

WEBVTT

NOTE duration:"00:19:19"

NOTE recognizability:0.817

NOTE language:en-us

NOTE Confidence: 0.855847522857143

00:00:11.480 --> 00:00:13.895 Welcome back, this session is being recorded.

NOTE Confidence: 0.826405711

00:00:18.430 --> 00:00:19.717 Hello, welcome back.

NOTE Confidence: 0.826405711

00:00:19.717 --> 00:00:22.720 My name is Chen Liu from pathology.

NOTE Confidence: 0.826405711

00:00:22.720 --> 00:00:24.890 It is my pleasure to

NOTE Confidence: 0.826405711

00:00:24.890 --> 00:00:26.626 introduce the next speaker,

NOTE Confidence: 0.826405711

00:00:26.630 --> 00:00:29.198 doctor David Medoff and Doctor Medoff

NOTE Confidence: 0.826405711

00:00:29.198 --> 00:00:32.397 is a professor of radiology and he's

NOTE Confidence: 0.826405711

00:00:32.397 --> 00:00:35.199 also the vice Chair for clinical

NOTE Confidence: 0.826405711

00:00:35.199 --> 00:00:38.477 research and the section chief for

NOTE Confidence: 0.826405711

00:00:38.477 --> 00:00:41.202 interventional radiology of useful medicine.

NOTE Confidence: 0.826405711

00:00:41.210 --> 00:00:43.919 So today he's going to talk about

NOTE Confidence: 0.826405711

00:00:43.919 --> 00:00:45.846 is interventional hepatology.

NOTE Confidence: 0.826405711

00:00:45.846 --> 00:00:49.686 Welcome, David, now is yours.

NOTE Confidence: 0.946258976666667

00:00:54.060 --> 00:00:56.240 Can you see? Yes, we can see it.  
NOTE Confidence: 0.799432222857143

00:00:59.380 --> 00:01:00.564 OK, so thanks Chen.  
NOTE Confidence: 0.799432222857143

00:01:00.564 --> 00:01:02.779 I would like to thank Mike Mario  
NOTE Confidence: 0.799432222857143

00:01:02.779 --> 00:01:04.614 and the Planning Committee for  
NOTE Confidence: 0.799432222857143

00:01:04.614 --> 00:01:06.540 inviting me to speak today.  
NOTE Confidence: 0.799432222857143

00:01:06.540 --> 00:01:08.804 I am truly honored to serve as faculty  
NOTE Confidence: 0.799432222857143

00:01:08.804 --> 00:01:11.300 for Yale Liver Center's Diamond Jubilee,  
NOTE Confidence: 0.799432222857143

00:01:11.300 --> 00:01:12.540 a major notable achievement.  
NOTE Confidence: 0.799432222857143

00:01:12.540 --> 00:01:14.807 My role today is to introduce the  
NOTE Confidence: 0.799432222857143

00:01:14.807 --> 00:01:16.199 topic of interventional hepatology  
NOTE Confidence: 0.799432222857143

00:01:16.199 --> 00:01:18.740 and how it is incorporated into the  
NOTE Confidence: 0.799432222857143

00:01:18.740 --> 00:01:20.236 algorithm for treating patients  
NOTE Confidence: 0.799432222857143

00:01:20.236 --> 00:01:22.028 with hepatobiliary disease at Yale.  
NOTE Confidence: 0.799432222857143

00:01:22.028 --> 00:01:24.332 I must admit that I was a little  
NOTE Confidence: 0.799432222857143

00:01:24.332 --> 00:01:25.880 nervous to talk about this,  
NOTE Confidence: 0.799432222857143

00:01:25.880 --> 00:01:28.169 given the title, as I wasn't planning

NOTE Confidence: 0.799432222857143  
00:01:28.169 --> 00:01:30.438 to devise and discuss a paradigm.  
NOTE Confidence: 0.799432222857143  
00:01:30.440 --> 00:01:32.770 For an entirely new field  
NOTE Confidence: 0.799432222857143  
00:01:32.770 --> 00:01:34.168 of interventional medicine,  
NOTE Confidence: 0.799432222857143  
00:01:34.170 --> 00:01:35.874 fortunately I was asked to focus  
NOTE Confidence: 0.799432222857143  
00:01:35.874 --> 00:01:37.670 on how IR interacts with cells.  
NOTE Confidence: 0.799432222857143  
00:01:37.670 --> 00:01:38.159 Multidisciplinary,  
NOTE Confidence: 0.799432222857143  
00:01:38.159 --> 00:01:39.626 hepatobiliary care team,  
NOTE Confidence: 0.799432222857143  
00:01:39.626 --> 00:01:43.190 and manage many of the most complex,  
NOTE Confidence: 0.799432222857143  
00:01:43.190 --> 00:01:44.994 challenging and sickest patients  
NOTE Confidence: 0.799432222857143  
00:01:44.994 --> 00:01:47.249 we see here at Yale.  
NOTE Confidence: 0.799432222857143  
00:01:47.250 --> 00:01:47.739 Therefore,  
NOTE Confidence: 0.799432222857143  
00:01:47.739 --> 00:01:50.184 despite the considerable amount of  
NOTE Confidence: 0.799432222857143  
00:01:50.184 --> 00:01:52.503 basic and translational research that  
NOTE Confidence: 0.799432222857143  
00:01:52.503 --> 00:01:54.895 we're doing at Yale and in this field,  
NOTE Confidence: 0.799432222857143  
00:01:54.900 --> 00:01:57.413 I will focus today on its clinical  
NOTE Confidence: 0.799432222857143

00:01:57.413 --> 00:01:59.397 aspects and highlight them by  
NOTE Confidence: 0.799432222857143

00:01:59.397 --> 00:02:01.065 showing some interesting cases.  
NOTE Confidence: 0.774202038

00:02:07.360 --> 00:02:09.880 So what is interventional hepatology?  
NOTE Confidence: 0.774202038

00:02:09.880 --> 00:02:11.146 Although there has been 80 years  
NOTE Confidence: 0.774202038

00:02:11.146 --> 00:02:13.106 of the battle, biliary imaging for  
NOTE Confidence: 0.774202038

00:02:13.106 --> 00:02:14.874 both diagnosis and intervention,  
NOTE Confidence: 0.774202038

00:02:14.880 --> 00:02:17.048 it has not been formally defined like it  
NOTE Confidence: 0.774202038

00:02:17.048 --> 00:02:20.086 has been for interventional oncology to me,  
NOTE Confidence: 0.774202038

00:02:20.086 --> 00:02:21.978 interventional hepatology is subspecialty  
NOTE Confidence: 0.774202038

00:02:21.978 --> 00:02:24.954 of IR that utilizes minimally invasive  
NOTE Confidence: 0.774202038

00:02:24.954 --> 00:02:27.489 image guided procedures to diagnose  
NOTE Confidence: 0.774202038

00:02:27.489 --> 00:02:30.109 and treat patients with various  
NOTE Confidence: 0.774202038

00:02:30.109 --> 00:02:32.149 forms of hepatobiliary disease.  
NOTE Confidence: 0.774202038

00:02:32.150 --> 00:02:34.350 Clearly there is some overlap  
NOTE Confidence: 0.774202038

00:02:34.350 --> 00:02:35.670 with interventional oncology,  
NOTE Confidence: 0.774202038

00:02:35.670 --> 00:02:38.100 such as treating tumors like

NOTE Confidence: 0.774202038

00:02:38.100 --> 00:02:40.044 HCC and Colangelo carcinoma,

NOTE Confidence: 0.774202038

00:02:40.050 --> 00:02:42.250 but there are also areas that don't overlap,

NOTE Confidence: 0.774202038

00:02:42.250 --> 00:02:44.714 such as managing the sequelae of portal

NOTE Confidence: 0.774202038

00:02:44.714 --> 00:02:47.104 hypertension, benign biliary strictures,

NOTE Confidence: 0.774202038

00:02:47.104 --> 00:02:50.730 destroy malformations, and trauma.

NOTE Confidence: 0.774202038

00:02:50.730 --> 00:02:52.230 And in terms of training,

NOTE Confidence: 0.774202038

00:02:52.230 --> 00:02:53.847 many in the audience may not be

NOTE Confidence: 0.774202038

00:02:53.847 --> 00:02:55.628 aware that IR is now a formalized,

NOTE Confidence: 0.774202038

00:02:55.630 --> 00:02:58.350 a CGM accredited categorical residency,

NOTE Confidence: 0.774202038

00:02:58.350 --> 00:03:00.280 where medical students can now

NOTE Confidence: 0.774202038

00:03:00.280 --> 00:03:01.824 match directly into it.

NOTE Confidence: 0.774202038

00:03:01.830 --> 00:03:03.965 Residents have a one year clinical internship

NOTE Confidence: 0.774202038

00:03:03.965 --> 00:03:05.870 followed by five years of radiology,

NOTE Confidence: 0.774202038

00:03:05.870 --> 00:03:08.198 with the final two years dedicated

NOTE Confidence: 0.774202038

00:03:08.198 --> 00:03:09.362 to interventional radiology.

NOTE Confidence: 0.774202038

00:03:09.370 --> 00:03:10.561 Imaging, of course,  
NOTE Confidence: 0.774202038

00:03:10.561 --> 00:03:13.288 is a critical component to training as  
NOTE Confidence: 0.774202038

00:03:13.288 --> 00:03:15.654 our patient as the patients we treat  
NOTE Confidence: 0.774202038

00:03:15.654 --> 00:03:18.523 and the procedures we offer require a  
NOTE Confidence: 0.774202038

00:03:18.523 --> 00:03:21.509 deep understanding of how the images are.  
NOTE Confidence: 0.774202038

00:03:21.510 --> 00:03:22.646 Gained, interpreted,  
NOTE Confidence: 0.774202038

00:03:22.646 --> 00:03:24.918 and ultimately used interprocedural.  
NOTE Confidence: 0.774202038

00:03:24.920 --> 00:03:27.590 Clearly you understanding of complex  
NOTE Confidence: 0.774202038

00:03:27.590 --> 00:03:29.726 Physiology is also important.  
NOTE Confidence: 0.774202038

00:03:29.730 --> 00:03:31.370 And yeah, it was part of their internship.  
NOTE Confidence: 0.774202038

00:03:31.370 --> 00:03:33.854 Our residents rotate on the classifying  
NOTE Confidence: 0.774202038

00:03:33.854 --> 00:03:36.685 service and IR residents as well as  
NOTE Confidence: 0.774202038

00:03:36.685 --> 00:03:38.887 faculty take part in inpatient consults,  
NOTE Confidence: 0.774202038

00:03:38.890 --> 00:03:39.882 outpatient clinics,  
NOTE Confidence: 0.774202038

00:03:39.882 --> 00:03:41.370 liver tumor boards,  
NOTE Confidence: 0.774202038

00:03:41.370 --> 00:03:43.494 and portal hypertension conferences.

NOTE Confidence: 0.774202038

00:03:43.494 --> 00:03:46.149 We also recently implemented the

NOTE Confidence: 0.774202038

00:03:46.149 --> 00:03:48.490 nation's first IR night float system

NOTE Confidence: 0.774202038

00:03:48.490 --> 00:03:51.035 so patients can be seen and evaluated

NOTE Confidence: 0.774202038

00:03:51.035 --> 00:03:53.979 rapidly even in the middle of the night.

NOTE Confidence: 0.774202038

00:03:53.980 --> 00:03:54.820 So at Yale,

NOTE Confidence: 0.774202038

00:03:54.820 --> 00:03:56.500 we have 17 clinical IR faculty

NOTE Confidence: 0.774202038

00:03:56.500 --> 00:03:58.885 who help in providing the most

NOTE Confidence: 0.774202038

00:03:58.885 --> 00:04:00.517 comprehensive care possible for

NOTE Confidence: 0.774202038

00:04:00.517 --> 00:04:02.816 patients with a paddle biliary disease.

NOTE Confidence: 0.774202038

00:04:02.820 --> 00:04:04.828 Here you can see a long list of

NOTE Confidence: 0.774202038

00:04:04.828 --> 00:04:05.959 procedures performed by our team,

NOTE Confidence: 0.774202038

00:04:05.960 --> 00:04:07.480 which ranged from pretentious

NOTE Confidence: 0.774202038

00:04:07.480 --> 00:04:08.240 or transcellular.

NOTE Confidence: 0.774202038

00:04:08.240 --> 00:04:11.640 Image guided biopsy, tumor therapy,

NOTE Confidence: 0.774202038

00:04:11.640 --> 00:04:12.832 palliative procedures,

NOTE Confidence: 0.774202038

00:04:12.832 --> 00:04:14.620 central venous access,  
NOTE Confidence: 0.774202038

00:04:14.620 --> 00:04:15.932 and managing complications like  
NOTE Confidence: 0.774202038

00:04:15.932 --> 00:04:17.244 those seen after transplant,  
NOTE Confidence: 0.774202038

00:04:17.250 --> 00:04:18.010 their resection,  
NOTE Confidence: 0.774202038

00:04:18.010 --> 00:04:20.670 or simply as a result of their  
NOTE Confidence: 0.774202038

00:04:20.670 --> 00:04:22.039 underlying liver disease.  
NOTE Confidence: 0.774202038

00:04:22.040 --> 00:04:23.482 So let's start with understanding how we  
NOTE Confidence: 0.774202038

00:04:23.482 --> 00:04:25.377 can help in the management of liver cancer.  
NOTE Confidence: 0.774202038

00:04:25.380 --> 00:04:27.564 There are three key goals we  
NOTE Confidence: 0.774202038

00:04:27.564 --> 00:04:30.150 are which are potential for cure  
NOTE Confidence: 0.774202038

00:04:30.150 --> 00:04:32.254 conversion of unacceptability to  
NOTE Confidence: 0.774202038

00:04:32.254 --> 00:04:34.358 resectability and for palliation.  
NOTE Confidence: 0.774202038

00:04:34.360 --> 00:04:37.176 How we decide depends on the tumor Histology,  
NOTE Confidence: 0.774202038

00:04:37.180 --> 00:04:38.720 the number and location of  
NOTE Confidence: 0.774202038

00:04:38.720 --> 00:04:39.952 tumors within the liver,  
NOTE Confidence: 0.774202038

00:04:39.960 --> 00:04:42.240 the extent of underlying liver disease,

NOTE Confidence: 0.774202038

00:04:42.240 --> 00:04:44.790 and the presence or absence

NOTE Confidence: 0.774202038

00:04:44.790 --> 00:04:46.320 of extrahepatic disease.

NOTE Confidence: 0.774202038

00:04:46.320 --> 00:04:48.056 So I wanted to start by discussing

NOTE Confidence: 0.774202038

00:04:48.056 --> 00:04:50.228 one method by which we can convert

NOTE Confidence: 0.774202038

00:04:50.228 --> 00:04:51.938 unresectable patients to resectable by

NOTE Confidence: 0.774202038

00:04:51.938 --> 00:04:53.937 simply manipulating the livers portal.

NOTE Confidence: 0.774202038

00:04:53.940 --> 00:04:55.720 Blood flow with the procedural

NOTE Confidence: 0.774202038

00:04:55.720 --> 00:04:57.500 portal vein embolization in patients

NOTE Confidence: 0.774202038

00:04:57.553 --> 00:04:59.223 whose surgery will leave them

NOTE Confidence: 0.774202038

00:04:59.223 --> 00:05:00.893 with an inadequate remnant liver,

NOTE Confidence: 0.774202038

00:05:00.900 --> 00:05:03.028 P VE redirects portal blood flow to the

NOTE Confidence: 0.774202038

00:05:03.028 --> 00:05:04.898 future liver remnant that by doing so,

NOTE Confidence: 0.774202038

00:05:04.900 --> 00:05:06.408 can initiate hypertrophy of

NOTE Confidence: 0.774202038

00:05:06.408 --> 00:05:07.916 the non embolized segments.

NOTE Confidence: 0.774202038

00:05:07.920 --> 00:05:10.468 PE has been shown to reduce perioperative

NOTE Confidence: 0.774202038

00:05:10.468 --> 00:05:12.260 complications and increase the number

NOTE Confidence: 0.774202038

00:05:12.260 --> 00:05:13.865 of potential surgical candidates who

NOTE Confidence: 0.774202038

00:05:13.865 --> 00:05:16.279 have what we call marginal anticipated.

NOTE Confidence: 0.774202038

00:05:16.280 --> 00:05:18.032 I feel our volumes,

NOTE Confidence: 0.774202038

00:05:18.032 --> 00:05:18.908 user PVE,

NOTE Confidence: 0.774202038

00:05:18.910 --> 00:05:20.660 has therefore been able to

NOTE Confidence: 0.774202038

00:05:20.660 --> 00:05:22.410 achieve similar survival rates to

NOTE Confidence: 0.85949708368421

00:05:22.474 --> 00:05:23.850 surgical patients who initially

NOTE Confidence: 0.85949708368421

00:05:23.850 --> 00:05:25.570 did not require PV E.

NOTE Confidence: 0.85949708368421

00:05:25.570 --> 00:05:27.886 Next we move to percutaneous ablation.

NOTE Confidence: 0.85949708368421

00:05:27.890 --> 00:05:30.025 The goals of ablation are to eradicate

NOTE Confidence: 0.85949708368421

00:05:30.025 --> 00:05:31.807 all viable malignant cells while

NOTE Confidence: 0.85949708368421

00:05:31.807 --> 00:05:33.427 sparing normal surrounding tissues.

NOTE Confidence: 0.85949708368421

00:05:33.430 --> 00:05:35.638 Additionally, we can treat tumors with

NOTE Confidence: 0.85949708368421

00:05:35.638 --> 00:05:37.544 unfavorable location or patterns of

NOTE Confidence: 0.85949708368421

00:05:37.544 --> 00:05:39.414 distribution for resection and those

NOTE Confidence: 0.85949708368421  
00:05:39.414 --> 00:05:41.170 with multiple comorbidities that can,  
NOTE Confidence: 0.85949708368421  
00:05:41.170 --> 00:05:43.618 in fact, undergo surgery.  
NOTE Confidence: 0.85949708368421  
00:05:43.620 --> 00:05:45.650 Population is most often used in patients  
NOTE Confidence: 0.85949708368421  
00:05:45.650 --> 00:05:47.599 with low volume disease which could,  
NOTE Confidence: 0.85949708368421  
00:05:47.600 --> 00:05:49.250 which could include potential first  
NOTE Confidence: 0.85949708368421  
00:05:49.250 --> 00:05:52.278 line cure or as a bridge to transplant.  
NOTE Confidence: 0.85949708368421  
00:05:52.280 --> 00:05:54.611 These procedures are typically done in the  
NOTE Confidence: 0.85949708368421  
00:05:54.611 --> 00:05:56.440 outpatient setting and are repeatable.  
NOTE Confidence: 0.85949708368421  
00:05:56.440 --> 00:05:58.216 We have many types of ablation  
NOTE Confidence: 0.85949708368421  
00:05:58.216 --> 00:05:59.669 devices which different energy used  
NOTE Confidence: 0.85949708368421  
00:05:59.669 --> 00:06:01.153 and this is just a short list.  
NOTE Confidence: 0.85949708368421  
00:06:01.160 --> 00:06:02.400 We can radio frequency,  
NOTE Confidence: 0.85949708368421  
00:06:02.400 --> 00:06:04.720 use radio frequency to cook the tumors,  
NOTE Confidence: 0.85949708368421  
00:06:04.720 --> 00:06:05.916 microwave to boil them,  
NOTE Confidence: 0.85949708368421  
00:06:05.916 --> 00:06:08.053 fry ablation to freeze them and the  
NOTE Confidence: 0.85949708368421

00:06:08.053 --> 00:06:10.006 new kid on the block is irreversible.  
NOTE Confidence: 0.85949708368421

00:06:10.010 --> 00:06:13.818 Electroporation to electrocute them.  
NOTE Confidence: 0.85949708368421

00:06:13.820 --> 00:06:15.842 We can also treat tumors as  
NOTE Confidence: 0.85949708368421

00:06:15.842 --> 00:06:16.853 a transarterial approaches.  
NOTE Confidence: 0.85949708368421

00:06:16.860 --> 00:06:17.865 Transarterial therapies were  
NOTE Confidence: 0.85949708368421

00:06:17.865 --> 00:06:19.540 initiated over 4 decades ago.  
NOTE Confidence: 0.85949708368421

00:06:19.540 --> 00:06:21.184 Since most liver tumors receive blood  
NOTE Confidence: 0.85949708368421

00:06:21.184 --> 00:06:22.920 supply largely from the optic artery,  
NOTE Confidence: 0.85949708368421

00:06:22.920 --> 00:06:24.900 and are often highly vascular.  
NOTE Confidence: 0.85949708368421

00:06:24.900 --> 00:06:27.180 Using current state of the art  
NOTE Confidence: 0.85949708368421

00:06:27.180 --> 00:06:28.700 catheter and imaging technology,  
NOTE Confidence: 0.85949708368421

00:06:28.700 --> 00:06:31.154 we can selectively and locally deliver  
NOTE Confidence: 0.85949708368421

00:06:31.154 --> 00:06:33.419 intraarterial therapeutics to the tumor bed.  
NOTE Confidence: 0.85949708368421

00:06:33.420 --> 00:06:33.783 Thus,  
NOTE Confidence: 0.85949708368421

00:06:33.783 --> 00:06:35.961 we can effectively target tumors while  
NOTE Confidence: 0.85949708368421

00:06:35.961 --> 00:06:37.660 sparing surrounding hepatic parenchyma,

NOTE Confidence: 0.85949708368421  
00:06:37.660 --> 00:06:40.592 thus minimizing systemic complications,  
NOTE Confidence: 0.85949708368421  
00:06:40.592 --> 00:06:42.058 and toxicities.  
NOTE Confidence: 0.85949708368421  
00:06:42.060 --> 00:06:43.233 Transarterial therapies are  
NOTE Confidence: 0.85949708368421  
00:06:43.233 --> 00:06:44.406 usually reserved for.  
NOTE Confidence: 0.85949708368421  
00:06:44.410 --> 00:06:46.220 Patients with higher tumor burdens  
NOTE Confidence: 0.85949708368421  
00:06:46.220 --> 00:06:48.482 in new adjuvant settings and in  
NOTE Confidence: 0.85949708368421  
00:06:48.482 --> 00:06:50.062 difficult or dangerous locations  
NOTE Confidence: 0.85949708368421  
00:06:50.062 --> 00:06:51.642 for resection or ablation.  
NOTE Confidence: 0.85949708368421  
00:06:51.650 --> 00:06:53.042 In terms of specifics,  
NOTE Confidence: 0.85949708368421  
00:06:53.042 --> 00:06:54.782 there was bland embolization in  
NOTE Confidence: 0.85949708368421  
00:06:54.782 --> 00:06:56.835 which embolization is performed  
NOTE Confidence: 0.85949708368421  
00:06:56.835 --> 00:06:57.927 without chemotherapy.  
NOTE Confidence: 0.85949708368421  
00:06:57.930 --> 00:06:59.430 The goal is to completely occlude  
NOTE Confidence: 0.85949708368421  
00:06:59.430 --> 00:07:00.430 the tumor feeding vessels,  
NOTE Confidence: 0.85949708368421  
00:07:00.430 --> 00:07:03.230 which result in a schema and rapid necrosis.  
NOTE Confidence: 0.85949708368421

00:07:03.230 --> 00:07:04.638 Conventional taste is divided,  
NOTE Confidence: 0.85949708368421

00:07:04.638 --> 00:07:07.184 is is defined as the infusion of  
NOTE Confidence: 0.85949708368421

00:07:07.184 --> 00:07:08.664 a mixture of chemotherapeutic  
NOTE Confidence: 0.85949708368421

00:07:08.664 --> 00:07:10.810 agents with or without iodized oil,  
NOTE Confidence: 0.85949708368421

00:07:10.810 --> 00:07:13.050 followed by embolization with particles.  
NOTE Confidence: 0.85949708368421

00:07:13.050 --> 00:07:14.850 This iodized oil, when used,  
NOTE Confidence: 0.85949708368421

00:07:14.850 --> 00:07:16.824 is taken up selectively and retained  
NOTE Confidence: 0.85949708368421

00:07:16.824 --> 00:07:19.945 by HCC and acts as both an embolic and  
NOTE Confidence: 0.85949708368421

00:07:19.945 --> 00:07:22.595 drug delivery vehicle given some potential.  
NOTE Confidence: 0.85949708368421

00:07:22.595 --> 00:07:24.735 Albeit rare systemic toxicities,  
NOTE Confidence: 0.85949708368421

00:07:24.740 --> 00:07:26.576 the idea for drug eluting beads  
NOTE Confidence: 0.85949708368421

00:07:26.576 --> 00:07:28.169 loaded with chemotherapy came about  
NOTE Confidence: 0.85949708368421

00:07:28.169 --> 00:07:29.749 which would theoretically be more  
NOTE Confidence: 0.85949708368421

00:07:29.749 --> 00:07:31.719 predictable in terms of drug washout,  
NOTE Confidence: 0.85949708368421

00:07:31.720 --> 00:07:34.004 leading to a potentially  
NOTE Confidence: 0.85949708368421

00:07:34.004 --> 00:07:35.717 better toxicity profile.

NOTE Confidence: 0.85949708368421  
00:07:35.720 --> 00:07:36.700 And lastly,  
NOTE Confidence: 0.85949708368421  
00:07:36.700 --> 00:07:39.640 there's radioembolization in which glass or  
NOTE Confidence: 0.85949708368421  
00:07:39.640 --> 00:07:42.077 resin microspheres are tagged atrium 90.  
NOTE Confidence: 0.85949708368421  
00:07:42.080 --> 00:07:43.944 These microspheres permanently lodged  
NOTE Confidence: 0.85949708368421  
00:07:43.944 --> 00:07:46.274 within terminal arterials of tumors  
NOTE Confidence: 0.85949708368421  
00:07:46.274 --> 00:07:48.797 and deliver high dose beta radiation.  
NOTE Confidence: 0.85949708368421  
00:07:48.800 --> 00:07:51.440 They kill the tumor.  
NOTE Confidence: 0.85949708368421  
00:07:51.440 --> 00:07:53.870 So this is the recently updated  
NOTE Confidence: 0.85949708368421  
00:07:53.870 --> 00:07:55.654 Barcelona Liver Clinton Barcelona  
NOTE Confidence: 0.85949708368421  
00:07:55.654 --> 00:07:58.402 Clinic liver cancer staging for HCC  
NOTE Confidence: 0.85949708368421  
00:07:58.402 --> 00:08:01.397 which is now much more comprehensive  
NOTE Confidence: 0.85949708368421  
00:08:01.397 --> 00:08:02.876 than previous iterations.  
NOTE Confidence: 0.85949708368421  
00:08:02.880 --> 00:08:05.204 So where does interventional  
NOTE Confidence: 0.85949708368421  
00:08:05.204 --> 00:08:08.109 hepatology fit in this paradigm?  
NOTE Confidence: 0.85949708368421  
00:08:08.110 --> 00:08:09.096 Of course,  
NOTE Confidence: 0.85949708368421

00:08:09.096 --> 00:08:11.068 transplanted hepatitis and resection  
NOTE Confidence: 0.85949708368421

00:08:11.068 --> 00:08:13.650 are key curative treatment options,  
NOTE Confidence: 0.85949708368421

00:08:13.650 --> 00:08:16.068 but defining resectability can be difficult.  
NOTE Confidence: 0.85949708368421

00:08:16.070 --> 00:08:17.440 Resectability is not just based  
NOTE Confidence: 0.85949708368421

00:08:17.440 --> 00:08:18.810 on tumor size and location,  
NOTE Confidence: 0.85949708368421

00:08:18.810 --> 00:08:19.750 but also on the size,  
NOTE Confidence: 0.85949708368421

00:08:19.750 --> 00:08:21.906 quality and function of the underlying liver.  
NOTE Confidence: 0.85949708368421

00:08:21.910 --> 00:08:22.242 Therefore,  
NOTE Confidence: 0.85949708368421

00:08:22.242 --> 00:08:24.566 even those with early stages of disease,  
NOTE Confidence: 0.85949708368421

00:08:24.570 --> 00:08:26.982 many patients may not be deemed  
NOTE Confidence: 0.85949708368421

00:08:26.982 --> 00:08:28.188 safe for resection.  
NOTE Confidence: 0.85949708368421

00:08:28.190 --> 00:08:28.687 Therefore,  
NOTE Confidence: 0.85949708368421

00:08:28.687 --> 00:08:30.178 when discussing management  
NOTE Confidence: 0.85949708368421

00:08:30.178 --> 00:08:31.669 of unresectable HCC,  
NOTE Confidence: 0.85949708368421

00:08:31.670 --> 00:08:33.272 there are many ways to cure  
NOTE Confidence: 0.85949708368421

00:08:33.272 --> 00:08:34.340 patients without surgery and

NOTE Confidence: 0.823888345454545  
00:08:34.397 --> 00:08:36.119 some patients who may be unresectable  
NOTE Confidence: 0.823888345454545  
00:08:36.119 --> 00:08:37.890 due to an insufficient future live.  
NOTE Confidence: 0.823888345454545  
00:08:37.890 --> 00:08:40.638 Pregnant or or may require downstage,  
NOTE Confidence: 0.823888345454545  
00:08:40.640 --> 00:08:43.496 and that can be converted to respectability  
NOTE Confidence: 0.823888345454545  
00:08:43.496 --> 00:08:45.270 and successfully undergo surgery.  
NOTE Confidence: 0.823888345454545  
00:08:45.270 --> 00:08:47.580 To that end, those that are within  
NOTE Confidence: 0.823888345454545  
00:08:47.580 --> 00:08:50.231 Milan criteria that is early HCC and  
NOTE Confidence: 0.823888345454545  
00:08:50.231 --> 00:08:52.221 deemed unresectable due to various  
NOTE Confidence: 0.823888345454545  
00:08:52.221 --> 00:08:54.029 comorbidities or patient preference.  
NOTE Confidence: 0.823888345454545  
00:08:54.030 --> 00:08:57.225 Ablation is a great option for those in  
NOTE Confidence: 0.823888345454545  
00:08:57.225 --> 00:08:58.750 early stage when resection transplant  
NOTE Confidence: 0.823888345454545  
00:08:58.750 --> 00:09:00.629 and ablation options are not feasible.  
NOTE Confidence: 0.823888345454545  
00:09:00.630 --> 00:09:02.886 Fans arterial therapies can be offered.  
NOTE Confidence: 0.823888345454545  
00:09:02.890 --> 00:09:04.605 In fact, Radioembolization for the  
NOTE Confidence: 0.823888345454545  
00:09:04.605 --> 00:09:07.229 first time has made it into the BCLC,  
NOTE Confidence: 0.823888345454545

00:09:07.230 --> 00:09:09.095 but only for single lesions  
NOTE Confidence: 0.823888345454545

00:09:09.095 --> 00:09:10.587 larger than 8 centimeters.  
NOTE Confidence: 0.823888345454545

00:09:10.590 --> 00:09:12.355 Further transfer trial therapy for  
NOTE Confidence: 0.823888345454545

00:09:12.355 --> 00:09:15.201 years has been the standard of care for  
NOTE Confidence: 0.823888345454545

00:09:15.201 --> 00:09:17.384 patients with intermediate HCC and lastly,  
NOTE Confidence: 0.823888345454545

00:09:17.384 --> 00:09:19.419 for diffusely infiltrative disease by  
NOTE Confidence: 0.823888345454545

00:09:19.419 --> 00:09:21.958 low bar disease or advanced disease.  
NOTE Confidence: 0.823888345454545

00:09:21.960 --> 00:09:23.790 There are numerous systemic therapeutics  
NOTE Confidence: 0.823888345454545

00:09:23.790 --> 00:09:26.619 that can be used that can be used  
NOTE Confidence: 0.823888345454545

00:09:26.619 --> 00:09:28.184 either alone or in combination  
NOTE Confidence: 0.823888345454545

00:09:28.184 --> 00:09:30.159 with local regional therapies and  
NOTE Confidence: 0.823888345454545

00:09:30.159 --> 00:09:31.879 clinical trials are ongoing.  
NOTE Confidence: 0.823888345454545

00:09:31.880 --> 00:09:34.005 So how about for intrahepatic  
NOTE Confidence: 0.823888345454545

00:09:34.005 --> 00:09:34.855 cholangio carcinoma?  
NOTE Confidence: 0.823888345454545

00:09:34.860 --> 00:09:35.428 At present,  
NOTE Confidence: 0.823888345454545

00:09:35.428 --> 00:09:36.848 there are no formalized guidelines

NOTE Confidence: 0.823888345454545  
00:09:36.848 --> 00:09:38.476 for the local regional management  
NOTE Confidence: 0.823888345454545  
00:09:38.476 --> 00:09:39.916 of intermatic landrew carcinoma  
NOTE Confidence: 0.823888345454545  
00:09:39.916 --> 00:09:41.840 with unclear and limited evidence,  
NOTE Confidence: 0.823888345454545  
00:09:41.840 --> 00:09:43.530 supported chiefs local ablation may  
NOTE Confidence: 0.823888345454545  
00:09:43.530 --> 00:09:46.014 be used for patients with early stage  
NOTE Confidence: 0.823888345454545  
00:09:46.014 --> 00:09:47.839 disease or ineligible for surgery,  
NOTE Confidence: 0.823888345454545  
00:09:47.840 --> 00:09:49.495 and regional therapies typically reserved  
NOTE Confidence: 0.823888345454545  
00:09:49.495 --> 00:09:51.860 for those with disease that's more advanced,  
NOTE Confidence: 0.823888345454545  
00:09:51.860 --> 00:09:53.771 and even the NCCN guidelines and a  
NOTE Confidence: 0.823888345454545  
00:09:53.771 --> 00:09:55.493 recent paper from Nature Reviews  
NOTE Confidence: 0.823888345454545  
00:09:55.493 --> 00:09:57.618 gastroenterology and Hepatology do not  
NOTE Confidence: 0.823888345454545  
00:09:57.618 --> 00:09:59.790 explicitly mention ablation in the paradigm,  
NOTE Confidence: 0.823888345454545  
00:09:59.790 --> 00:10:00.930 although they do mention  
NOTE Confidence: 0.823888345454545  
00:10:00.930 --> 00:10:01.785 local regional therapy.  
NOTE Confidence: 0.823888345454545  
00:10:01.790 --> 00:10:05.078 Unresectable liver dominant disease.  
NOTE Confidence: 0.823888345454545

00:10:05.080 --> 00:10:08.095 So I wanted to show a case of how  
NOTE Confidence: 0.823888345454545

00:10:08.095 --> 00:10:10.387 interventional hepatology can be used to  
NOTE Confidence: 0.823888345454545

00:10:10.387 --> 00:10:13.250 treat a typical patient with liver cancer.  
NOTE Confidence: 0.823888345454545

00:10:13.250 --> 00:10:15.506 So this is a 48 year old female  
NOTE Confidence: 0.823888345454545

00:10:15.506 --> 00:10:17.184 with biopsy proven multifocal  
NOTE Confidence: 0.823888345454545

00:10:17.184 --> 00:10:19.280 intrahepatic Andrew carcinoma having  
NOTE Confidence: 0.823888345454545

00:10:19.280 --> 00:10:22.132 a 4.5 centimeter mass in segment 7  
NOTE Confidence: 0.823888345454545

00:10:22.132 --> 00:10:24.068 and a 7.7 centimeter infiltrative  
NOTE Confidence: 0.823888345454545

00:10:24.068 --> 00:10:26.384 mass and segments four and five.  
NOTE Confidence: 0.823888345454545

00:10:26.390 --> 00:10:28.175 She had lymphadenopathy in the  
NOTE Confidence: 0.823888345454545

00:10:28.175 --> 00:10:29.603 gallbladder and Porta Hepatus.  
NOTE Confidence: 0.823888345454545

00:10:29.610 --> 00:10:31.176 There were no masses seen in  
NOTE Confidence: 0.823888345454545

00:10:31.176 --> 00:10:32.929 the left lateral liver and there  
NOTE Confidence: 0.823888345454545

00:10:32.929 --> 00:10:34.229 were no peritoneal implants.  
NOTE Confidence: 0.823888345454545

00:10:34.230 --> 00:10:35.400 She was considered for an  
NOTE Confidence: 0.823888345454545

00:10:35.400 --> 00:10:36.570 extended right up protecting me,

NOTE Confidence: 0.823888345454545  
00:10:36.570 --> 00:10:38.390 but the FLRW was deemed  
NOTE Confidence: 0.823888345454545  
00:10:38.390 --> 00:10:39.846 insufficient for safe resection.  
NOTE Confidence: 0.823888345454545  
00:10:39.850 --> 00:10:42.454 Therefore P VE was requested to have  
NOTE Confidence: 0.823888345454545  
00:10:42.454 --> 00:10:43.889 purchase. The floor preoperatively.  
NOTE Confidence: 0.823888345454545  
00:10:43.889 --> 00:10:47.251 Here you see a right PV E with extension  
NOTE Confidence: 0.823888345454545  
00:10:47.251 --> 00:10:50.107 to the segment 4 Portal vein branches.  
NOTE Confidence: 0.823888345454545  
00:10:50.110 --> 00:10:51.892 There is occlusion of portal flow  
NOTE Confidence: 0.823888345454545  
00:10:51.892 --> 00:10:54.028 to the entire liver to be resected  
NOTE Confidence: 0.823888345454545  
00:10:54.028 --> 00:10:55.513 with complete diversion of flow  
NOTE Confidence: 0.823888345454545  
00:10:55.513 --> 00:10:57.230 to the left lateral liver.  
NOTE Confidence: 0.823888345454545  
00:10:57.230 --> 00:10:58.457 One month later,  
NOTE Confidence: 0.823888345454545  
00:10:58.457 --> 00:11:00.093 enough FLR hypertrophy occurred  
NOTE Confidence: 0.823888345454545  
00:11:00.093 --> 00:11:02.030 to proceed with resection.  
NOTE Confidence: 0.823888345454545  
00:11:02.030 --> 00:11:03.640 So an extended by Hepatectomy,  
NOTE Confidence: 0.823888345454545  
00:11:03.640 --> 00:11:05.280 cholecystectomy and regional Lymphadenectomy  
NOTE Confidence: 0.823888345454545

00:11:05.280 --> 00:11:07.330 was performed with pathology showing.  
NOTE Confidence: 0.823888345454545

00:11:07.330 --> 00:11:09.400 You basically had no carcinoma of  
NOTE Confidence: 0.823888345454545

00:11:09.400 --> 00:11:11.279 intrahepatic bile ducts with multiple  
NOTE Confidence: 0.823888345454545

00:11:11.279 --> 00:11:13.019 positive regional lymph nodes.  
NOTE Confidence: 0.823888345454545

00:11:13.020 --> 00:11:14.885 She underwent adjuvant chemotherapy with  
NOTE Confidence: 0.823888345454545

00:11:14.885 --> 00:11:17.070 gemcitabine and cisplatin for six months  
NOTE Confidence: 0.823888345454545

00:11:17.070 --> 00:11:18.939 but nine months later there were two  
NOTE Confidence: 0.823888345454545

00:11:18.939 --> 00:11:20.938 new small tumors in the remnant liver,  
NOTE Confidence: 0.823888345454545

00:11:20.940 --> 00:11:23.532 one in segment 2 and the other in  
NOTE Confidence: 0.823888345454545

00:11:23.532 --> 00:11:25.946 the junction of segments 2 and three,  
NOTE Confidence: 0.823888345454545

00:11:25.950 --> 00:11:29.076 and there was also increased size  
NOTE Confidence: 0.823888345454545

00:11:29.076 --> 00:11:30.639 of retroviral lymphadenopathy.  
NOTE Confidence: 0.823888345454545

00:11:30.640 --> 00:11:32.890 Both tumors were successfully treated  
NOTE Confidence: 0.823888345454545

00:11:32.890 --> 00:11:35.530 with microwave ablation as shown here.  
NOTE Confidence: 0.823888345454545

00:11:35.530 --> 00:11:35.922 Subsequently,  
NOTE Confidence: 0.823888345454545

00:11:35.922 --> 00:11:37.098 adjuvant chemotherapy with

NOTE Confidence: 0.823888345454545  
00:11:37.098 --> 00:11:39.450 Zolota was given for three months  
NOTE Confidence: 0.769857944117647  
00:11:39.509 --> 00:11:41.784 with several new hepatic tumors were found,  
NOTE Confidence: 0.769857944117647  
00:11:41.790 --> 00:11:44.160 as well as increased size of  
NOTE Confidence: 0.769857944117647  
00:11:44.160 --> 00:11:45.345 the retroviral lymphadenopathy.  
NOTE Confidence: 0.769857944117647  
00:11:45.350 --> 00:11:47.192 This is also very nicely shown  
NOTE Confidence: 0.769857944117647  
00:11:47.192 --> 00:11:49.230 with the pet CT shown here.  
NOTE Confidence: 0.769857944117647  
00:11:49.230 --> 00:11:50.558 Radio embolization was performed,  
NOTE Confidence: 0.769857944117647  
00:11:50.558 --> 00:11:52.935 but in a staged approach to avoid  
NOTE Confidence: 0.769857944117647  
00:11:52.935 --> 00:11:54.570 treatment of the entire liver.  
NOTE Confidence: 0.769857944117647  
00:11:54.570 --> 00:11:55.956 In one session,  
NOTE Confidence: 0.769857944117647  
00:11:55.956 --> 00:11:59.190 that can ultimately lead to liver failure.  
NOTE Confidence: 0.769857944117647  
00:11:59.190 --> 00:11:59.616 Subsequently,  
NOTE Confidence: 0.769857944117647  
00:11:59.616 --> 00:12:01.746 there was good treatment response  
NOTE Confidence: 0.769857944117647  
00:12:01.746 --> 00:12:05.208 with decreased FDG avidity and nine  
NOTE Confidence: 0.769857944117647  
00:12:05.208 --> 00:12:07.386 months after radioembolization,  
NOTE Confidence: 0.769857944117647

00:12:07.390 --> 00:12:10.610 she developed a severe, intractable,  
NOTE Confidence: 0.769857944117647

00:12:10.610 --> 00:12:13.305 bandlike pain around the upper abdomen and  
NOTE Confidence: 0.769857944117647

00:12:13.305 --> 00:12:16.167 several FDG avid hepatic segment 3 masses.  
NOTE Confidence: 0.769857944117647

00:12:16.170 --> 00:12:17.535 One was increased in size  
NOTE Confidence: 0.769857944117647

00:12:17.535 --> 00:12:18.627 from the prior study,  
NOTE Confidence: 0.769857944117647

00:12:18.630 --> 00:12:20.130 and there were two new tumors.  
NOTE Confidence: 0.769857944117647

00:12:20.130 --> 00:12:24.028 She also had stable FDG avidity in in  
NOTE Confidence: 0.769857944117647

00:12:24.028 --> 00:12:26.673 the pulmonary nodules and retroviral  
NOTE Confidence: 0.769857944117647

00:12:26.673 --> 00:12:28.260 and retroperitoneal lymphadenopathy.  
NOTE Confidence: 0.769857944117647

00:12:28.260 --> 00:12:29.680 So bland embolization was  
NOTE Confidence: 0.769857944117647

00:12:29.680 --> 00:12:31.100 performed for pain control,  
NOTE Confidence: 0.769857944117647

00:12:31.100 --> 00:12:33.884 as the anterior most tumor which you see  
NOTE Confidence: 0.769857944117647

00:12:33.884 --> 00:12:35.940 here was stretching the liver capsule,  
NOTE Confidence: 0.769857944117647

00:12:35.940 --> 00:12:37.191 causing the pain.  
NOTE Confidence: 0.769857944117647

00:12:37.191 --> 00:12:37.608 Fortunately,  
NOTE Confidence: 0.769857944117647

00:12:37.608 --> 00:12:39.693 the treatment resulted in complete

NOTE Confidence: 0.769857944117647  
00:12:39.693 --> 00:12:41.664 tumor necrosis and she had  
NOTE Confidence: 0.769857944117647  
00:12:41.664 --> 00:12:43.524 immediate and sustained pain relief.  
NOTE Confidence: 0.769857944117647  
00:12:43.530 --> 00:12:43.895 Unfortunately,  
NOTE Confidence: 0.769857944117647  
00:12:43.895 --> 00:12:45.720 she died from disease progression,  
NOTE Confidence: 0.769857944117647  
00:12:45.720 --> 00:12:47.880 but lived three years after initial  
NOTE Confidence: 0.769857944117647  
00:12:47.880 --> 00:12:49.320 diagnosis with this multimodality  
NOTE Confidence: 0.769857944117647  
00:12:49.380 --> 00:12:51.198 therapy and with nearly the entire  
NOTE Confidence: 0.769857944117647  
00:12:51.198 --> 00:12:53.040 gamut of local regional strategies,  
NOTE Confidence: 0.769857944117647  
00:12:53.040 --> 00:12:55.704 we have to offer playing a major role in  
NOTE Confidence: 0.769857944117647  
00:12:55.704 --> 00:12:58.366 her much lower than expected survival.  
NOTE Confidence: 0.769857944117647  
00:12:58.370 --> 00:13:00.138 I just wanted to say a few words  
NOTE Confidence: 0.769857944117647  
00:13:00.138 --> 00:13:01.144 about combining immunotherapy  
NOTE Confidence: 0.769857944117647  
00:13:01.144 --> 00:13:02.668 and interventional hepatology.  
NOTE Confidence: 0.769857944117647  
00:13:02.670 --> 00:13:04.374 Interestingly, local regional therapies,  
NOTE Confidence: 0.769857944117647  
00:13:04.374 --> 00:13:06.504 such as ablation and transarterial  
NOTE Confidence: 0.769857944117647

00:13:06.504 --> 00:13:07.390 envelope therapy,  
NOTE Confidence: 0.769857944117647

00:13:07.390 --> 00:13:09.566 do elicit immune responses.  
NOTE Confidence: 0.769857944117647

00:13:09.566 --> 00:13:10.110 Therefore,  
NOTE Confidence: 0.769857944117647

00:13:10.110 --> 00:13:12.065 there could be synergies between  
NOTE Confidence: 0.769857944117647

00:13:12.065 --> 00:13:14.020 local regional therapy and immune  
NOTE Confidence: 0.769857944117647

00:13:14.080 --> 00:13:16.024 checkpoint inhibitors for better  
NOTE Confidence: 0.769857944117647

00:13:16.024 --> 00:13:18.010 outcomes and numerous clinical  
NOTE Confidence: 0.769857944117647

00:13:18.010 --> 00:13:20.010 trials are currently underway,  
NOTE Confidence: 0.769857944117647

00:13:20.010 --> 00:13:21.122 such as this one.  
NOTE Confidence: 0.769857944117647

00:13:21.122 --> 00:13:24.088 We are now enrolling 4 at Yale in this study.  
NOTE Confidence: 0.769857944117647

00:13:24.090 --> 00:13:26.475 LEAP 012 patients will receive  
NOTE Confidence: 0.769857944117647

00:13:26.475 --> 00:13:28.383 taste with or without.  
NOTE Confidence: 0.769857944117647

00:13:28.390 --> 00:13:30.298 Embolism AB and levatino.  
NOTE Confidence: 0.8085703775

00:13:32.560 --> 00:13:34.408 So let's now move to management of portal,  
NOTE Confidence: 0.8085703775

00:13:34.410 --> 00:13:36.040 vein tumor thrombus, and entity.  
NOTE Confidence: 0.8085703775

00:13:36.040 --> 00:13:37.488 I personally believe is

NOTE Confidence: 0.8085703775

00:13:37.488 --> 00:13:39.298 under treated in the West.

NOTE Confidence: 0.8085703775

00:13:39.300 --> 00:13:42.140 Here we have a 54 year old man

NOTE Confidence: 0.8085703775

00:13:42.140 --> 00:13:44.579 with HCC and HBV cirrhosis.

NOTE Confidence: 0.8085703775

00:13:44.580 --> 00:13:50.209 He has scanned showing. By low bar.

NOTE Confidence: 0.8085703775

00:13:50.210 --> 00:13:52.430 HCC with extensive infiltrative

NOTE Confidence: 0.8085703775

00:13:52.430 --> 00:13:55.760 tumor in the left lateral liver.

NOTE Confidence: 0.8085703775

00:13:55.760 --> 00:13:57.028 There's portal vein tumor

NOTE Confidence: 0.8085703775

00:13:57.028 --> 00:13:58.634 thrombus within the right, left,

NOTE Confidence: 0.8085703775

00:13:58.634 --> 00:14:00.638 and mid main portal veins extending

NOTE Confidence: 0.8085703775

00:14:00.638 --> 00:14:02.760 to the sphenoid portal confluence,

NOTE Confidence: 0.8085703775

00:14:02.760 --> 00:14:04.560 and there are numerous enhancing

NOTE Confidence: 0.8085703775

00:14:04.560 --> 00:14:06.000 vessels throughout the tumor.

NOTE Confidence: 0.8085703775

00:14:06.000 --> 00:14:08.340 Thrombus with arterial portal shunting?

NOTE Confidence: 0.8085703775

00:14:08.340 --> 00:14:10.140 I am sure most practitioners in

NOTE Confidence: 0.8085703775

00:14:10.140 --> 00:14:11.888 the audience would have just placed

NOTE Confidence: 0.8085703775

00:14:11.888 --> 00:14:13.603 this patient on a TI and his  
NOTE Confidence: 0.8085703775

00:14:13.603 --> 00:14:15.087 life expectancy would have been  
NOTE Confidence: 0.8085703775

00:14:15.087 --> 00:14:17.205 dismal just a few months at best.  
NOTE Confidence: 0.8085703775

00:14:17.205 --> 00:14:18.240 As often happens,  
NOTE Confidence: 0.8085703775

00:14:18.240 --> 00:14:20.663 we hear very compelling stories such as  
NOTE Confidence: 0.8085703775

00:14:20.663 --> 00:14:22.679 having a wife and two young children.  
NOTE Confidence: 0.8085703775

00:14:22.680 --> 00:14:26.810 So against all odds we try to do what we can.  
NOTE Confidence: 0.8085703775

00:14:26.810 --> 00:14:29.764 So in this case, taste was offered,  
NOTE Confidence: 0.8085703775

00:14:29.770 --> 00:14:31.822 but knowing the challenges he was  
NOTE Confidence: 0.8085703775

00:14:31.822 --> 00:14:34.109 scheduled for four monthly taste sessions.  
NOTE Confidence: 0.8085703775

00:14:34.110 --> 00:14:36.000 Here we used a novel doable and  
NOTE Confidence: 0.8085703775

00:14:36.000 --> 00:14:37.689 occlusion catheter and see the tumor  
NOTE Confidence: 0.8085703775

00:14:37.689 --> 00:14:39.339 supplied by the writer padick artery  
NOTE Confidence: 0.8085703775

00:14:39.339 --> 00:14:41.468 with rapid shunting into the portal vein.  
NOTE Confidence: 0.8085703775

00:14:41.470 --> 00:14:43.958 And this is an angiogram with only the  
NOTE Confidence: 0.8085703775

00:14:43.958 --> 00:14:46.232 distal balloon inflated on the right.

NOTE Confidence: 0.8085703775

00:14:46.232 --> 00:14:48.476 The comb beam CT fluoroscopic scopic

NOTE Confidence: 0.8085703775

00:14:48.476 --> 00:14:50.609 images with both balloons inflated

NOTE Confidence: 0.8085703775

00:14:50.609 --> 00:14:53.135 nicely shows the portal vein tumoral

NOTE Confidence: 0.8085703775

00:14:53.201 --> 00:14:55.530 blood supply one year after initial taste,

NOTE Confidence: 0.8085703775

00:14:55.530 --> 00:14:56.880 the portal vein tumor thrombus.

NOTE Confidence: 0.8085703775

00:14:56.880 --> 00:14:58.130 Detracted from the spinal portal.

NOTE Confidence: 0.8085703775

00:14:58.130 --> 00:15:00.040 Confluence and there was increased

NOTE Confidence: 0.8085703775

00:15:00.040 --> 00:15:00.804 portal flow.

NOTE Confidence: 0.8085703775

00:15:00.810 --> 00:15:02.928 There was no evidence of new

NOTE Confidence: 0.8085703775

00:15:02.928 --> 00:15:04.340 or residual hepatic tumor,

NOTE Confidence: 0.8085703775

00:15:04.340 --> 00:15:06.386 but his liver function did worsen

NOTE Confidence: 0.8085703775

00:15:06.386 --> 00:15:08.010 some now being child BQ.

NOTE Confidence: 0.8085703775

00:15:08.010 --> 00:15:11.685 Child Pugh, B7 and mild of 11.

NOTE Confidence: 0.8085703775

00:15:11.690 --> 00:15:14.084 He died 16 months after the first

NOTE Confidence: 0.8085703775

00:15:14.084 --> 00:15:16.658 case which was much longer than

NOTE Confidence: 0.8085703775

00:15:16.658 --> 00:15:18.614 expected with systemic therapy.  
NOTE Confidence: 0.8085703775

00:15:18.620 --> 00:15:19.180 Next list,  
NOTE Confidence: 0.8085703775

00:15:19.180 --> 00:15:20.580 discuss the management of the  
NOTE Confidence: 0.8085703775

00:15:20.580 --> 00:15:22.110 sequel of Portal Hypertension.  
NOTE Confidence: 0.8085703775

00:15:22.110 --> 00:15:23.270 Although there are numerous  
NOTE Confidence: 0.8085703775

00:15:23.270 --> 00:15:24.720 reasons for performing a tips,  
NOTE Confidence: 0.8085703775

00:15:24.720 --> 00:15:27.060 the most common indications are variceal  
NOTE Confidence: 0.8085703775

00:15:27.060 --> 00:15:28.620 bleeding and refractory ascites.  
NOTE Confidence: 0.8085703775

00:15:28.620 --> 00:15:30.176 Both indications have exceedingly  
NOTE Confidence: 0.8085703775

00:15:30.176 --> 00:15:32.121 complex Physiology and the benefits  
NOTE Confidence: 0.8085703775

00:15:32.121 --> 00:15:34.153 of percutaneous approaches to manage  
NOTE Confidence: 0.8085703775

00:15:34.153 --> 00:15:36.133 these have been well documented.  
NOTE Confidence: 0.8085703775

00:15:36.140 --> 00:15:38.198 For now more than 25 years,  
NOTE Confidence: 0.8085703775

00:15:38.200 --> 00:15:39.928 so this is a 62 year old woman  
NOTE Confidence: 0.8085703775

00:15:39.928 --> 00:15:40.980 with HCV cirrhosis,  
NOTE Confidence: 0.8085703775

00:15:40.980 --> 00:15:43.040 recurrent ascites and hepatic

NOTE Confidence: 0.8085703775

00:15:43.040 --> 00:15:45.615 hydrothorax in two small HCS.

NOTE Confidence: 0.8085703775

00:15:45.620 --> 00:15:46.848 She was getting Thoreson,

NOTE Confidence: 0.8085703775

00:15:46.848 --> 00:15:48.383 TCS and Paris and TCS.

NOTE Confidence: 0.8085703775

00:15:48.390 --> 00:15:50.693 Every two days and had a miserable

NOTE Confidence: 0.8085703775

00:15:50.693 --> 00:15:52.475 quality of life over the three

NOTE Confidence: 0.8085703775

00:15:52.475 --> 00:15:53.800 years prior she had variceal,

NOTE Confidence: 0.8085703775

00:15:53.800 --> 00:15:55.080 bleeding, and esophageal banding,

NOTE Confidence: 0.8085703775

00:15:55.080 --> 00:15:56.680 and when I saw her,

NOTE Confidence: 0.8085703775

00:15:56.680 --> 00:15:59.400 she was child's C at a meld score of 12

NOTE Confidence: 0.8085703775

00:15:59.470 --> 00:16:02.330 and was undergoing transplant evaluation.

NOTE Confidence: 0.8085703775

00:16:02.330 --> 00:16:04.304 Intraprocedural and a one month follow up.

NOTE Confidence: 0.8085703775

00:16:04.310 --> 00:16:07.238 See T we effectively we see that we

NOTE Confidence: 0.8085703775

00:16:07.238 --> 00:16:09.341 effectively treated the tumor with

NOTE Confidence: 0.8085703775

00:16:09.341 --> 00:16:11.073 conventional taste and therefore

NOTE Confidence: 0.8085703775

00:16:11.073 --> 00:16:13.838 proceeded to tips after tips placement.

NOTE Confidence: 0.8085703775

00:16:13.840 --> 00:16:16.018 Her new comparison TCS and Thoracentesis

NOTE Confidence: 0.8085703775

00:16:16.018 --> 00:16:17.470 immediately diminished and there

NOTE Confidence: 0.8085703775

00:16:17.529 --> 00:16:18.873 was no evidence of viable tumor

NOTE Confidence: 0.8085703775

00:16:18.873 --> 00:16:20.670 on any of the subsequent scans.

NOTE Confidence: 0.8085703775

00:16:20.670 --> 00:16:22.105 And to the best of my knowledge,

NOTE Confidence: 0.8085703775

00:16:22.110 --> 00:16:24.270 she was awaiting liver transplantation.

NOTE Confidence: 0.8085703775

00:16:24.270 --> 00:16:24.730 Sorry,

NOTE Confidence: 0.587299919166667

00:16:25.050 --> 00:16:27.108 sorry they made a full interruption.

NOTE Confidence: 0.587299919166667

00:16:27.110 --> 00:16:28.982 We have to wrap it up in a minute.

NOTE Confidence: 0.850787739

00:16:30.480 --> 00:16:31.776 OK, all right.

NOTE Confidence: 0.850787739

00:16:31.776 --> 00:16:34.800 I guess I'll just discuss this case.

NOTE Confidence: 0.850787739

00:16:34.800 --> 00:16:35.828 So here's another case

NOTE Confidence: 0.850787739

00:16:35.828 --> 00:16:36.599 of portal hypertension.

NOTE Confidence: 0.850787739

00:16:36.600 --> 00:16:38.336 A 67 year old woman with cirrhosis

NOTE Confidence: 0.850787739

00:16:38.336 --> 00:16:39.974 and HCC who transferred from

NOTE Confidence: 0.850787739

00:16:39.974 --> 00:16:41.654 outside hospital for management

NOTE Confidence: 0.850787739

00:16:41.654 --> 00:16:43.334 of massive variceal bleeding.

NOTE Confidence: 0.850787739

00:16:43.340 --> 00:16:45.020 Originally I was consulted for the tips

NOTE Confidence: 0.850787739

00:16:45.020 --> 00:16:47.236 but as you can see from this portal vein,

NOTE Confidence: 0.850787739

00:16:47.240 --> 00:16:48.372 very tiny portal vein,

NOTE Confidence: 0.850787739

00:16:48.372 --> 00:16:50.460 she was not a candidate for because

NOTE Confidence: 0.850787739

00:16:50.460 --> 00:16:52.100 the students are actually much

NOTE Confidence: 0.850787739

00:16:52.100 --> 00:16:54.384 larger than this so we ended up

NOTE Confidence: 0.850787739

00:16:54.384 --> 00:16:56.196 performing of what's called the RTO.

NOTE Confidence: 0.850787739

00:16:56.200 --> 00:16:57.810 And here we see that we're able

NOTE Confidence: 0.850787739

00:16:57.810 --> 00:16:59.599 to use a splenorenal shunt.

NOTE Confidence: 0.850787739

00:16:59.600 --> 00:17:01.048 You have two catheters.

NOTE Confidence: 0.850787739

00:17:01.048 --> 00:17:03.220 Into the into the variceal complex

NOTE Confidence: 0.850787739

00:17:03.283 --> 00:17:05.551 coil with one of the catheters and

NOTE Confidence: 0.850787739

00:17:05.551 --> 00:17:07.352 then infused foam directly beyond

NOTE Confidence: 0.850787739

00:17:07.352 --> 00:17:10.012 it and therefore we were able to

NOTE Confidence: 0.850787739

00:17:10.012 --> 00:17:11.636 successfully treat the bleeding.

NOTE Confidence: 0.850787739

00:17:11.636 --> 00:17:14.520 But unfortunately this patient had a died,

NOTE Confidence: 0.850787739

00:17:14.520 --> 00:17:17.360 so I will skip this.

NOTE Confidence: 0.850787739

00:17:17.360 --> 00:17:19.816 And then we'll just go to the conclusion,

NOTE Confidence: 0.850787739

00:17:19.820 --> 00:17:21.860 which is as I hope I have shown,

NOTE Confidence: 0.850787739

00:17:21.860 --> 00:17:22.840 and I know I did,

NOTE Confidence: 0.850787739

00:17:22.840 --> 00:17:24.980 mostly on a tumor therapy.

NOTE Confidence: 0.850787739

00:17:24.980 --> 00:17:26.652 Interventional Hepatology plays an

NOTE Confidence: 0.850787739

00:17:26.652 --> 00:17:29.160 important role in the management of

NOTE Confidence: 0.850787739

00:17:29.222 --> 00:17:31.907 numerous complex compatible biliary diseases.

NOTE Confidence: 0.850787739

00:17:31.910 --> 00:17:32.738 Interventional radiology,

NOTE Confidence: 0.850787739

00:17:32.738 --> 00:17:33.980 as I discussed,

NOTE Confidence: 0.850787739

00:17:33.980 --> 00:17:36.572 is now in a CGM accredited 6 year

NOTE Confidence: 0.850787739

00:17:36.572 --> 00:17:38.669 categorical residency and I think this

NOTE Confidence: 0.850787739

00:17:38.669 --> 00:17:40.404 is very important as understanding

NOTE Confidence: 0.850787739

00:17:40.404 --> 00:17:43.238 imaging and Physiology is really the

NOTE Confidence: 0.850787739

00:17:43.238 --> 00:17:45.174 critical differentiator among proceduralists.

NOTE Confidence: 0.850787739

00:17:45.180 --> 00:17:46.602 I think that it yell we

NOTE Confidence: 0.850787739

00:17:46.602 --> 00:17:47.550 have a very collaborative,

NOTE Confidence: 0.850787739

00:17:47.550 --> 00:17:47.938 excellent.

NOTE Confidence: 0.850787739

00:17:47.938 --> 00:17:50.266 Environments we have liver tumor boards,

NOTE Confidence: 0.850787739

00:17:50.270 --> 00:17:51.076 portal hypertension,

NOTE Confidence: 0.850787739

00:17:51.076 --> 00:17:53.494 conferences and our trainees get to

NOTE Confidence: 0.850787739

00:17:53.494 --> 00:17:55.709 rotate on the class and service,

NOTE Confidence: 0.850787739

00:17:55.710 --> 00:17:58.034 and I think that from my perspective

NOTE Confidence: 0.850787739

00:17:58.034 --> 00:17:59.706 the future of interventional

NOTE Confidence: 0.850787739

00:17:59.706 --> 00:18:02.146 hepatology is extremely bright.

NOTE Confidence: 0.850787739

00:18:02.150 --> 00:18:03.482 There are novel technologies

NOTE Confidence: 0.850787739

00:18:03.482 --> 00:18:04.814 which are listed here,

NOTE Confidence: 0.850787739

00:18:04.820 --> 00:18:07.529 as well as a lot of promising

NOTE Confidence: 0.850787739

00:18:07.529 --> 00:18:08.303 combination therapies,

NOTE Confidence: 0.850787739

00:18:08.310 --> 00:18:10.134 so with that I will stop here and  
NOTE Confidence: 0.850787739

00:18:10.134 --> 00:18:11.658 thank you for your attention.  
NOTE Confidence: 0.8477886295

00:18:12.620 --> 00:18:14.944 Thank you David. So we will have  
NOTE Confidence: 0.8477886295

00:18:14.944 --> 00:18:17.244 to skip the question and answer  
NOTE Confidence: 0.8477886295

00:18:17.244 --> 00:18:20.100 session so we now you know please,  
NOTE Confidence: 0.8477886295

00:18:20.100 --> 00:18:22.608 everybody goes straight to the 3:30  
NOTE Confidence: 0.8477886295

00:18:22.608 --> 00:18:25.120 session to imaging based hepatology.  
NOTE Confidence: 0.8477886295

00:18:25.120 --> 00:18:25.819 Thank you all.  
NOTE Confidence: 0.9644465

00:18:32.270 --> 00:18:33.740 Thank you everyone due to the timing,  
NOTE Confidence: 0.9644465

00:18:33.740 --> 00:18:35.560 we will be skipping this 315 session  
NOTE Confidence: 0.9644465

00:18:35.560 --> 00:18:37.667 if you have a question for a speaker,  
NOTE Confidence: 0.9644465

00:18:37.670 --> 00:18:39.427 please send it in to the speaker  
NOTE Confidence: 0.9644465

00:18:39.427 --> 00:18:40.849 directly through the attendee hub.  
NOTE Confidence: 0.9644465

00:18:40.850 --> 00:18:42.302 Please join us at 3:30 for  
NOTE Confidence: 0.9644465

00:18:42.302 --> 00:18:43.570 the next session. Thank you.