.521 --> 00:32:31.326 who underwent an extended right.

NOTE Confidence: 0.811400353908539

00:32:31.330 --> 00:32:32.594 He protected me here.

NOTE Confidence: 0.811400353908539

00:32:32.594 --> 00:32:34.490 We see that the cirrhotic patient

NOTE Confidence: 0.811400353908539

00:32:34.553 --> 00:32:36.050 had excellent hypertrophy,

NOTE Confidence: 0.811400353908539

00:32:36.050 --> 00:32:38.953 while the other patient had only 1% growth.

NOTE Confidence: 0.811400353908539

00:32:38.953 --> 00:32:40.768 Interesting Lee, the cirrhotic patient,

NOTE Confidence: 0.811400353908539

00:32:40.770 --> 00:32:42.190 did well after surgery,

NOTE Confidence: 0.811400353908539

00:32:42.190 --> 00:32:44.320 while the patient that had the

NOTE Confidence: 0.811400353908539

00:32:44.395 --> 00:32:46.747 normal liver or what we thought was

NOTE Confidence: 0.811400353908539

00:32:46.747 --> 00:32:48.809 a pretty normal liver actually.

NOTE Confidence: 0.811400353908539

00:32:48.810 --> 00:32:50.226 Died after their reception.

NOTE Confidence: 0.811400353908539

00:32:50.226 --> 00:32:50.580 Therefore,

NOTE Confidence: 0.811400353908539

00:32:50.580 --> 00:32:53.180 if we see that you can use these

NOTE Confidence: 0.811400353908539

00:32:53.180 --> 00:32:55.418 numbers to see that patients that

NOTE Confidence: 0.811400353908539

00:32:55.418 --> 00:32:58.690 have at least 20% FLR and at least 5%

NOTE Confidence: 0.811400353908539

00:32:58.690 --> 00:33:01.168 degree of hypertrophy had a zero percent,

NOTE Confidence: 0.811400353908539

00:33:01.170 --> 00:33:02.226 90 day mortality.

NOTE Confidence: 0.811400353908539

00:33:02.226 --> 00:33:03.634 And like I said,

NOTE Confidence: 0.811400353908539

00:33:03.640 --> 00:33:05.788 this information can be used when

NOTE Confidence: 0.811400353908539

00:33:05.788 --> 00:33:07.627 trying to understand whether a

NOTE Confidence: 0.811400353908539

00:33:07.627 --> 00:33:09.332 patient should be indicated for

NOTE Confidence: 0.811400353908539

00:33:09.332 --> 00:33:10.696 their reception after PV.

NOTE Confidence: 0.811400353908539

00:33:10.700 --> 00:33:13.596 So now that we know the floor cut

NOTE Confidence: 0.811400353908539

00:33:13.596 --> 00:33:16.370 off numbers that is 20% for normal liver,

NOTE Confidence: 0.811400353908539

00:33:16.370 --> 00:33:18.890 30% for injured liver from chemotherapy and.

NOTE Confidence: 0.811400353908539

00:33:18.890 --> 00:33:19.883 40% for Cirrhosis,

NOTE Confidence: 0.811400353908539

00:33:19.883 --> 00:33:22.739 and we know that if I purchased the 5%,

NOTE Confidence: 0.811400353908539

00:33:22.740 --> 00:33:24.987 is this enough to really be able

NOTE Confidence: 0.811400353908539

00:33:24.987 --> 00:33:25.950 to predict which

NOTE Confidence: 0.847820580005646

00:33:26.022 --> 00:33:28.447 patients should have their surgeries?

NOTE Confidence: 0.847820580005646

00:33:28.450 --> 00:33:30.907 So we now know that we've had

NOTE Confidence: 0.847820580005646

00:33:30.907 --> 00:33:32.899 purchase fees based on the timing

NOTE Confidence: 0.847820580005646

00:33:32.899 --> 00:33:35.425 of the image Ng and that a true

NOTE Confidence: 0.847820580005646

00:33:35.425 --> 00:33:38.089 assessment of the epilogue growth is

NOTE Confidence: 0.847820580005646

00:33:38.089 --> 00:33:40.196 difficult to compare among patients.

NOTE Confidence: 0.847820580005646

00:33:40.196 --> 00:33:42.494 Therefore, we developed a new variable

NOTE Confidence: 0.847820580005646

00:33:42.494 --> 00:33:44.916 called the kinetic growth rate or KJR,

NOTE Confidence: 0.847820580005646

00:33:44.920 --> 00:33:47.380 which is the degree of hypertrophy

NOTE Confidence: 0.847820580005646

00:33:47.380 --> 00:33:49.396 over the time elapsed from

NOTE Confidence: 0.847820580005646

00:33:49.396 --> 00:33:51.510 PV E in the number of weeks.

NOTE Confidence: 0.847820580005646

00:33:51.510 --> 00:33:53.706 So here we see three patients

NOTE Confidence: 0.847820580005646

00:33:53.706 --> 00:33:55.170 with colorectal liver metastases,

NOTE Confidence: 0.847820580005646

00:33:55.170 --> 00:33:57.360 each with a degree of hypertrophy,

NOTE Confidence: 0.847820580005646

00:33:57.360 --> 00:33:59.929 well within the amount needed for successful,

NOTE Confidence: 0.847820580005646

00:33:59.930 --> 00:34:00.600 safer section.

NOTE Confidence: 0.847820580005646

00:34:00.600 --> 00:34:02.945 However, the patient on the bottom actually

NOTE Confidence: 0.847820580005646

00:34:02.945 --> 00:34:05.090 died from liver failure after section,

NOTE Confidence: 0.847820580005646

00:34:05.090 --> 00:34:07.722 so we went back and reviewed the cases

NOTE Confidence: 0.847820580005646

00:34:07.722 --> 00:34:10.657 and found that the time for the first 2

NOTE Confidence: 0.847820580005646

00:34:10.657 --> 00:34:13.456 patients with 35 days to get these results,

NOTE Confidence: 0.847820580005646

00:34:13.460 --> 00:34:16.140 while we found that the patient had died,

NOTE Confidence: 0.847820580005646

00:34:16.140 --> 00:34:18.150 it actually occurred in 70 days.

NOTE Confidence: 0.847820580005646

00:34:18.150 --> 00:34:20.474 So when we went back and calculated

NOTE Confidence: 0.847820580005646

00:34:20.474 --> 00:34:21.840 the kinetic growth rate,

NOTE Confidence: 0.847820580005646

00:34:21.840 --> 00:34:23.850 the patient that I had only

NOTE Confidence: 0.847820580005646

00:34:23.850 --> 00:34:26.176 1 zero point 3% per week,

NOTE Confidence: 0.847820580005646

00:34:26.176 --> 00:34:28.641 while the other two had

NOTE Confidence: 0.847820580005646

00:34:28.641 --> 00:34:30.790 much higher growth rates.

NOTE Confidence: 0.847820580005646

00:34:30.790 --> 00:34:32.474 Therefore, when assessing patients

NOTE Confidence: 0.847820580005646

00:34:32.474 --> 00:34:34.158 which should have surgery,

NOTE Confidence: 0.847820580005646

00:34:34.160 --> 00:34:37.949 we found that in order to really be safe,

NOTE Confidence: 0.847820580005646

00:34:37.950 --> 00:34:40.936 that we really need 2% per week.

NOTE Confidence: 0.847820580005646

00:34:40.936 --> 00:34:43.151 That led to know hepatic

NOTE Confidence: 0.847820580005646

00:34:43.151 --> 00:34:45.710 insufficiency or 90 day mortality.

NOTE Confidence: 0.847820580005646

00:34:45.710 --> 00:34:46.002 So,

NOTE Confidence: 0.847820580005646

00:34:46.002 --> 00:34:48.046 is Kevin stated earlier we can now

NOTE Confidence: 0.847820580005646

00:34:48.046 --> 00:34:50.384 extend the boundaries for safer section

NOTE Confidence: 0.847820580005646

00:34:50.384 --> 00:34:52.499 by using advanced surgical strategies

NOTE Confidence: 0.847820580005646

00:34:52.499 --> 00:34:54.447 such as the two stage protecting

NOTE Confidence: 0.847820580005646

00:34:54.447 --> 00:34:56.250 me like for this pain titlebar,

NOTE Confidence: 0.847820580005646

00:34:56.250 --> 00:34:57.610 colon article, living metastases,

NOTE Confidence: 0.847820580005646

00:34:57.610 --> 00:34:58.970 patient first had systemic

NOTE Confidence: 0.847820580005646

00:34:58.970 --> 00:35:00.330 chemotherapy with excellent response,

NOTE Confidence: 0.847820580005646

00:35:00.330 --> 00:35:02.030 then had surgery to clear

NOTE Confidence: 0.847820580005646

00:35:02.030 --> 00:35:03.390 the left lateral liver.

NOTE Confidence: 0.847820580005646

00:35:03.390 --> 00:35:04.070 The FL,

NOTE Confidence: 0.847820580005646

00:35:04.070 --> 00:35:05.430 our volumes were calculated

NOTE Confidence: 0.847820580005646

00:35:05.430 --> 00:35:07.886 to be 16% of PV was performed,

NOTE Confidence: 0.847820580005646

00:35:07.886 --> 00:35:10.868 and then FLR was then found to be 26%.

NOTE Confidence: 0.847820580005646

00:35:10.870 --> 00:35:12.742 So the definitive resection

NOTE Confidence: 0.847820580005646

00:35:12.742 --> 00:35:14.146 was then performed.

NOTE Confidence: 0.847820580005646

00:35:14.150 --> 00:35:16.058 So to assess the benefit of

NOTE Confidence: 0.847820580005646

00:35:16.058 --> 00:35:17.840 the two stage separate ectomy,

NOTE Confidence: 0.847820580005646

00:35:17.840 --> 00:35:19.605 we reviewed patients who had

NOTE Confidence: 0.847820580005646

00:35:19.605 --> 00:35:21.017 invented the advanced strategy

NOTE Confidence: 0.847820580005646

00:35:21.017 --> 00:35:22.773 with extended pack resection and

NOTE Confidence: 0.847820580005646

00:35:22.773 --> 00:35:24.789 compared those those that did not

NOTE Confidence: 0.847820580005646

00:35:24.853 --> 00:35:26.974 have tumor in their FL are therefore

NOTE Confidence: 0.847820580005646

00:35:26.974 --> 00:35:28.498 not really needing second stage.

NOTE Confidence: 0.847820580005646

00:35:28.498 --> 00:35:30.322 Our results had shown that there

NOTE Confidence: 0.847820580005646

00:35:30.322 --> 00:35:32.483 was no difference in overall and

NOTE Confidence: 0.847820580005646

00:35:32.483 --> 00:35:34.348 disease free survival in those

NOTE Confidence: 0.847820580005646

00:35:34.348 --> 00:35:36.356 patients that required the two stage

NOTE Confidence: 0.847820580005646

00:35:36.356 --> 00:35:38.274 protect me as compared with those

NOTE Confidence: 0.847820580005646

00:35:38.274 --> 00:35:40.278 that only required the one stage.

NOTE Confidence: 0.847820580005646

00:35:40.280 --> 00:35:42.856 And as Kevin showed from our study from

NOTE Confidence: 0.847820580005646

00:35:42.856 --> 00:35:45.339 MD Anderson in a really highly selected.

NOTE Confidence: 0.847820580005646

00:35:45.340 --> 00:35:47.284 And she cohort who did complete

NOTE Confidence: 0.847820580005646

00:35:47.284 --> 00:35:48.256 the second stage.

NOTE Confidence: 0.847820580005646

00:35:48.260 --> 00:35:50.192 We were able to achieve a

NOTE Confidence: 0.847820580005646

00:35:50.192 --> 00:35:51.495 60% five year survival,

NOTE Confidence: 0.847820580005646

00:35:51.495 --> 00:35:53.120 which is really considered amazing.

NOTE Confidence: 0.847820580005646

00:35:53.120 --> 00:35:56.095 Anything about a decade ago given to

NOTE Confidence: 0.847820580005646

00:35:56.095 --> 00:35:58.628 buy Alobar nature of the disease.

NOTE Confidence: 0.847820580005646

00:35:58.630 --> 00:35:58.991 However,

NOTE Confidence: 0.847820580005646

00:35:58.991 --> 00:36:01.157 there is some concerns regarding team

NOTE Confidence: 0.847820580005646

00:36:01.157 --> 00:36:03.915 be one of the major concerns is the

NOTE Confidence: 0.847820580005646

00:36:03.915 --> 00:36:06.264 potential drop out of up to 35% of

NOTE Confidence: 0.847820580005646

00:36:06.264 --> 00:36:07.968 patients due to an insufficient FL

NOTE Confidence: 0.847820580005646

00:36:07.968 --> 00:36:09.975 are or or tumor progression within

NOTE Confidence: 0.847820580005646

00:36:09.975 --> 00:36:12.516 the four to six week waiting period

NOTE Confidence: 0.847820580005646

00:36:12.579 --> 00:36:14.994 from the TV to the definitive resection.

NOTE Confidence: 0.847820580005646

00:36:15.000 --> 00:36:15.508 Therefore,

NOTE Confidence: 0.847820580005646

00:36:15.508 --> 00:36:17.540 other approaches are needed.

NOTE Confidence: 0.847820580005646

00:36:17.540 --> 00:36:18.406 So one.

NOTE Confidence: 0.847820580005646

00:36:18.406 --> 00:36:20.571 Issue that has been entertained

NOTE Confidence: 0.847820580005646

00:36:20.571 --> 00:36:23.736 has been that PV can lead to

NOTE Confidence: 0.847820580005646

00:36:23.736 --> 00:36:25.068 expedited tumor growth,

NOTE Confidence: 0.847820580005646

00:36:25.070 --> 00:36:26.654 so to that end the recent

NOTE Confidence: 0.847820580005646

00:36:26.654 --> 00:36:27.710 data supports that we

NOTE Confidence: 0.825742840766907

00:36:27.767 --> 00:36:29.422 can use chemotherapy during the

NOTE Confidence: 0.825742840766907

00:36:29.422 --> 00:36:31.778 waiting period and also can be used

NOTE Confidence: 0.825742840766907

00:36:31.778 --> 00:36:33.058 within the postoperative period

NOTE Confidence: 0.825742840766907

00:36:33.058 --> 00:36:35.264 which at one time was thought to

NOTE Confidence: 0.825742840766907

00:36:35.264 --> 00:36:36.891 maybe limit for generation. However,

NOTE Confidence: 0.825742840766907

00:36:36.891 --> 00:36:40.410 that has not borne out to be the case.

NOTE Confidence: 0.825742840766907

00:36:40.410 --> 00:36:42.280 So there are other alternative

NOTE Confidence: 0.825742840766907

00:36:42.280 --> 00:36:44.150 approaches that we can use.

NOTE Confidence: 0.825742840766907

00:36:44.150 --> 00:36:45.642 It is Interventional radiologist.

NOTE Confidence: 0.825742840766907

00:36:45.642 --> 00:36:47.134 This is a case.

NOTE Confidence: 0.825742840766907

00:36:47.140 --> 00:36:49.478 This is a study that was performed

NOTE Confidence: 0.825742840766907

00:36:49.478 --> 00:36:52.233 from Korea where TV did not leave

NOTE Confidence: 0.825742840766907

00:36:52.233 --> 00:36:53.496 the sufficient regeneration.

NOTE Confidence: 0.825742840766907

00:36:53.500 --> 00:36:55.365 Anna Korean group found that

NOTE Confidence: 0.825742840766907

00:36:55.365 --> 00:36:56.484 later performing right,

NOTE Confidence: 0.825742840766907

00:36:56.490 --> 00:36:58.078 having bane embolization in

NOTE Confidence: 0.825742840766907

00:36:58.078 --> 00:37:01.013 addition to the PV is shown here

NOTE Confidence: 0.825742840766907

00:37:01.013 --> 00:37:03.418 actually result in better outcomes.

NOTE Confidence: 0.825742840766907

00:37:03.420 --> 00:37:05.040 We've also used something

NOTE Confidence: 0.825742840766907

00:37:05.040 --> 00:37:06.255 called radiation lobectomy.

NOTE Confidence: 0.825742840766907

00:37:06.260 --> 00:37:08.724 This is done by the Transarterial Bar

NOTE Confidence: 0.825742840766907

00:37:08.724 --> 00:37:10.730 Administration of Y-90 microparticles.

NOTE Confidence: 0.825742840766907

00:37:10.730 --> 00:37:12.780 She's now an established means

NOTE Confidence: 0.825742840766907

00:37:12.780 --> 00:37:14.830 of providing local tumor control

NOTE Confidence: 0.825742840766907

00:37:14.902 --> 00:37:16.009 within the liver.

NOTE Confidence: 0.825742840766907

00:37:16.010 --> 00:37:16.826 That said,

NOTE Confidence: 0.825742840766907

00:37:16.826 --> 00:37:18.866 there was an unintended phenomenon

NOTE Confidence: 0.825742840766907

00:37:18.866 --> 00:37:21.332 of contralateral liver I8 and seven

NOTE Confidence: 0.825742840766907

00:37:21.332 --> 00:37:22.908 in several retrospective studies.

NOTE Confidence: 0.825742840766907

00:37:22.910 --> 00:37:23.722 Contralateral hypertrophy?

NOTE Confidence: 0.825742840766907

00:37:23.722 --> 00:37:26.158 A curd from 21 to 47%,

NOTE Confidence: 0.825742840766907

00:37:26.160 --> 00:37:28.650 and therefore this has been suggested

NOTE Confidence: 0.825742840766907

00:37:28.650 --> 00:37:31.543 as an alternative to PV with the

NOTE Confidence: 0.825742840766907

00:37:31.543 --> 00:37:33.468 benefit of local tumor control.

NOTE Confidence: 0.825742840766907

00:37:33.470 --> 00:37:35.610 And the test of time.

NOTE Confidence: 0.825742840766907

00:37:35.610 --> 00:37:38.368 So we had talked about this earlier,

NOTE Confidence: 0.825742840766907

00:37:38.370 --> 00:37:40.590 but nuclear medicine is showing

NOTE Confidence: 0.825742840766907

00:37:40.590 --> 00:37:43.209 improved liver function after PV E

NOTE Confidence: 0.825742840766907

00:37:43.209 --> 00:37:45.456 in this small study of 13 patients,

NOTE Confidence: 0.825742840766907

00:37:45.460 --> 00:37:47.240 with some being colorectal liver

NOTE Confidence: 0.825742840766907

00:37:47.240 --> 00:37:48.664 metastases who underwent some

NOTE Confidence: 0.825742840766907

00:37:48.664 --> 00:37:50.189 nuclear medicine scintigraphy.

NOTE Confidence: 0.825742840766907

00:37:50.190 --> 00:37:52.145 They showed that using radiation

NOTE Confidence: 0.825742840766907

00:37:52.145 --> 00:37:53.709 lobectomy actually can cause

NOTE Confidence: 0.825742840766907

00:37:53.709 --> 00:37:55.698 changes in regional liver function,

NOTE Confidence: 0.825742840766907

00:37:55.700 --> 00:37:58.376 and this correlated with the functional

NOTE Confidence: 0.825742840766907

00:37:58.376 --> 00:38:00.523 liver absorbed doses from Y-90

NOTE Confidence: 0.825742840766907

00:38:00.523 --> 00:38:02.883 and pack and then in 2014 a group

NOTE Confidence: 0.825742840766907

00:38:02.883 --> 00:38:04.975 from France compared 141 patients

NOTE Confidence: 0.825742840766907

00:38:04.975 --> 00:38:07.567 who underwent right PV with third.

NOTE Confidence: 0.825742840766907

00:38:07.570 --> 00:38:09.735 35 patients who underwent radiation

NOTE Confidence: 0.825742840766907

00:38:09.735 --> 00:38:12.436 lobectomy at two centers that were

NOTE Confidence: 0.825742840766907

00:38:12.436 --> 00:38:14.766 matched for criterion known to

NOTE Confidence: 0.825742840766907

00:38:14.766 --> 00:38:16.970 influence liver regeneration after PVD.

NOTE Confidence: 0.825742840766907

00:38:16.970 --> 00:38:19.133 The radiation was performed if the authors

NOTE Confidence: 0.825742840766907

00:38:19.133 --> 00:38:21.260 found the case would be challenging,

NOTE Confidence: 0.825742840766907

00:38:21.260 --> 00:38:23.240 provid PB and to be honest,

NOTE Confidence: 0.825742840766907

00:38:23.240 --> 00:38:25.550 I'm not sure why this would be,

NOTE Confidence: 0.825742840766907

00:38:25.550 --> 00:38:28.078 but when they match the patients they found

NOTE Confidence: 0.825742840766907

00:38:28.078 --> 00:38:29.839 significantly more hypertrophy after PV.

NOTE Confidence: 0.825742840766907

00:38:29.840 --> 00:38:31.772 They concluded that while the hyper

NOTE Confidence: 0.825742840766907

00:38:31.772 --> 00:38:33.060 chicken radiation lobectomy substantial

NOTE Confidence: 0.825742840766907

00:38:33.111 --> 00:38:34.786 and doesn't minimize tumor progression,

NOTE Confidence: 0.825742840766907

00:38:34.790 --> 00:38:36.440 PV can induce significantly greater,

NOTE Confidence: 0.825742840766907

00:38:36.440 --> 00:38:38.402 and I purchased the in radiation

NOTE Confidence: 0.825742840766907

00:38:38.402 --> 00:38:40.070 lobectomy with these therapeutic doses.

NOTE Confidence: 0.825742840766907

00:38:40.070 --> 00:38:42.230 So how do you decide if you should

NOTE Confidence: 0.825742840766907

00:38:42.230 --> 00:38:44.360 use PV or radiation lobectomy?

NOTE Confidence: 0.825742840766907

00:38:44.360 --> 00:38:46.010 The decision should be based

NOTE Confidence: 0.825742840766907

00:38:46.010 --> 00:38:47.000 on achievement intent,

NOTE Confidence: 0.825742840766907

00:38:47.000 --> 00:38:47.618 such as.

NOTE Confidence: 0.825742840766907

00:38:47.618 --> 00:38:49.781 Is the patient a candidate for section

NOTE Confidence: 0.825742840766907

00:38:49.781 --> 00:38:52.439 now and what is the plan resection if

NOTE Confidence: 0.825742840766907

00:38:52.439 --> 00:38:54.642 the reception should be done now you

NOTE Confidence: 0.825742840766907

00:38:54.642 --> 00:38:57.086 should just go ahead and perform the P PE.

NOTE Confidence: 0.825742840766907

00:38:57.086 --> 00:38:59.138 You also need to know what type of

NOTE Confidence: 0.825742840766907

00:38:59.138 --> 00:39:01.316 malignancy patient has and whether the

NOTE Confidence: 0.825742840766907

00:39:01.316 --> 00:39:03.259 patient has underlying liver disease.

NOTE Confidence: 0.825742840766907

00:39:03.260 --> 00:39:04.970 Cases where patients have bottle

NOTE Confidence: 0.825742840766907

00:39:04.970 --> 00:39:06.338 bar colorectal metastases that

NOTE Confidence: 0.825742840766907

00:39:06.338 --> 00:39:07.500 require a Tuesday check.

NOTE Confidence: 0.825742840766907

00:39:07.500 --> 00:39:08.325 Her protect me.

NOTE Confidence: 0.825742840766907

00:39:08.325 --> 00:39:09.700 There is likely really no

NOTE Confidence: 0.825742840766907

00:39:09.700 --> 00:39:11.409 role for radiation lobectomy,

NOTE Confidence: 0.825742840766907

00:39:11.410 --> 00:39:12.498 as you can see,

NOTE Confidence: 0.825742840766907

00:39:12.498 --> 00:39:14.603 I'm personally not in favor of the

NOTE Confidence: 0.825742840766907

00:39:14.603 --> 00:39:16.628 radiation lobectomy in this approach,

NOTE Confidence: 0.825742840766907

00:39:16.630 --> 00:39:19.069 as you would really need to do 190 of

NOTE Confidence: 0.825742840766907

00:39:19.069 --> 00:39:21.083 both lobes and it seems appropriate

NOTE Confidence: 0.825742840766907

00:39:21.083 --> 00:39:23.799 in the setting of HTC with cirrhosis.

NOTE Confidence: 0.825742840766907

00:39:23.800 --> 00:39:26.061 But I don't think it really is

NOTE Confidence: 0.825742840766907

00:39:26.061 --> 00:39:28.133 appropriate in the setting of

NOTE Confidence: 0.825742840766907

00:39:28.133 --> 00:39:29.678 colorectal liver metastasis.

NOTE Confidence: 0.825742840766907

00:39:29.680 --> 00:39:30.944 Another approach is Alps,

NOTE Confidence: 0.825742840766907

00:39:30.944 --> 00:39:32.840 which is short for associating liver

NOTE Confidence: 0.752619624137878

00:39:32.894 --> 00:39:34.679 partition and portal vein ligation.

NOTE Confidence: 0.752619624137878

00:39:34.680 --> 00:39:36.345 This approach was proposed to

NOTE Confidence: 0.752619624137878

00:39:36.345 --> 00:39:38.010 replace pbe with two surgeries.

NOTE Confidence: 0.752619624137878

00:39:38.010 --> 00:39:39.322 He performed interactive right

NOTE Confidence: 0.752619624137878

00:39:39.322 --> 00:39:40.634 portal vein ligation followed

NOTE Confidence: 0.752619624137878

00:39:40.634 --> 00:39:41.999 by completely divest arising.

NOTE Confidence: 0.752619624137878

00:39:42.000 --> 00:39:43.908 Segment four of the liver and

NOTE Confidence: 0.752619624137878

00:39:43.908 --> 00:39:45.939 at the same session is surgeon

NOTE Confidence: 0.752619624137878

00:39:45.939 --> 00:39:47.654 clears the floor of tumor.

NOTE Confidence: 0.752619624137878

00:39:47.660 --> 00:39:49.688 The patient is then closed with

NOTE Confidence: 0.752619624137878

00:39:49.688 --> 00:39:51.660 the tumor bearing liver in place,

NOTE Confidence: 0.752619624137878

00:39:51.660 --> 00:39:53.652 while the FLL rapidly have Portuguese

NOTE Confidence: 0.752619624137878

00:39:53.652 --> 00:39:55.613 and then the Sturgeon returns within

NOTE Confidence: 0.752619624137878

00:39:55.613 --> 00:39:57.909 7 to 10 days for a second laparotomy

NOTE Confidence: 0.752619624137878

00:39:57.967 --> 00:40:00.047 to complete the definitive resection.

NOTE Confidence: 0.752619624137878

00:40:00.050 --> 00:40:01.422 And early reports actually

NOTE Confidence: 0.752619624137878

00:40:01.422 --> 00:40:03.137 showed very strong tumor growth.

NOTE Confidence: 0.752619624137878

00:40:03.140 --> 00:40:05.980 I mean, fellow growth and was believed to

NOTE Confidence: 0.752619624137878

00:40:05.980 --> 00:40:09.218 have a lower risk for tumor progression.

NOTE Confidence: 0.752619624137878

00:40:09.220 --> 00:40:10.072 That being said,

NOTE Confidence: 0.752619624137878

00:40:10.072 --> 00:40:12.060 when comparing PV 2 apps that were

NOTE Confidence: 0.752619624137878

00:40:12.120 --> 00:40:13.730 the massive infest or hypertrophy

NOTE Confidence: 0.752619624137878

00:40:13.730 --> 00:40:15.018 in the Alps Group,

NOTE Confidence: 0.752619624137878

00:40:15.020 --> 00:40:17.668 but it came at a much higher cost

NOTE Confidence: 0.752619624137878

00:40:17.668 --> 00:40:20.308 of major complications and death.

NOTE Confidence: 0.752619624137878

00:40:20.310 --> 00:40:20.650 Interestingly,

NOTE Confidence: 0.752619624137878

00:40:20.650 --> 00:40:22.350 while the kinetic growth rate

NOTE Confidence: 0.752619624137878

00:40:22.350 --> 00:40:24.599 was found to be higher electron

NOTE Confidence: 0.752619624137878

00:40:24.599 --> 00:40:26.669 microscopy studies from Japan showed

NOTE Confidence: 0.752619624137878

00:40:26.669 --> 00:40:28.804 that the hepatocytes were not mature

NOTE Confidence: 0.752619624137878

00:40:28.804 --> 00:40:30.750 and not really able to handle the

NOTE Confidence: 0.752619624137878

00:40:30.750 --> 00:40:33.186 increased blood flow to the FL are.

NOTE Confidence: 0.752619624137878

00:40:33.190 --> 00:40:33.530 Therefore,

NOTE Confidence: 0.752619624137878

00:40:33.530 --> 00:40:36.250 it was shown that it is not simply

NOTE Confidence: 0.752619624137878

00:40:36.250 --> 00:40:37.709 regenerating the liver rapidly,

NOTE Confidence: 0.752619624137878

00:40:37.710 --> 00:40:39.670 but also in a way that allows

NOTE Confidence: 0.752619624137878

00:40:39.670 --> 00:40:41.071 the hepatocytes maturan function

NOTE Confidence: 0.752619624137878

00:40:41.071 --> 00:40:42.580 appropriately so interesting.

NOTE Confidence: 0.752619624137878

00:40:42.580 --> 00:40:42.900 Lee,

NOTE Confidence: 0.752619624137878

00:40:42.900 --> 00:40:44.500 a systematic review and meta

NOTE Confidence: 0.752619624137878

00:40:44.500 --> 00:40:45.780 analysis for colorectal liver

NOTE Confidence: 0.752619624137878

00:40:45.838 --> 00:40:47.110 metastases was performed,

NOTE Confidence: 0.752619624137878

00:40:47.110 --> 00:40:49.210 confirming the findings of the faster

NOTE Confidence: 0.752619624137878

00:40:49.210 --> 00:40:50.950 kinetic growth rate with Alps.

NOTE Confidence: 0.752619624137878

00:40:50.950 --> 00:40:52.755 But with the increased morbidity

NOTE Confidence: 0.752619624137878

00:40:52.755 --> 00:40:53.477 and mortality.

NOTE Confidence: 0.752619624137878

00:40:53.480 --> 00:40:55.290 So for this reason numerous

NOTE Confidence: 0.752619624137878

00:40:55.290 --> 00:40:56.738 modifications have been proposed,

NOTE Confidence: 0.752619624137878

00:40:56.740 --> 00:40:58.948 many of which negated distinct advantages

NOTE Confidence: 0.752619624137878

00:40:58.948 --> 00:41:02.169 of why Alps was proposed in the 1st place.

NOTE Confidence: 0.752619624137878

00:41:02.170 --> 00:41:02.894 And Lastly,

NOTE Confidence: 0.752619624137878

00:41:02.894 --> 00:41:05.428 I want to show a new procedure,

NOTE Confidence: 0.752619624137878

00:41:05.430 --> 00:41:08.688 one that we will now be using it Yale,

NOTE Confidence: 0.752619624137878

00:41:08.690 --> 00:41:10.616 while while I already showed sequential

NOTE Confidence: 0.752619624137878

00:41:10.616 --> 00:41:12.670 PV into Patty being embolization,

NOTE Confidence: 0.752619624137878

00:41:12.670 --> 00:41:14.836 Liberty is deprivation is performing PV.

NOTE Confidence: 0.752619624137878

00:41:14.840 --> 00:41:17.012 And how do you been embolization

NOTE Confidence: 0.752619624137878

00:41:17.012 --> 00:41:18.460 in a single session?

NOTE Confidence: 0.752619624137878

00:41:18.460 --> 00:41:20.658 The goal is to shorten and optimize

NOTE Confidence: 0.752619624137878

00:41:20.658 --> 00:41:22.849 the phase of liver preparation.

NOTE Confidence: 0.752619624137878

00:41:22.850 --> 00:41:24.218 Or surgery without the

NOTE Confidence: 0.752619624137878

00:41:24.218 --> 00:41:25.586 aggressive nature of Alps,

NOTE Confidence: 0.752619624137878

00:41:25.590 --> 00:41:26.962 and in this early

NOTE Confidence: 0.752619624137878

00:41:26.962 --> 00:41:28.334 feasibility study from 2016,

NOTE Confidence: 0.752619624137878

00:41:28.340 --> 00:41:30.566 the procedure was found to be safe

NOTE Confidence: 0.752619624137878

00:41:30.566 --> 00:41:32.679 and feasible in a small patient

NOTE Confidence: 0.752619624137878

00:41:32.679 --> 00:41:34.504 cohort of only seven patients,

NOTE Confidence: 0.752619624137878

00:41:34.510 --> 00:41:36.743 and then the same group then added

NOTE Confidence: 0.752619624137878

00:41:36.743 --> 00:41:39.203 embolization of the middle of having pain

NOTE Confidence: 0.752619624137878

00:41:39.203 --> 00:41:41.363 to the right hepatic vein embolization,

NOTE Confidence: 0.752619624137878

00:41:41.370 --> 00:41:43.225 and they found that by doing so

NOTE Confidence: 0.752619624137878

00:41:43.225 --> 00:41:45.668 they can get safe and provide the

NOTE Confidence: 0.752619624137878

00:41:45.668 --> 00:41:47.653 most marketing rapid elevation in

NOTE Confidence: 0.752619624137878

00:41:47.653 --> 00:41:49.259 hypertrophy and liver function.

NOTE Confidence: 0.752619624137878

00:41:49.260 --> 00:41:50.980 Unprecedented for an IR procedure,

NOTE Confidence: 0.752619624137878

00:41:50.980 --> 00:41:53.346 and just soon Kevin and I will

NOTE Confidence: 0.752619624137878

00:41:53.346 --> 00:41:54.840 be the Copia eyes.

NOTE Confidence: 0.752619624137878

00:41:54.840 --> 00:41:56.650 Or yell prospective clinical trial.

NOTE Confidence: 0.752619624137878

00:41:56.650 --> 00:41:58.146 Looking at Libertines deprivation

NOTE Confidence: 0.752619624137878

00:41:58.146 --> 00:42:00.390 called Dragon One and Dragon 2

NOTE Confidence: 0.752619624137878

00:42:00.452 --> 00:42:02.438 dragon one is a feasibility study,

NOTE Confidence: 0.752619624137878

00:42:02.440 --> 00:42:05.156 and Dragon 2 actually will compare it

NOTE Confidence: 0.752619624137878

00:42:05.156 --> 00:42:07.867 to the standard of care which is PV.

NOTE Confidence: 0.752619624137878

00:42:07.870 --> 00:42:08.911 So in conclusion,

NOTE Confidence: 0.752619624137878

00:42:08.911 --> 00:42:10.646 liver regeneration is critical to

NOTE Confidence: 0.752619624137878

00:42:10.646 --> 00:42:12.219 managing colorectal liver metastases,

NOTE Confidence: 0.752619624137878

00:42:12.220 --> 00:42:14.747 and, as I hope to have shown,

NOTE Confidence: 0.752619624137878

00:42:14.750 --> 00:42:16.198 there are numerous strategies

NOTE Confidence: 0.752619624137878

00:42:16.198 --> 00:42:18.008 that can regenerate the liver,

NOTE Confidence: 0.752619624137878

00:42:18.010 --> 00:42:20.176 either percutaneously or by surgical means.

NOTE Confidence: 0.752619624137878

00:42:20.180 --> 00:42:20.561 Currently,

NOTE Confidence: 0.752619624137878

00:42:20.561 --> 00:42:22.466 the understanding of Liberal generation

NOTE Confidence: 0.752619624137878

00:42:22.466 --> 00:42:25.329 in this area is really at its infancy.

NOTE Confidence: 0.752619624137878

00:42:25.330 --> 00:42:26.550 Any apples opportunities do

NOTE Confidence: 0.752619624137878

00:42:26.550 --> 00:42:27.465 exist for research,

NOTE Confidence: 0.752619624137878

00:42:27.470 --> 00:42:29.015 so I'm looking forward to

NOTE Confidence: 0.752619624137878

00:42:29.015 --> 00:42:30.560 working with your team and

NOTE Confidence: 0.85053288936615

00:42:30.624 --> 00:42:32.028 looking forward working with

NOTE Confidence: 0.85053288936615

00:42:32.028 --> 00:42:34.134 Kevin on this dragon study and

NOTE Confidence: 0.85053288936615

00:42:34.194 --> 00:42:35.919 thank you for your attention.

NOTE Confidence: 0.85053288936615

00:42:35.920 --> 00:42:41.160 Thank you David, that was awesome.

NOTE Confidence: 0.729231476783752

00:42:43.790 --> 00:42:44.980 Thanks bikini.

NOTE Confidence: 0.781764268875122

00:42:48.940 --> 00:42:51.228 Kevin David, can you stop

NOTE Confidence: 0.781764268875122

00:42:51.230 --> 00:42:54.440 sharing? OK, stop the sharing here, yeah?

NOTE Confidence: 0.819342970848084

00:42:55.640 --> 00:42:58.740 Alright, so I'm Michael Cicchini.

NOTE Confidence: 0.819342970848084

00:42:58.740 --> 00:43:01.840 I'm a medical Oncologist and

NOTE Confidence: 0.819342970848084

00:43:01.840 --> 00:43:05.522 I'm going to talk about the chemotherapy

NOTE Confidence: 0.819342970848084

00:43:05.522 --> 00:43:10.309 in the Peri operative management of these

NOTE Confidence: 0.819342970848084

00:43:10.309 --> 00:43:14.189 liver metastases for colorectal cancer.

NOTE Confidence: 0.819342970848084

00:43:14.190 --> 00:43:17.868 So first I'm going to talk

NOTE Confidence: 0.819342970848084

00:43:17.868 --> 00:43:20.320 about the molecular profiling.

NOTE Confidence: 0.819342970848084

00:43:20.320 --> 00:43:22.196 That's important to decide.

NOTE Confidence: 0.819342970848084

00:43:22.196 --> 00:43:25.010 Chemotherapy agents as well as sightedness,

NOTE Confidence: 0.819342970848084

00:43:25.010 --> 00:43:27.170 which is not truly molecular

NOTE Confidence: 0.819342970848084

00:43:27.170 --> 00:43:28.898 profiling but certainly hasn't

NOTE Confidence: 0.819342970848084

00:43:28.898 --> 00:43:31.110 impacted the chemotherapy selection.

NOTE Confidence: 0.819342970848084

00:43:31.110 --> 00:43:34.386 The two types of patients we encounter,

NOTE Confidence: 0.819342970848084

00:43:34.390 --> 00:43:37.015 the unrespectable patiently up respectable

NOTE Confidence: 0.819342970848084

00:43:37.015 --> 00:43:40.514 biologics and then some of the damage

NOTE Confidence: 0.819342970848084

00:43:40.514 --> 00:43:43.286 our agents can do that can complicate

NOTE Confidence: 0.819342970848084

00:43:43.286 --> 00:43:46.119 the role of complicated surgery so.

NOTE Confidence: 0.819342970848084

00:43:46.120 --> 00:43:47.850 Molecular profiling for colorectal cancer.

NOTE Confidence: 0.819342970848084

00:43:47.850 --> 00:43:49.922 What information do I really need to

NOTE Confidence: 0.819342970848084

00:43:49.922 --> 00:43:52.329 know to make a chemotherapy decision?

NOTE Confidence: 0.819342970848084

00:43:52.330 --> 00:43:54.486 Wrap the grass in the raft status

NOTE Confidence: 0.819342970848084

00:43:54.486 --> 00:43:56.376 are very important and they have

NOTE Confidence: 0.819342970848084

00:43:56.376 --> 00:43:58.188 been so for some time mismatch

NOTE Confidence: 0.819342970848084

00:43:58.188 --> 00:44:00.268 repair status microsatellite status,

NOTE Confidence: 0.819342970848084

00:44:00.270 --> 00:44:01.944 which is analogous to that and

NOTE Confidence: 0.819342970848084

00:44:01.944 --> 00:44:03.516 then the sightedness has become

NOTE Confidence: 0.819342970848084

00:44:03.516 --> 00:44:05.136 increasingly important for determining

NOTE Confidence: 0.819342970848084

00:44:05.136 --> 00:44:07.161 determining which biologic to use.

NOTE Confidence: 0.819342970848084

00:44:07.170 --> 00:44:09.897 So the origin of the primary tumor was at

NOTE Confidence: 0.819342970848084

00:44:09.897 --> 00:44:13.028 a left sided tumor or right sided tumors.

NOTE Confidence: 0.819342970848084

00:44:13.030 --> 00:44:14.920 So to remind ourselves why Rasen

NOTE Confidence: 0.819342970848084

00:44:14.920 --> 00:44:16.890 rap status is so important.

NOTE Confidence: 0.819342970848084

00:44:16.890 --> 00:44:20.238 We need to go back to the EGFR pathway.

NOTE Confidence: 0.819342970848084

00:44:20.240 --> 00:44:22.472 So EGFR here in this purple

NOTE Confidence: 0.819342970848084

00:44:22.472 --> 00:44:23.960 is upstream of crowds.

NOTE Confidence: 0.819342970848084

00:44:23.960 --> 00:44:25.336 B RAF MEK Erk.

NOTE Confidence: 0.819342970848084

00:44:25.336 --> 00:44:27.400 So in our ask mutated cancer

NOTE Confidence: 0.819342970848084

00:44:27.487 --> 00:44:29.167 or at mutated cancer.

NOTE Confidence: 0.819342970848084

00:44:29.170 --> 00:44:31.402 This is this pathways constituently activated

NOTE Confidence: 0.819342970848084

00:44:31.402 --> 00:44:34.000 below the level of the ship receptor.

NOTE Confidence: 0.819342970848084

00:44:34.000 --> 00:44:35.860 We have drugs syntax Mammon,

NOTE Confidence: 0.819342970848084

00:44:35.860 --> 00:44:37.404 Panitumumab two monoclonal antibodies

NOTE Confidence: 0.819342970848084

00:44:37.404 --> 00:44:40.426 to target EGFR receptor that we add on

NOTE Confidence: 0.819342970848084

00:44:40.426 --> 00:44:42.186 to chemotherapy, so they're effective.

NOTE Confidence: 0.819342970848084

00:44:42.186 --> 00:44:44.790 If this pathway is not constituent active,

NOTE Confidence: 0.819342970848084

00:44:44.790 --> 00:44:45.552 blow it.

NOTE Confidence: 0.819342970848084

00:44:45.552 --> 00:44:47.457 So in a rash wild.

NOTE Confidence: 0.819342970848084

00:44:47.460 --> 00:44:52.014 I porra filetype we add on

NOTE Confidence: 0.819342970848084

00:44:52.014 --> 00:44:54.291 Panitumumab Humanized Monoclonal

NOTE Confidence: 0.819342970848084

00:44:54.291 --> 00:44:58.299 Antibody an and or so or sucks Mad A.

NOTE Confidence: 0.819342970848084

00:44:58.300 --> 00:44:59.377 A chimeric antibody,

NOTE Confidence: 0.819342970848084

00:44:59.377 --> 00:45:01.531 but for the patients that are

NOTE Confidence: 0.819342970848084

00:45:01.531 --> 00:45:02.450 mutated in rats,

NOTE Confidence: 0.819342970848084

00:45:02.450 --> 00:45:04.865 we have to take a different approach.

NOTE Confidence: 0.819342970848084

00:45:04.870 --> 00:45:06.600 So bad this is mab.

NOTE Confidence: 0.819342970848084

00:45:06.600 --> 00:45:08.574 Kevin talked about a little bit

NOTE Confidence: 0.819342970848084

00:45:08.574 --> 00:45:09.890 to monoclonal monoclonal antibody

NOTE Confidence: 0.819342970848084

00:45:09.943 --> 00:45:11.743 against veg that Jeff Vascular

NOTE Confidence: 0.819342970848084

00:45:11.743 --> 00:45:12.823 endothelial growth factor,

NOTE Confidence: 0.819342970848084

00:45:12.830 --> 00:45:15.287 and that's also added on to chemotherapy

NOTE Confidence: 0.819342970848084

00:45:15.287 --> 00:45:17.070 be Rapids become important just

NOTE Confidence: 0.819342970848084

00:45:17.070 --> 00:45:19.056 in the last couple of years.

NOTE Confidence: 0.819342970848084

00:45:19.060 --> 00:45:21.142 Now we have targeted agents for

NOTE Confidence: 0.819342970848084

00:45:21.142 --> 00:45:23.559 that and Grafton if insta tox mad,

NOTE Confidence: 0.819342970848084

00:45:23.560 --> 00:45:25.570 but for the Intents and purposes

NOTE Confidence: 0.819342970848084

00:45:25.570 --> 00:45:28.045 of this stock graph is used as

NOTE Confidence: 0.819342970848084

00:45:28.045 --> 00:45:29.110 a negative prognostic.

NOTE Confidence: 0.819342970848084

00:45:29.110 --> 00:45:30.505 Mutation and most of those

NOTE Confidence: 0.819342970848084

00:45:30.505 --> 00:45:32.340 patients are not can be included

NOTE Confidence: 0.819342970848084

00:45:32.340 --> 00:45:34.245 in the consideration of surgery.

NOTE Confidence: 0.819342970848084

00:45:34.250 --> 00:45:36.326 So why is the mismatch repair

NOTE Confidence: 0.819342970848084

00:45:36.326 --> 00:45:37.364 status so important?

NOTE Confidence: 0.819342970848084

00:45:37.370 --> 00:45:38.590 So to answer that,

NOTE Confidence: 0.819342970848084

00:45:38.590 --> 00:45:40.420 we first have to remember what

NOTE Confidence: 0.819342970848084

00:45:40.485 --> 00:45:42.229 mismatch repair proteins do.

NOTE Confidence: 0.819342970848084

00:45:42.230 --> 00:45:45.970 So Emily age 1:00 PM S 2 Ms H2, and six.

NOTE Confidence: 0.819342970848084

00:45:45.970 --> 00:45:48.140 These are the four most most clinically

NOTE Confidence: 0.819342970848084

00:45:48.140 --> 00:45:49.868 relevant mismatch repair proteins.

NOTE Confidence: 0.819342970848084

00:45:49.870 --> 00:45:51.410 Their function is to follow

NOTE Confidence: 0.819342970848084

00:45:51.410 --> 00:45:52.950 the DNA polymerase machine DNA

NOTE Confidence: 0.819342970848084

00:45:53.006 --> 00:45:54.921 polymerase machinery along as it

NOTE Confidence: 0.819342970848084

00:45:54.921 --> 00:45:56.453 undoubtedly makes some mistakes.

NOTE Confidence: 0.819342970848084

00:45:56.460 --> 00:45:58.889 It fixed these these single base mismatches,

NOTE Confidence: 0.819342970848084

00:45:58.890 --> 00:46:01.319 which are most prevalent in these areas,

NOTE Confidence: 0.819342970848084

00:46:01.320 --> 00:46:02.046 called microsatellites,

NOTE Confidence: 0.819342970848084

00:46:02.046 --> 00:46:03.861 which are dynamically Titan tribe

NOTE Confidence: 0.819342970848084

00:46:03.861 --> 00:46:05.480 nucleotide repeats across the genome.

NOTE Confidence: 0.819342970848084

00:46:05.480 --> 00:46:07.208 You can imagine this DNA machinery.

NOTE Confidence: 0.819342970848084

00:46:07.210 --> 00:46:08.645 It's really caught up on

NOTE Confidence: 0.819342970848084

00:46:08.645 --> 00:46:09.793 all this repetitive DNA.

NOTE Confidence: 0.819342970848084

00:46:09.800 --> 00:46:11.510 Lots of mistakes are made so

NOTE Confidence: 0.819342970848084

00:46:11.510 --> 00:46:13.260 we know when these are lost.

NOTE Confidence: 0.819342970848084

00:46:13.260 --> 00:46:14.795 Tumors have very high tumor

NOTE Confidence: 0.819342970848084

00:46:14.795 --> 00:46:16.330 mutational burden that which leads

NOTE Confidence: 0.798309564590454

00:46:16.388 --> 00:46:17.578 to a lot of Neoantigens.

NOTE Confidence: 0.798309564590454

00:46:17.580 --> 00:46:19.232 We've known for some time that these

NOTE Confidence: 0.798309564590454

00:46:19.232 --> 00:46:21.376 are some of the most sensitive cancers

NOTE Confidence: 0.798309564590454

00:46:21.376 --> 00:46:22.756 to immunostimulatory therapies such

NOTE Confidence: 0.798309564590454

00:46:22.756 --> 00:46:24.778 as anti PD one and four therapies.

NOTE Confidence: 0.798309564590454

00:46:24.780 --> 00:46:27.223 So they've been approved in the refractory

NOTE Confidence: 0.798309564590454

00:46:27.223 --> 00:46:29.650 setting for you for a few years but

NOTE Confidence: 0.798309564590454

00:46:29.650 --> 00:46:31.700 only recently just a few months ago.

NOTE Confidence: 0.798309564590454

00:46:31.700 --> 00:46:33.597 Did we get to see their activity

NOTE Confidence: 0.798309564590454

00:46:33.597 --> 00:46:35.260 in the first line setting?

NOTE Confidence: 0.798309564590454

00:46:35.260 --> 00:46:37.030 You can see very dramatic separation

NOTE Confidence: 0.798309564590454

00:46:37.030 --> 00:46:38.530 of these two curves here.

NOTE Confidence: 0.798309564590454

00:46:38.530 --> 00:46:40.020 Green being Pember Lizum app,

NOTE Confidence: 0.798309564590454

00:46:40.020 --> 00:46:42.684 purple being the chemo arm for a first line.

NOTE Confidence: 0.798309564590454

00:46:42.690 --> 00:46:43.282 Microsatellite instability.

NOTE Confidence: 0.798309564590454

00:46:43.282 --> 00:46:44.170 High collector cancer.

NOTE Confidence: 0.798309564590454

00:46:44.170 --> 00:46:47.440 I mean if we look at the two year mark here,

NOTE Confidence: 0.798309564590454

00:46:47.440 --> 00:46:49.216 you're seeing 48% of patients that

NOTE Confidence: 0.798309564590454

00:46:49.216 --> 00:46:50.104 are microsatellite instability,

NOTE Confidence: 0.798309564590454

00:46:50.110 --> 00:46:51.600 higher progression, free and alive.

NOTE Confidence: 0.798309564590454

00:46:51.600 --> 00:46:54.272 At at two years versus only 19% with chemo.

NOTE Confidence: 0.798309564590454

00:46:54.272 --> 00:46:55.456 But for today's top,

NOTE Confidence: 0.798309564590454

00:46:55.460 --> 00:46:56.950 what's really important to look?

NOTE Confidence: 0.798309564590454

00:46:56.950 --> 00:46:58.410 Actually look at this part

NOTE Confidence: 0.798309564590454

00:46:58.410 --> 00:47:00.510 of the curve on the far left,

NOTE Confidence: 0.798309564590454

00:47:00.510 --> 00:47:01.710 because that's where anybody

NOTE Confidence: 0.798309564590454

00:47:01.710 --> 00:47:03.510 that's going to surgery would be.

NOTE Confidence: 0.798309564590454

00:47:03.510 --> 00:47:06.044 Maybe early on in their treatment journey

NOTE Confidence: 0.798309564590454

00:47:06.044 --> 00:47:09.327 and you can actually see Pembroke behavior.

NOTE Confidence: 0.798309564590454

00:47:09.330 --> 00:47:11.328 A bit more inferior to chemotherapy.

NOTE Confidence: 0.798309564590454

00:47:11.330 --> 00:47:14.327 In this setting in a very rapid drop off,

NOTE Confidence: 0.798309564590454

00:47:14.330 --> 00:47:15.606 even with Pam bro,

NOTE Confidence: 0.798309564590454

00:47:15.606 --> 00:47:18.320 which obviously has a tail on this curve.

NOTE Confidence: 0.798309564590454

00:47:18.320 --> 00:47:20.060 So immunotherapy in the new edge

NOTE Confidence: 0.798309564590454

00:47:20.060 --> 00:47:21.731 of insteading for somebody that's

NOTE Confidence: 0.798309564590454

00:47:21.731 --> 00:47:23.316 initially resectable, for example,

NOTE Confidence: 0.798309564590454

00:47:23.316 --> 00:47:25.647 is definitely not ready for prime time.

NOTE Confidence: 0.798309564590454

00:47:25.650 --> 00:47:27.648 And I think future directions will

NOTE Confidence: 0.798309564590454

00:47:27.648 --> 00:47:28.980 certainly be chemo immunotherapy,

NOTE Confidence: 0.798309564590454

00:47:28.980 --> 00:47:30.645 and hopefully will negate some

NOTE Confidence: 0.798309564590454

00:47:30.645 --> 00:47:32.310 of the early drop off.

NOTE Confidence: 0.798309564590454

00:47:32.310 --> 00:47:33.678 Why is sightedness important?

NOTE Confidence: 0.798309564590454

00:47:33.678 --> 00:47:35.730 So we've known for some time

NOTE Confidence: 0.798309564590454

00:47:35.793 --> 00:47:37.564 that high and got the left sided

NOTE Confidence: 0.798309564590454

00:47:37.564 --> 00:47:39.689 Colon is a different embryologic.

NOTE Confidence: 0.798309564590454

00:47:39.690 --> 00:47:42.014 Origin in the right right colon so

NOTE Confidence: 0.798309564590454

00:47:42.014 --> 00:47:44.249 hindgut for left and got for right.

NOTE Confidence: 0.798309564590454

00:47:44.250 --> 00:47:46.206 Right sided tumors generally worse prognosis,

NOTE Confidence: 0.798309564590454

00:47:46.210 --> 00:47:47.188 more methylated tumors,

NOTE Confidence: 0.798309564590454

00:47:47.188 --> 00:47:48.818 higher beer after some degree.

NOTE Confidence: 0.798309564590454

00:47:48.820 --> 00:47:51.277 Higher crass and left side it more

NOTE Confidence: 0.798309564590454

00:47:51.277 --> 00:47:53.010 than more traditional APC mutations

NOTE Confidence: 0.798309564590454

00:47:53.010 --> 00:47:55.159 in TP 53 mutations and we know

NOTE Confidence: 0.798309564590454

00:47:55.159 --> 00:47:57.285 that even if your rash wild type,

NOTE Confidence: 0.798309564590454

00:47:57.290 --> 00:47:59.030 it matters whether or not you

NOTE Confidence: 0.798309564590454

00:47:59.030 --> 00:48:00.982 respond to a EGFR antibodies such

NOTE Confidence: 0.798309564590454

00:48:00.982 --> 00:48:03.160 as anti tumor map or cetuximab.

NOTE Confidence: 0.798309564590454

00:48:03.160 --> 00:48:05.337 So it's really the rash wildtype left

NOTE Confidence: 0.798309564590454

00:48:05.337 --> 00:48:07.286 sided tumors that we're thinking about

NOTE Confidence: 0.798309564590454

00:48:07.286 --> 00:48:10.020 using these drugs in the first line setting.

NOTE Confidence: 0.798309564590454

00:48:10.020 --> 00:48:12.484 And even if rash while typing right

NOTE Confidence: 0.798309564590454

00:48:12.484 --> 00:48:15.261 sided data SIM it at this is a

NOTE Confidence: 0.798309564590454

00:48:15.261 --> 00:48:16.911 map should still be considered.

NOTE Confidence: 0.798309564590454

00:48:16.920 --> 00:48:19.544 So what are the drugs that we have

NOTE Confidence: 0.798309564590454

00:48:19.544 --> 00:48:22.040 at our disposal to help these

NOTE Confidence: 0.798309564590454

00:48:22.040 --> 00:48:23.800 patients so full Fox?

NOTE Confidence: 0.798309564590454

00:48:23.800 --> 00:48:26.086 We've probably all heard full box,

NOTE Confidence: 0.798309564590454

00:48:26.090 --> 00:48:28.020 full fury, full Fox series.

NOTE Confidence: 0.798309564590454

00:48:28.020 --> 00:48:30.916 And when we use in pancreatic cancer here,

NOTE Confidence: 0.798309564590454

00:48:30.920 --> 00:48:32.003 full fear knocks,

NOTE Confidence: 0.798309564590454

00:48:32.003 --> 00:48:33.808 but they're slightly different approaches.

NOTE Confidence: 0.798309564590454

00:48:33.810 --> 00:48:35.258 So what is folfox?

NOTE Confidence: 0.798309564590454

00:48:35.258 --> 00:48:36.706 So five fluoro uracil,

NOTE Confidence: 0.798309564590454

00:48:36.710 --> 00:48:38.876 which is patented by Charlie Heidelberger.

NOTE Confidence: 0.798309564590454

00:48:38.880 --> 00:48:41.246 I think in 1957 and is still

NOTE Confidence: 0.798309564590454

00:48:41.246 --> 00:48:42.870 around and going strong.

NOTE Confidence: 0.798309564590454

00:48:42.870 --> 00:48:44.802 Is a family space inhibitor so

NOTE Confidence: 0.798309564590454

00:48:44.802 --> 00:48:46.934 you don't have time to look

NOTE Confidence: 0.798309564590454

00:48:46.934 --> 00:48:48.869 around for rapidly dividing cells.

NOTE Confidence: 0.798309564590454

00:48:48.870 --> 00:48:50.635 Luca born potentiates the activity

NOTE Confidence: 0.798309564590454

00:48:50.635 --> 00:48:51.694 of five FU.

NOTE Confidence: 0.798309564590454

00:48:51.700 --> 00:48:53.818 It's a vitamin that we give

NOTE Confidence: 0.798309564590454

00:48:53.818 --> 00:48:55.230 along with the chemotherapy.

NOTE Confidence: 0.798309564590454

00:48:55.230 --> 00:48:57.694 Oxaliplatin is the oxen in full box,

NOTE Confidence: 0.798309564590454

00:48:57.700 --> 00:48:59.982 and that's in platinum agent that causes

NOTE Confidence: 0.798309564590454

00:48:59.982 --> 00:49:02.145 DNA addicts and ultimately results in

NOTE Confidence: 0.798309564590454

00:49:02.145 --> 00:49:04.756 double stranded breaks and are in Attican,

NOTE Confidence: 0.749365627765656

00:49:04.760 --> 00:49:07.624 which is the IRI. In full fury is.

NOTE Confidence: 0.749365627765656

00:49:07.630 --> 00:49:09.436 Ultimately converted into its active form.

NOTE Confidence: 0.749365627765656

00:49:09.440 --> 00:49:10.600 About summarize, one inhibitor,

NOTE Confidence: 0.749365627765656

00:49:10.600 --> 00:49:12.340 SN 38 and ultimately also end

NOTE Confidence: 0.749365627765656

00:49:12.396 --> 00:49:13.966 result is double stranded breaks,

NOTE Confidence: 0.749365627765656

00:49:13.970 --> 00:49:16.386 so these are the main agents we have.

NOTE Confidence: 0.749365627765656

00:49:16.390 --> 00:49:18.148 We started out again with just

NOTE Confidence: 0.749365627765656

00:49:18.148 --> 00:49:20.593 5F U and this is about what we

NOTE Confidence: 0.749365627765656

00:49:20.593 --> 00:49:22.730 were doing back in the early 90s,

NOTE Confidence: 0.749365627765656

00:49:22.730 --> 00:49:25.052 so we had about a median survival of 12

NOTE Confidence: 0.749365627765656

00:49:25.052 --> 00:49:27.257 year for patients with mosaic answer.

NOTE Confidence: 0.749365627765656

00:49:27.260 --> 00:49:29.078 When we started to have doublet

NOTE Confidence: 0.749365627765656

00:49:29.078 --> 00:49:31.189 chemotherapy's in full box and full theory,

NOTE Confidence: 0.749365627765656

00:49:31.190 --> 00:49:33.899 we move this out about the two year mark.

NOTE Confidence: 0.749365627765656

00:49:33.900 --> 00:49:36.316 Now we're really between the two and three,

NOTE Confidence: 0.749365627765656

00:49:36.320 --> 00:49:38.426 or mark or median overall survival.

NOTE Confidence: 0.749365627765656

00:49:38.430 --> 00:49:40.942 For most, for most of our active trials

NOTE Confidence: 0.749365627765656

00:49:40.942 --> 00:49:43.117 with colorectal cancer with folfox theory,

NOTE Confidence: 0.749365627765656

00:49:43.120 --> 00:49:45.479 the triple combination that's a bit more

NOTE Confidence: 0.749365627765656

00:49:45.479 --> 00:49:47.534 toxic and reserved for younger patients

NOTE Confidence: 0.749365627765656

00:49:47.534 --> 00:49:49.816 is about a 32 month median survival,

NOTE Confidence: 0.749365627765656

00:49:49.820 --> 00:49:52.835 so we have to ask ourselves at tumor board,

NOTE Confidence: 0.749365627765656

00:49:52.840 --> 00:49:55.178 what does this patient have it with?

NOTE Confidence: 0.749365627765656

00:49:55.180 --> 00:49:56.328 Cash pathway to cure?

NOTE Confidence: 0.749365627765656

00:49:56.328 --> 00:49:58.870 So what our main goals with chemotherapy?

NOTE Confidence: 0.749365627765656

00:49:58.870 --> 00:50:00.545 We've heard a little bit

NOTE Confidence: 0.749365627765656

00:50:00.545 --> 00:50:01.550 about conversion therapy,

NOTE Confidence: 0.749365627765656

00:50:01.550 --> 00:50:02.886 so converting the unrespectable

NOTE Confidence: 0.749365627765656

00:50:02.886 --> 00:50:04.556 patient to a respectable patient.

NOTE Confidence: 0.749365627765656

00:50:04.560 --> 00:50:06.905 If we have a patient that's upfront,

NOTE Confidence: 0.749365627765656

00:50:06.910 --> 00:50:08.495 resectable chemotherapy can still be

NOTE Confidence: 0.749365627765656

00:50:08.495 --> 00:50:10.660 useful to reduce the surgical complexity.

NOTE Confidence: 0.749365627765656

00:50:10.660 --> 00:50:11.701 Eradicate micrometastatic disease,

NOTE Confidence: 0.749365627765656

00:50:11.701 --> 00:50:13.783 which is also hopefully doing for

NOTE Confidence: 0.749365627765656

00:50:13.783 --> 00:50:15.362 the unrespectable patient and then

NOTE Confidence: 0.749365627765656

00:50:15.362 --> 00:50:17.126 also assess the biology of the

NOTE Confidence: 0.749365627765656

00:50:17.181 --> 00:50:18.629 aggressiveness of the disease.

NOTE Confidence: 0.749365627765656

00:50:18.630 --> 00:50:20.285 Is somebody actually getting a

NOTE Confidence: 0.749365627765656

00:50:20.285 --> 00:50:21.278 response through chemotherapy,

NOTE Confidence: 0.749365627765656

00:50:21.280 --> 00:50:22.940 or they just rapidly progressing?

NOTE Confidence: 0.749365627765656

00:50:22.940 --> 00:50:24.932 That's not a patient you want

NOTE Confidence: 0.749365627765656

00:50:24.932 --> 00:50:25.928 to surgery anyway,

NOTE Confidence: 0.749365627765656

00:50:25.930 --> 00:50:28.099 and if we know that even in the best

NOTE Confidence: 0.749365627765656

00:50:28.099 --> 00:50:29.864 of circumstances the patients never

NOTE Confidence: 0.749365627765656

00:50:29.864 --> 00:50:32.513 going to get to a surgical option

NOTE Confidence: 0.749365627765656

00:50:32.513 --> 00:50:34.895 that the treatment is prolonging life,

NOTE Confidence: 0.749365627765656

00:50:34.900 --> 00:50:36.555 hopefully by controlling disease in

NOTE Confidence: 0.749365627765656

00:50:36.555 --> 00:50:37.879 improving tumor related symptoms,

NOTE Confidence: 0.749365627765656

00:50:37.880 --> 00:50:40.868 so we should think about this as two groups,

NOTE Confidence: 0.749365627765656

00:50:40.870 --> 00:50:41.950 the unrespectable patient.

NOTE Confidence: 0.749365627765656

00:50:41.950 --> 00:50:43.390 And the resectable patients.

NOTE Confidence: 0.749365627765656

00:50:43.390 --> 00:50:45.460 So the upfront receptable patient and

NOTE Confidence: 0.749365627765656

00:50:45.460 --> 00:50:48.157 just there's no right way to integrate

NOTE Confidence: 0.749365627765656

00:50:48.157 --> 00:50:49.829 chemotherapy into these patients.

NOTE Confidence: 0.749365627765656

00:50:49.830 --> 00:50:50.964 By the way,

NOTE Confidence: 0.749365627765656

00:50:50.964 --> 00:50:52.854 different centers take different approaches,

NOTE Confidence: 0.749365627765656

00:50:52.860 --> 00:50:54.750 but there's more nuanced than

NOTE Confidence: 0.749365627765656

00:50:54.750 --> 00:50:55.884 just this slide.

NOTE Confidence: 0.749365627765656

00:50:55.890 --> 00:50:58.550 But when to consider a front reception?

NOTE Confidence: 0.749365627765656

00:50:58.550 --> 00:51:00.440 Generally, for fewer liver metastasis,

NOTE Confidence: 0.749365627765656

00:51:00.440 --> 00:51:01.306 chemotherapy response?

NOTE Confidence: 0.749365627765656

00:51:01.306 --> 00:51:02.172 Not really.

NOTE Confidence: 0.749365627765656

00:51:02.172 --> 00:51:04.337 The surgeon doesn't really think

NOTE Confidence: 0.749365627765656

00:51:04.337 --> 00:51:06.102 chemotherapy response is going to

NOTE Confidence: 0.749365627765656

00:51:06.102 --> 00:51:08.016 lower the complexity of the operation.

NOTE Confidence: 0.749365627765656

00:51:08.020 --> 00:51:10.639 But when do we do it when there's more

NOTE Confidence: 0.749365627765656

00:51:10.639 --> 00:51:13.377 than four suspicious knodel involvement?

NOTE Confidence: 0.749365627765656

00:51:13.380 --> 00:51:14.274 My Liberty disease.

NOTE Confidence: 0.749365627765656

00:51:14.274 --> 00:51:16.360 But again, there's more nuanced to this,

NOTE Confidence: 0.749365627765656

00:51:16.360 --> 00:51:19.033 so we have to we have to take everything.

NOTE Confidence: 0.749365627765656

00:51:19.040 --> 00:51:21.126 Every aspect of the patient into account.

NOTE Confidence: 0.749365627765656

00:51:21.130 --> 00:51:23.506 Do they have a lot of other comorbidities?

NOTE Confidence: 0.749365627765656

00:51:23.510 --> 00:51:25.596 Where if they if they are not

NOTE Confidence: 0.749365627765656

00:51:25.596 --> 00:51:26.490 tolerating chemotherapy well,

NOTE Confidence: 0.749365627765656

00:51:26.490 --> 00:51:27.682 we're expecting significant increase

NOTE Confidence: 0.749365627765656

00:51:27.682 --> 00:51:28.874 in liver liver damage,

NOTE Confidence: 0.749365627765656

00:51:28.880 --> 00:51:30.370 which could complicate in operation?

NOTE Confidence: 0.749365627765656

00:51:30.370 --> 00:51:32.380 Is there reason to suspect that

NOTE Confidence: 0.749365627765656

00:51:32.380 --> 00:51:33.720 they have particularly aggressive

NOTE Confidence: 0.749365627765656

00:51:33.781 --> 00:51:35.765 disease and you want to give him the

NOTE Confidence: 0.749365627765656

00:51:35.765 --> 00:51:37.509 tincture of time on chemotherapy to

NOTE Confidence: 0.749365627765656

00:51:37.509 --> 00:51:39.303 make sure they're not just rapidly

NOTE Confidence: 0.749365627765656

00:51:39.310 --> 00:51:40.978 progressing and you're going to put

NOTE Confidence: 0.749365627765656

00:51:40.978 --> 00:51:42.580 them through an unnecessary operation?

NOTE Confidence: 0.749365627765656

00:51:42.580 --> 00:51:44.778 Did they recently received full Fox for?

NOTE Confidence: 0.749365627765656

00:51:44.780 --> 00:51:47.980 For management of primary primary,

NOTE Confidence: 0.749365627765656

00:51:47.980 --> 00:51:51.688 so could a slight response results

NOTE Confidence: 0.749365627765656

00:51:51.688 --> 00:51:54.160 in maybe converting an

NOTE Confidence: 0.794327676296234

00:51:54.273 --> 00:51:58.827 open reception to a laprascopic reception.

NOTE Confidence: 0.794327676296234

00:51:58.830 --> 00:52:00.245 So what, what chemotherapy do

NOTE Confidence: 0.794327676296234

00:52:00.245 --> 00:52:01.668 we typically use? So again,

NOTE Confidence: 0.794327676296234

00:52:01.668 --> 00:52:03.656 these are patients that could be respected,

NOTE Confidence: 0.794327676296234

00:52:03.660 --> 00:52:05.080 most likely, so full Fox,

NOTE Confidence: 0.794327676296234

00:52:05.080 --> 00:52:05.932 a doublet chemotherapy,

NOTE Confidence: 0.794327676296234

00:52:05.932 --> 00:52:07.352 perhaps with the biologic bevacizumab

NOTE Confidence: 0.794327676296234

00:52:07.352 --> 00:52:08.200 panitumumab receptors amount,

NOTE Confidence: 0.794327676296234

00:52:08.200 --> 00:52:10.328 but the important part is to limit the

NOTE Confidence: 0.794327676296234

00:52:10.328 --> 00:52:12.749 number of chemo cycles as much as possible.

NOTE Confidence: 0.794327676296234

00:52:12.750 --> 00:52:14.703 These patients that can get to surgery

NOTE Confidence: 0.794327676296234

00:52:14.703 --> 00:52:16.717 quickly and should get to surgery quickly,

NOTE Confidence: 0.794327676296234

00:52:16.720 --> 00:52:18.484 and we want to do as little

NOTE Confidence: 0.794327676296234

00:52:18.484 --> 00:52:20.263 damage is possible to the to

NOTE Confidence: 0.794327676296234

00:52:20.263 --> 00:52:21.547 the liver without chemotherapy.

NOTE Confidence: 0.794327676296234

00:52:21.550 --> 00:52:23.405 So we should image patients early and

NOTE Confidence: 0.794327676296234

00:52:23.405 --> 00:52:25.806 as soon as thought as soon as feasible.

NOTE Confidence: 0.794327676296234

00:52:25.810 --> 00:52:27.798 These patients should be taken into surgery.

NOTE Confidence: 0.794327676296234

00:52:27.800 --> 00:52:29.528 We generally plan to do six

NOTE Confidence: 0.794327676296234

00:52:29.528 --> 00:52:30.680 months total of chemotherapy.

NOTE Confidence: 0.794327676296234

00:52:30.680 --> 00:52:32.800 But the rest would be reserved for later.

NOTE Confidence: 0.794327676296234

00:52:32.800 --> 00:52:34.456 So what about the unresectable patient?

NOTE Confidence: 0.794327676296234

00:52:34.460 --> 00:52:36.122 Now this patient can't get this

NOTE Confidence: 0.794327676296234

00:52:36.122 --> 00:52:37.230 surgery without a response,

NOTE Confidence: 0.794327676296234

00:52:37.230 --> 00:52:38.338 so it's a different.

NOTE Confidence: 0.794327676296234

00:52:38.338 --> 00:52:39.446 It's a different approach,

NOTE Confidence: 0.794327676296234

00:52:39.450 --> 00:52:41.389 so we talked a little bit about

NOTE Confidence: 0.794327676296234

00:52:41.389 --> 00:52:42.220 what is undetectable.

NOTE Confidence: 0.794327676296234

00:52:42.220 --> 00:52:42.830 But so,

NOTE Confidence: 0.794327676296234

00:52:42.830 --> 00:52:44.355 how likely is this understandable

NOTE Confidence: 0.794327676296234

00:52:44.355 --> 00:52:46.040 patient going to get going to

NOTE Confidence: 0.794327676296234

00:52:46.040 --> 00:52:47.474 be able to get an operation?

NOTE Confidence: 0.794327676296234

00:52:47.480 --> 00:52:49.013 Perhaps as high as a third 1/3

NOTE Confidence: 0.794327676296234

00:52:49.013 --> 00:52:50.873 of the time that we will get

NOTE Confidence: 0.794327676296234

00:52:50.873 --> 00:52:52.308 enough cited reduction to convert

NOTE Confidence: 0.794327676296234

00:52:52.308 --> 00:52:53.849 this patient to respectable?

NOTE Confidence: 0.794327676296234

00:52:53.850 --> 00:52:55.240 But what regiment is best?

NOTE Confidence: 0.794327676296234

00:52:55.240 --> 00:52:56.896 Again, if you look at guidelines,

NOTE Confidence: 0.794327676296234

00:52:56.900 --> 00:52:58.280 both guidelines are very so.

NOTE Confidence: 0.794327676296234

00:52:58.280 --> 00:52:59.388 The guidelines don't really

NOTE Confidence: 0.794327676296234

00:52:59.388 --> 00:53:00.773 take much of a stand.

NOTE Confidence: 0.794327676296234

00:53:00.780 --> 00:53:02.810 They say Folfox Folfiri Anna tumor map.

NOTE Confidence: 0.794327676296234

00:53:02.810 --> 00:53:04.350 But this is a mad.

NOTE Confidence: 0.794327676296234

00:53:04.350 --> 00:53:06.686 They kind of leave it up to the

NOTE Confidence: 0.794327676296234

00:53:06.686 --> 00:53:07.720 treating oncologists asthma.

NOTE Confidence: 0.794327676296234

00:53:07.720 --> 00:53:08.948 On the other hand,

NOTE Confidence: 0.794327676296234

00:53:08.948 --> 00:53:10.483 takes a more dogmatic approach.

NOTE Confidence: 0.794327676296234

00:53:10.490 --> 00:53:12.450 It says full flux is the recommendation

NOTE Confidence: 0.794327676296234

00:53:12.450 --> 00:53:13.860 or for unresectable metastases.

NOTE Confidence: 0.794327676296234

00:53:13.860 --> 00:53:14.799 Considerable Fox series,

NOTE Confidence: 0.794327676296234

00:53:14.799 --> 00:53:16.364 so that's that's the approach

NOTE Confidence: 0.794327676296234

00:53:16.364 --> 00:53:17.849 that we would take here,

NOTE Confidence: 0.794327676296234

00:53:17.850 --> 00:53:19.435 predominantly in the United States

NOTE Confidence: 0.794327676296234

00:53:19.435 --> 00:53:21.230 that most most centers would do.

NOTE Confidence: 0.794327676296234

00:53:21.230 --> 00:53:22.765 But certainly here at Yale

NOTE Confidence: 0.794327676296234

00:53:22.765 --> 00:53:24.300 for the younger fit patients,

NOTE Confidence: 0.794327676296234

00:53:24.300 --> 00:53:26.449 we would be for an unrespectable patient.

NOTE Confidence: 0.794327676296234

00:53:26.450 --> 00:53:28.340 We would do full foxy reefer.

NOTE Confidence: 0.794327676296234

00:53:28.340 --> 00:53:30.316 This is a map, but for our upfront,

NOTE Confidence: 0.794327676296234

00:53:30.320 --> 00:53:31.548 resectable patients we would

NOTE Confidence: 0.794327676296234

00:53:31.548 --> 00:53:33.390 again just be doing a doublet.

NOTE Confidence: 0.794327676296234

00:53:33.390 --> 00:53:35.388 So I'm going to skip through

NOTE Confidence: 0.794327676296234

00:53:35.388 --> 00:53:37.339 this in the interest of time,

NOTE Confidence: 0.794327676296234

00:53:37.340 --> 00:53:38.656 especially since Kevin showed

NOTE Confidence: 0.794327676296234

00:53:38.656 --> 00:53:40.630 some of the slides are ready.

NOTE Confidence: 0.794327676296234

00:53:40.630 --> 00:53:42.270 So what about our biologics?

NOTE Confidence: 0.794327676296234

00:53:42.270 --> 00:53:44.580 So this is another level of nuance.

NOTE Confidence: 0.794327676296234

00:53:44.580 --> 00:53:46.548 Again, to do our chemotherapy here.

NOTE Confidence: 0.794327676296234

00:53:46.550 --> 00:53:47.534 So we have.

NOTE Confidence: 0.794327676296234

00:53:47.534 --> 00:53:49.502 We have agents such as bad.

NOTE Confidence: 0.794327676296234

00:53:49.510 --> 00:53:51.638 This is a map which is a vascular

NOTE Confidence: 0.794327676296234

00:53:51.638 --> 00:53:53.074 endothelial growth factor antibody

NOTE Confidence: 0.794327676296234

00:53:53.074 --> 00:53:54.778 against speculative growth factor,

NOTE Confidence: 0.794327676296234

00:53:54.780 --> 00:53:56.999 which is created by the tumors and

NOTE Confidence: 0.794327676296234

00:53:56.999 --> 00:53:58.390 stimulates blood vessel growth.

NOTE Confidence: 0.794327676296234

00:53:58.390 --> 00:53:59.710 Because the tumor needs

NOTE Confidence: 0.794327676296234

00:53:59.710 --> 00:54:00.370 increased vascularity,

NOTE Confidence: 0.794327676296234

00:54:00.370 --> 00:54:02.010 so we know that bevacizumab

NOTE Confidence: 0.794327676296234

00:54:02.010 --> 00:54:02.994 increases response rates,

NOTE Confidence: 0.794327676296234

00:54:03.000 --> 00:54:04.670 but it can potentially increase

NOTE Confidence: 0.794327676296234

00:54:04.670 --> 00:54:05.338 perioperative complications.

NOTE Confidence: 0.794327676296234

00:54:05.340 --> 00:54:07.464 We see vascular events such as

NOTE Confidence: 0.794327676296234

00:54:07.464 --> 00:54:09.234 such as arterial thrombi, Venus,

NOTE Confidence: 0.794327676296234

00:54:09.234 --> 00:54:10.650 thrombi, on occasion perforations,

NOTE Confidence: 0.794327676296234

00:54:10.650 --> 00:54:13.128 but the big concern is wound healing,

NOTE Confidence: 0.794327676296234

00:54:13.130 --> 00:54:14.970 so we generally would hold

NOTE Confidence: 0.794327676296234

00:54:14.970 --> 00:54:16.442 bevacizumab within six weeks

NOTE Confidence: 0.794327676296234

00:54:16.442 --> 00:54:18.077 prior to any server dream.

NOTE Confidence: 0.794327676296234

00:54:18.080 --> 00:54:20.355 There is some data that supports it

NOTE Confidence: 0.794327676296234

00:54:20.355 --> 00:54:23.038 up to four weeks prior to surgery,

NOTE Confidence: 0.794327676296234

00:54:23.040 --> 00:54:25.378 but but the concern is how you

NOTE Confidence: 0.794327676296234

00:54:25.378 --> 00:54:27.829 when you hold it preoperatively.

NOTE Confidence: 0.794327676296234

00:54:27.830 --> 00:54:30.217 So this is actually been looked at.

NOTE Confidence: 0.777625679969788

00:54:30.220 --> 00:54:32.146 The addition of bevacizumab in systemic

NOTE Confidence: 0.777625679969788

00:54:32.146 --> 00:54:33.990 therapy for unresectable liver metastasis.

NOTE Confidence: 0.777625679969788

00:54:33.990 --> 00:54:36.244 So we have a cohort of patients

NOTE Confidence: 0.777625679969788

00:54:36.244 --> 00:54:38.430 here split up into two groups.

NOTE Confidence: 0.777625679969788

00:54:38.430 --> 00:54:40.005 These are all kras mutated

NOTE Confidence: 0.777625679969788

00:54:40.005 --> 00:54:41.580 patients or patients that are

NOTE Confidence: 0.777625679969788

00:54:41.642 --> 00:54:43.218 perfect fit for bevacizumab.

NOTE Confidence: 0.777625679969788

00:54:43.220 --> 00:54:44.865 So full blocks plus bevacizumab

NOTE Confidence: 0.777625679969788

00:54:44.865 --> 00:54:46.980 in arm a in Folfox alone.

NOTE Confidence: 0.777625679969788

00:54:46.980 --> 00:54:49.716 In R&B you can see that the reception,

NOTE Confidence: 0.777625679969788

00:54:49.720 --> 00:54:52.107 the rate of R0 Resection complete resection,

NOTE Confidence: 0.777625679969788

00:54:52.110 --> 00:54:53.820 22 verses about 6% without

NOTE Confidence: 0.777625679969788

00:54:53.820 --> 00:54:55.530 the berbasis matters so very,

NOTE Confidence: 0.777625679969788

00:54:55.530 --> 00:54:56.898 very big difference about

NOTE Confidence: 0.777625679969788

00:54:56.898 --> 00:54:58.266 getting to surgery there.

NOTE Confidence: 0.777625679969788

00:54:58.270 --> 00:55:00.755 What about progression free survival 9 1/2

NOTE Confidence: 0.777625679969788

00:55:00.755 --> 00:55:03.094 months median versus about 5 1/2 months

NOTE Confidence: 0.777625679969788

00:55:03.094 --> 00:55:05.260 median favoring Bevis is maben blue here.

NOTE Confidence: 0.777625679969788

00:55:05.260 --> 00:55:06.930 Same thing with overall survival.

NOTE Confidence: 0.777625679969788

00:55:06.930 --> 00:55:08.262 Less less striking difference

NOTE Confidence: 0.777625679969788

00:55:08.262 --> 00:55:09.927 about 25 versus 20 months.

NOTE Confidence: 0.777625679969788

00:55:09.930 --> 00:55:11.154 Both are statistically significant.

NOTE Confidence: 0.777625679969788

00:55:11.154 --> 00:55:14.016 So bad this is a map should be used

NOTE Confidence: 0.777625679969788

00:55:14.016 --> 00:55:15.948 in the Peri operative management with

NOTE Confidence: 0.777625679969788

00:55:15.948 --> 00:55:18.249 Folfox 4 correct meeting liver metastases.

NOTE Confidence: 0.777625679969788

00:55:18.250 --> 00:55:20.248 What about the EGFR antibody face?

NOTE Confidence: 0.777625679969788

00:55:20.250 --> 00:55:22.272 These are highly effective therapies for

NOTE Confidence: 0.777625679969788

00:55:22.272 --> 00:55:24.239 patients that are crashed while type.

NOTE Confidence: 0.777625679969788

00:55:24.240 --> 00:55:26.459 You think you think we see a

NOTE Confidence: 0.777625679969788

00:55:26.459 --> 00:55:28.239 similar a similar story here.

NOTE Confidence: 0.777625679969788

00:55:28.240 --> 00:55:29.428 In fact, we're.

NOTE Confidence: 0.777625679969788

00:55:29.428 --> 00:55:31.484 In exact opposite, so again,

NOTE Confidence: 0.777625679969788

00:55:31.484 --> 00:55:33.644 we have two groups here.

NOTE Confidence: 0.777625679969788

00:55:33.650 --> 00:55:36.248 This is a new epoch study,

NOTE Confidence: 0.777625679969788

00:55:36.250 --> 00:55:37.549 split into chemotherapy,

NOTE Confidence: 0.777625679969788

00:55:37.549 --> 00:55:38.848 perioperatively before and

NOTE Confidence: 0.777625679969788

00:55:38.848 --> 00:55:40.580 after surgery with cetuximab,

NOTE Confidence: 0.777625679969788

00:55:40.580 --> 00:55:42.360 an without stuck some,

NOTE Confidence: 0.777625679969788

00:55:42.360 --> 00:55:46.238 and so without cytoxan map is here in blue.

NOTE Confidence: 0.777625679969788

00:55:46.240 --> 00:55:47.380 Progression free survival curve

NOTE Confidence: 0.777625679969788

00:55:47.380 --> 00:55:49.880 here so you can see the red group

NOTE Confidence: 0.777625679969788

00:55:49.880 --> 00:55:51.352 chemotherapy plastic doing inferior

NOTE Confidence: 0.777625679969788

00:55:51.352 --> 00:55:53.190 to the chemotherapy alone group.

NOTE Confidence: 0.777625679969788

00:55:53.190 --> 00:55:54.850 Same thing with overall survival.

NOTE Confidence: 0.777625679969788

00:55:54.850 --> 00:55:55.843 What's really interesting?

NOTE Confidence: 0.777625679969788

00:55:55.843 --> 00:55:57.829 If you look at these curves,

NOTE Confidence: 0.777625679969788

00:55:57.830 --> 00:56:00.470 these are these are the Times of surgery,

NOTE Confidence: 0.777625679969788

00:56:00.470 --> 00:56:02.456 so this curve have not separated.

NOTE Confidence: 0.777625679969788

00:56:02.460 --> 00:56:03.513 They separate later.

NOTE Confidence: 0.777625679969788

00:56:03.513 --> 00:56:05.268 An obvious explanation to this

NOTE Confidence: 0.777625679969788

00:56:05.268 --> 00:56:07.087 oh would be an awesome app.

NOTE Confidence: 0.777625679969788

00:56:07.090 --> 00:56:08.745 Is creating some increase in

NOTE Confidence: 0.777625679969788

00:56:08.745 --> 00:56:09.407 perioperative complications?

NOTE Confidence: 0.777625679969788

00:56:09.410 --> 00:56:11.506 But that's not the case and the fact

NOTE Confidence: 0.777625679969788

00:56:11.506 --> 00:56:13.694 that the changes in progression free

NOTE Confidence: 0.777625679969788

00:56:13.694 --> 00:56:15.699 and overall survival happened later

NOTE Confidence: 0.777625679969788

00:56:15.699 --> 00:56:17.665 again speaks to. They did that.

NOTE Confidence: 0.777625679969788

00:56:17.665 --> 00:56:19.190 It's not an actual increase

NOTE Confidence: 0.777625679969788

00:56:19.190 --> 00:56:20.680 in proper complications.

NOTE Confidence: 0.777625679969788

00:56:20.680 --> 00:56:21.003 Frankly,

NOTE Confidence: 0.777625679969788

00:56:21.003 --> 00:56:22.941 I haven't seen any good explanation

NOTE Confidence: 0.777625679969788

00:56:22.941 --> 00:56:25.161 for why this we're seeing these

NOTE Confidence: 0.777625679969788

00:56:25.161 --> 00:56:26.749 these these confusing results,

NOTE Confidence: 0.777625679969788

00:56:26.750 --> 00:56:28.997 but I think we should proceed with

NOTE Confidence: 0.777625679969788

00:56:28.997 --> 00:56:30.840 caution when using our bodies

NOTE Confidence: 0.777625679969788

00:56:30.840 --> 00:56:32.460 in the perioperative setting.

NOTE Confidence: 0.777625679969788

00:56:32.460 --> 00:56:34.875 I think a lot of my colleagues

NOTE Confidence: 0.777625679969788

00:56:34.875 --> 00:56:36.739 have not bought into this,

NOTE Confidence: 0.777625679969788

00:56:36.740 --> 00:56:38.744 and I again uncertain on the

NOTE Confidence: 0.777625679969788

00:56:38.744 --> 00:56:40.535 rest of the biological rationale

NOTE Confidence: 0.777625679969788

00:56:40.535 --> 00:56:42.445 of why we're seeing this,

NOTE Confidence: 0.777625679969788

00:56:42.450 --> 00:56:44.235 but it's a very striking

NOTE Confidence: 0.777625679969788

00:56:44.235 --> 00:56:45.306 overall survival difference.

NOTE Confidence: 0.777625679969788

00:56:45.310 --> 00:56:46.650 It's almost three years.

NOTE Confidence: 0.777625679969788

00:56:46.650 --> 00:56:47.655 Median overall survival

NOTE Confidence: 0.777625679969788

00:56:47.655 --> 00:56:49.140 difference without the antibody.

NOTE Confidence: 0.777625679969788

00:56:49.140 --> 00:56:50.217 So chemotherapy associated

NOTE Confidence: 0.777625679969788

00:56:50.217 --> 00:56:52.012 liver diseases will close on

NOTE Confidence: 0.777625679969788

00:56:52.012 --> 00:56:53.897 South are drugs can do damage.

NOTE Confidence: 0.777625679969788

00:56:53.900 --> 00:56:56.717 That's why the name that our approach is to

NOTE Confidence: 0.777625679969788

00:56:56.717 --> 00:56:59.338 limit the number of cycles when feasible,

NOTE Confidence: 0.777625679969788

00:56:59.340 --> 00:57:00.020 so Oxaliplatin,

NOTE Confidence: 0.777625679969788

00:57:00.020 --> 00:57:01.380 cut static sinusoidal abnormalities.

NOTE Confidence: 0.777625679969788

00:57:01.380 --> 00:57:03.270 You can see the dilations here in

NOTE Confidence: 0.777625679969788

00:57:03.270 --> 00:57:05.082 light of these sinusoids that directly

NOTE Confidence: 0.777625679969788

00:57:05.082 --> 00:57:07.287 from oxide Platt and you can see

NOTE Confidence: 0.777625679969788

00:57:07.343 --> 00:57:09.200 nodular regenerative hyperplasia.

NOTE Confidence: 0.777625679969788

00:57:09.200 --> 00:57:11.240 This, like lighter pink nodule here.

NOTE Confidence: 0.777625679969788

00:57:11.240 --> 00:57:12.940 Crowding out the more healthy

NOTE Confidence: 0.777625679969788

00:57:12.940 --> 00:57:13.960 liver tissue here,

NOTE Confidence: 0.777625679969788

00:57:13.960 --> 00:57:15.320 which creates noncirrhotic portal

NOTE Confidence: 0.777625679969788

00:57:15.320 --> 00:57:16.713 hypertension, both from Oxaliplatin,

NOTE Confidence: 0.777625679969788

00:57:16.713 --> 00:57:17.766 where Uniti Concuss.

NOTE Confidence: 0.777625679969788

00:57:17.770 --> 00:57:19.185 Seattle hepatitis so fatty fatty

NOTE Confidence: 0.777625679969788

00:57:19.185 --> 00:57:20.890 infiltration and inflammation of the liver.

NOTE Confidence: 0.777625679969788

00:57:20.890 --> 00:57:22.026 Here very severe case,

NOTE Confidence: 0.777625679969788

00:57:22.026 --> 00:57:23.730 and the less of your case.

NOTE Confidence: 0.797431170940399

00:57:23.730 --> 00:57:25.440 But frankly there shouldn't be fact.

NOTE Confidence: 0.797431170940399

00:57:25.440 --> 00:57:26.992 Neither of these images.

NOTE Confidence: 0.797431170940399

00:57:26.992 --> 00:57:28.544 So in in conclusion,

NOTE Confidence: 0.797431170940399

00:57:28.550 --> 00:57:30.260 we took the talked about the

NOTE Confidence: 0.797431170940399

00:57:30.260 --> 00:57:31.400 importance of molecular results.

NOTE Confidence: 0.797431170940399

00:57:31.400 --> 00:57:33.038 Those are things that need to be

NOTE Confidence: 0.797431170940399

00:57:33.038 --> 00:57:35.063 sent on every patient so that the

NOTE Confidence: 0.797431170940399

00:57:35.063 --> 00:57:36.643 medical oncologist can know what

NOTE Confidence: 0.797431170940399

00:57:36.643 --> 00:57:38.239 treatment approach should be done.

NOTE Confidence: 0.797431170940399

00:57:38.240 --> 00:57:39.292 The role of sightedness,

NOTE Confidence: 0.797431170940399

00:57:39.292 --> 00:57:40.607 our approach to the unrespectable

NOTE Confidence: 0.797431170940399

00:57:40.607 --> 00:57:41.950 in the upfront respectable,

NOTE Confidence: 0.797431170940399

00:57:41.950 --> 00:57:44.506 and some of the damage our agents can do.

NOTE Confidence: 0.797431170940399

00:57:44.510 --> 00:57:45.650 Thank you so much.

NOTE Confidence: 0.894135177135468

00:57:48.500 --> 00:57:54.222 Michael, thank you for high speed yet

NOTE Confidence: 0.894135177135468

00:57:54.222 --> 00:57:57.470 incredibly comprehensive overview of

NOTE Confidence: 0.894135177135468

00:57:57.597 --> 00:58:02.967 rapidly evolving and complicated field and.

NOTE Confidence: 0.894135177135468

00:58:02.970 --> 00:58:06.538 David, I want to thank you as well.

NOTE Confidence: 0.894135177135468

00:58:06.540 --> 00:58:11.013 Given the time, I don't think we have much

NOTE Confidence: 0.894135177135468

00:58:11.013 --> 00:58:14.435 leftover for discussion, I would just.

NOTE Confidence: 0.894135177135468

00:58:14.435 --> 00:58:17.620 Close by saying that this is an

NOTE Confidence: 0.894135177135468

00:58:17.725 --> 00:58:21.469 incredibly exciting field to work in,

NOTE Confidence: 0.894135177135468

00:58:21.470 --> 00:58:24.606 I think the overview that my partners

NOTE Confidence: 0.894135177135468

00:58:24.606 --> 00:58:27.599 have given gives the audience a

NOTE Confidence: 0.894135177135468

00:58:27.599 --> 00:58:30.731 sense of the enormous complexity yet

NOTE Confidence: 0.894135177135468

00:58:30.731 --> 00:58:33.499 opportunity involved for our patients.

NOTE Confidence: 0.894135177135468

00:58:33.500 --> 00:58:37.360 And I think for all of us who work together,

NOTE Confidence: 0.894135177135468

00:58:37.360 --> 00:58:39.370 it is yet another call.

NOTE Confidence: 0.894135177135468

00:58:39.370 --> 00:58:42.436 For an extraordinary level of teamwork,

NOTE Confidence: 0.894135177135468

00:58:42.440 --> 00:58:43.460 integration, communication,

NOTE Confidence: 0.894135177135468

00:58:43.460 --> 00:58:47.540 all of these clinical services have to be

NOTE Confidence: 0.894135177135468

00:58:47.617 --> 00:58:50.242 linked together by meticulous communication

NOTE Confidence: 0.894135177135468

00:58:50.242 --> 00:58:53.892 between us is clinicians as well as

NOTE Confidence: 0.894135177135468

00:58:53.892 --> 00:58:56.267 our nurses and administrative Staffs.

NOTE Confidence: 0.894135177135468

00:58:56.270 --> 00:58:59.654 As we kind of navigate care

NOTE Confidence: 0.894135177135468

00:58:59.654 --> 00:59:02.770 throughout a very complex system.

NOTE Confidence: 0.894135177135468

00:59:02.770 --> 00:59:04.270 Charlie, anything to add.

NOTE Confidence: 0.875126302242279

00:59:04.270 --> 00:59:06.874 Oh, I just want to thank David,

NOTE Confidence: 0.875126302242279

00:59:06.880 --> 00:59:08.750 Michael and Kevin for really

NOTE Confidence: 0.875126302242279

00:59:08.750 --> 00:59:10.246 just a brilliant discussion.

NOTE Confidence: 0.875126302242279

00:59:10.250 --> 00:59:12.489 And thank you for your leadership,

NOTE Confidence: 0.875126302242279

00:59:12.490 --> 00:59:14.440 your collaboration and building a

NOTE Confidence: 0.875126302242279

00:59:14.440 --> 00:59:16.979 team around a pivotal area of care,

NOTE Confidence: 0.875126302242279

00:59:16.980 --> 00:59:19.338 research and thanks everyone for joining

NOTE Confidence: 0.875126302242279

00:59:19.338 --> 00:59:22.717 us and think giving us a lot to think

NOTE Confidence: 0.875126302242279

00:59:22.717 --> 00:59:24.452 about and really exciting progress.