## WEBVTT

NOTE duration: "00:57:04.5760000"

NOTE language:en-us

NOTE Confidence: 0.78028923

00:00:00.000 --> 00:00:02.548 To this week's character center Grand rounds,

NOTE Confidence: 0.78028923

 $00:00:02.550 \longrightarrow 00:00:04.330$  we have two speakers today,

NOTE Confidence: 0.78028923

 $00:00:04.330 \longrightarrow 00:00:06.550$  both from Yale will give us

NOTE Confidence: 0.78028923

 $00{:}00{:}06.550 \dashrightarrow 00{:}00{:}08.434$  some exciting discussion of some

NOTE Confidence: 0.78028923

 $00:00:08.434 \longrightarrow 00:00:10.396$  of the work we're doing here.

NOTE Confidence: 0.78028923

 $00:00:10.400 \longrightarrow 00:00:12.899$  Our first speaker is Mario Strozza busco.

NOTE Confidence: 0.78028923

 $00{:}00{:}12.900 \longrightarrow 00{:}00{:}15.046$  He's a professor of medicine, director

NOTE Confidence: 0.78028923

00:00:15.046 --> 00:00:17.894 of the liver Cancer program here in Co.

NOTE Confidence: 0.78028923

 $00:00:17.900 \longrightarrow 00:00:20.470$  Director of the liver center.

NOTE Confidence: 0.78028923

 $00:00:20.470 \longrightarrow 00:00:22.395$  He received his medical and PhD degrees

NOTE Confidence: 0.78028923

 $00{:}00{:}22.395 \dashrightarrow 00{:}00{:}24.840$  in Italy and then had a number of

NOTE Confidence: 0.78028923

 $00{:}00{:}24.840 \to 00{:}00{:}26.400$  leadership positions at the University

NOTE Confidence: 0.78028923

00:00:26.461 --> 00:00:28.369 of Milan before joining our faculty.

NOTE Confidence: 0.78028923

 $00:00:28.370 \longrightarrow 00:00:30.351$  He's an expert on the care of

 $00:00:30.351 \longrightarrow 00:00:31.670$  patients with liver cancer,

NOTE Confidence: 0.78028923

 $00:00:31.670 \longrightarrow 00:00:32.870$  is internationally known for

NOTE Confidence: 0.78028923

 $00:00:32.870 \longrightarrow 00:00:34.070$  his work and hepatology.

NOTE Confidence: 0.78028923

 $00:00:34.070 \longrightarrow 00:00:35.885$  Liver transplantation is a member

NOTE Confidence: 0.78028923

 $00:00:35.885 \longrightarrow 00:00:37.337$  of several scientific societies

NOTE Confidence: 0.78028923

 $00:00:37.337 \longrightarrow 00:00:39.257$  in Europe in the United States.

NOTE Confidence: 0.78028923

 $00:00:39.260 \longrightarrow 00:00:41.275$  His current research relates to

NOTE Confidence: 0.78028923

 $00{:}00{:}41.275 \dashrightarrow 00{:}00{:}42.887$  the pathophysiology of biliary

NOTE Confidence: 0.78028923

00:00:42.887 --> 00:00:44.538 tract disease is repaired.

NOTE Confidence: 0.78028923

00:00:44.540 --> 00:00:46.160 Biology of liver repair,

NOTE Confidence: 0.78028923

 $00:00:46.160 \longrightarrow 00:00:46.970$  liver transplantation,

NOTE Confidence: 0.78028923

 $00:00:46.970 \longrightarrow 00:00:49.000$  liver cancer in healthcare management,

NOTE Confidence: 0.78028923

 $00{:}00{:}49.000 \dashrightarrow 00{:}00{:}52.208$  and so today we're going to hear from

NOTE Confidence: 0.78028923

 $00{:}00{:}52.208 \to 00{:}00{:}55.909$  Mario and tell of his talk is liver cancer,

NOTE Confidence: 0.78028923

 $00{:}00{:}55.910 \dashrightarrow 00{:}00{:}58.340$  clinical care and research at Yale.

00:00:58.340 --> 00:00:59.558 So Mario, you're

NOTE Confidence: 0.79450005

00:00:59.560 --> 00:01:01.991 up. Thank you very much, Dan,

NOTE Confidence: 0.79450005

 $00:01:01.991 \longrightarrow 00:01:04.798$  for the introduction and thanks for the

NOTE Confidence: 0.79450005

 $00:01:04.798 \longrightarrow 00:01:07.269$  Cancer Center for the Invitation Ann.

NOTE Confidence: 0.79450005

 $00:01:07.270 \longrightarrow 00:01:11.827$  And thanks a lot for this Milo.

NOTE Confidence: 0.79450005

 $00:01:11.830 \longrightarrow 00:01:15.378$  Cancel. After the program has

NOTE Confidence: 0.79450005

00:01:15.378 --> 00:01:17.086 received during this year,

NOTE Confidence: 0.79450005

 $00:01:17.090 \longrightarrow 00:01:20.090$  I'm really only as a spokesperson

NOTE Confidence: 0.79450005

 $00{:}01{:}20.090 \dashrightarrow 00{:}01{:}23.516$  for for a group of colleagues that are

NOTE Confidence: 0.79450005

 $00:01:23.516 \longrightarrow 00:01:26.735$  interested in India in the in liver

NOTE Confidence: 0.79450005

 $00:01:26.735 \longrightarrow 00:01:29.080$  cancer and treating liver cancer.

NOTE Confidence: 0.79450005

 $00:01:29.080 \longrightarrow 00:01:31.220$  So I'm just the messenger.

NOTE Confidence: 0.79450005

 $00:01:31.220 \longrightarrow 00:01:34.620$  So what do we do in the liver

NOTE Confidence: 0.79450005

 $00:01:34.620 \longrightarrow 00:01:36.350$  cancer program we take?

NOTE Confidence: 0.79450005

 $00:01:36.350 \longrightarrow 00:01:39.297$  We take care of patients with liver

NOTE Confidence: 0.79450005

 $00:01:39.297 \longrightarrow 00:01:41.918$  masses either benign or malignant are,

 $00:01:41.920 \longrightarrow 00:01:44.180$  and the two most frequent.

NOTE Confidence: 0.79450005

 $00{:}01{:}44.180 \dashrightarrow 00{:}01{:}48.500$  Primary liver cancer are able to sell cash.

NOTE Confidence: 0.79450005

00:01:48.500 --> 00:01:52.819 You know my also called HTC and

NOTE Confidence: 0.79450005

 $00:01:52.819 \longrightarrow 00:01:55.660$  Intraparticle Angela carcinoma and I

NOTE Confidence: 0.79450005

 $00:01:55.660 \longrightarrow 00:01:58.754$  focus my talk today mostly on ATC,

NOTE Confidence: 0.79450005

 $00:01:58.760 \longrightarrow 00:02:03.818$  which is the most important primary.

NOTE Confidence: 0.79450005

 $00:02:03.820 \longrightarrow 00:02:05.464$  Cancer of the liver.

NOTE Confidence: 0.79450005

 $00:02:05.464 \longrightarrow 00:02:08.519$  The liver is is an organ which

NOTE Confidence: 0.79450005

 $00:02:08.519 \longrightarrow 00:02:10.959$  is located in the abdomen,

NOTE Confidence: 0.79450005

 $00:02:10.960 \longrightarrow 00:02:13.190$  but really here it is.

NOTE Confidence: 0.79450005

00:02:13.190 --> 00:02:16.305 The main regulator of the whole body,

NOTE Confidence: 0.79450005

00:02:16.310 --> 00:02:17.597 metabolic coma stasis,

NOTE Confidence: 0.79450005

 $00{:}02{:}17.597 \dashrightarrow 00{:}02{:}21.659$  and in fact if the liver fails we actually,

NOTE Confidence: 0.79450005

 $00{:}02{:}21.660 \dashrightarrow 00{:}02{:}23.890$  the patient suffered of a

NOTE Confidence: 0.79450005

 $00:02:23.890 \longrightarrow 00:02:26.120$  syndrome which is very bad.

 $00:02:26.120 \longrightarrow 00:02:27.900$  Absolutely Poly systemic syndrome.

NOTE Confidence: 0.79450005

 $00{:}02{:}27.900 --> 00{:}02{:}30.125$  As you can see here.

NOTE Confidence: 0.79450005

 $00:02:30.130 \longrightarrow 00:02:32.022$  And the important thing

NOTE Confidence: 0.79450005

 $00:02:32.022 \longrightarrow 00:02:34.387$  to understand is that 85%.

NOTE Confidence: 0.79450005

 $00:02:34.390 \longrightarrow 00:02:38.179 90\%$  of the patient with able to sell casino.

NOTE Confidence: 0.79450005

 $00:02:38.180 \longrightarrow 00:02:40.240$  They are also cirrhotic in

NOTE Confidence: 0.79450005

 $00:02:40.240 \longrightarrow 00:02:42.810$  the liver and not only that,

NOTE Confidence: 0.79450005

 $00:02:42.810 \longrightarrow 00:02:46.010$  but if we follow a cohort of patients

NOTE Confidence: 0.79450005

00:02:46.010 --> 00:02:48.194 with viral induced liver disease

NOTE Confidence: 0.79450005

00:02:48.194 --> 00:02:51.225 either B or C for enough time,

NOTE Confidence: 0.79450005

 $00:02:51.230 \longrightarrow 00:02:54.506$  we see that the main the.

NOTE Confidence: 0.79450005

 $00:02:54.510 \longrightarrow 00:02:55.785$  When they die,

NOTE Confidence: 0.79450005

 $00:02:55.785 \longrightarrow 00:02:59.875$  most of them they died with the in a

NOTE Confidence: 0.79450005

 $00:02:59.875 \longrightarrow 00:03:02.923$  particular casting armor as shown here.

NOTE Confidence: 0.79450005

 $00:03:02.930 \longrightarrow 00:03:05.968$  So why what the about the circus

NOTE Confidence: 0.79450005

00:03:05.968 --> 00:03:08.358 number is actually only rise

 $00:03:08.358 \longrightarrow 00:03:11.358$  worldwide and the estimate are there.

NOTE Confidence: 0.79450005

 $00:03:11.360 \longrightarrow 00:03:14.629$  There are 830,000 cases recorded every year,

NOTE Confidence: 0.79450005

00:03:14.630 --> 00:03:16.970 with the mortality that almost

NOTE Confidence: 0.79450005

 $00:03:16.970 \longrightarrow 00:03:18.374$  approached the incidents.

NOTE Confidence: 0.79450005

 $00:03:18.380 \longrightarrow 00:03:22.079$  And why is that? Well, this is the.

NOTE Confidence: 0.79450005

 $00:03:22.079 \longrightarrow 00:03:25.917$  A result of a number of worldwide the

NOTE Confidence: 0.79450005

 $00:03:25.917 \longrightarrow 00:03:29.289$  epidemics that are also risk factor

NOTE Confidence: 0.79450005

 $00:03:29.289 \longrightarrow 00:03:32.702$  for chronic liver disease and among

NOTE Confidence: 0.79450005

 $00:03:32.702 \longrightarrow 00:03:37.042$  them we can mention viral appetite is B&C.

NOTE Confidence: 0.79450005

 $00:03:37.042 \longrightarrow 00:03:40.294$  You see that they the infection

NOTE Confidence: 0.79450005

 $00{:}03{:}40.294 \dashrightarrow 00{:}03{:}43.028$  from viral potatis is hundreds

NOTE Confidence: 0.79450005

 $00{:}03{:}43.028 \dashrightarrow 00{:}03{:}46.549$  of millions of people I call is

NOTE Confidence: 0.79450005

 $00{:}03{:}46.549 \dashrightarrow 00{:}03{:}49.318$  another important work by the.

NOTE Confidence: 0.79450005

 $00:03:49.320 \longrightarrow 00:03:52.015$  What is factor as it is obesity,

NOTE Confidence: 0.79450005

 $00:03:52.020 \longrightarrow 00:03:52.646$  diabetes?

 $00:03:52.646 \longrightarrow 00:03:55.150$  And more and more,

NOTE Confidence: 0.79450005

 $00{:}03{:}55.150 \dashrightarrow 00{:}03{:}58.104$  we realize that if 50 important risk

NOTE Confidence: 0.79450005

 $00:03:58.104 \longrightarrow 00:04:01.716$  factor is due to inequality's an patient

NOTE Confidence: 0.79450005

 $00:04:01.716 \longrightarrow 00:04:04.541$  population that are underserved and

NOTE Confidence: 0.79450005

 $00:04:04.541 \longrightarrow 00:04:07.190$  they have difficulties in reaching

NOTE Confidence: 0.79450005

 $00:04:07.190 \longrightarrow 00:04:10.694$  and being reached by the best care,

NOTE Confidence: 0.79450005

 $00:04:10.694 \longrightarrow 00:04:12.236$  other risk factors,

NOTE Confidence: 0.79450005

 $00:04:12.236 \longrightarrow 00:04:16.698$  smoking alpha toxin and an other as well.

NOTE Confidence: 0.79450005

 $00{:}04{:}16.700 \dashrightarrow 00{:}04{:}20.039$  And this is important to understand that

NOTE Confidence: 0.79450005

 $00:04:20.039 \longrightarrow 00:04:23.338$  the combination of risk factor increases.

NOTE Confidence: 0.79450005

 $00{:}04{:}23.340 \dashrightarrow 00{:}04{:}24.184$  And actually the risk.

NOTE Confidence: 0.79450005

00:04:24.184 --> 00:04:25.670 So in every patient that we see,

NOTE Confidence: 0.79450005

 $00:04:25.670 \longrightarrow 00:04:27.366$  we need to look for all of them.

NOTE Confidence: 0.79554164

 $00:04:33.060 \longrightarrow 00:04:36.865$  This risk factor are distributed

NOTE Confidence: 0.79554164

 $00:04:36.865 \longrightarrow 00:04:40.670$  unequally in the world wide.

NOTE Confidence: 0.79554164

 $00:04:40.670 \longrightarrow 00:04:42.722$  For example, a flatoxin is more frequent

 $00:04:42.722 \longrightarrow 00:04:45.779$  as it goes in in the African continent,

NOTE Confidence: 0.79554164

00:04:45.780 --> 00:04:49.070 but if we go to the US, All told,

NOTE Confidence: 0.79554164

 $00:04:49.070 \longrightarrow 00:04:51.990$  this publication shows Nash is a main factor.

NOTE Confidence: 0.79554164

 $00:04:51.990 \longrightarrow 00:04:54.419$  It is actually we have all the

NOTE Confidence: 0.79554164

 $00{:}04{:}54.419 \dashrightarrow 00{:}04{:}56.291$  respect or combining here because

NOTE Confidence: 0.79554164

 $00:04:56.291 \longrightarrow 00:04:58.186$  we have Nash with alcohol,

NOTE Confidence: 0.79554164

 $00:04:58.190 \longrightarrow 00:05:00.020$  we have appetite is C.

NOTE Confidence: 0.79554164

 $00:05:00.020 \longrightarrow 00:05:02.210$  And so on. And in fact,

NOTE Confidence: 0.79554164

 $00:05:02.210 \longrightarrow 00:05:05.710$  if we look at the distribution of

NOTE Confidence: 0.79554164

 $00:05:05.710 \longrightarrow 00:05:08.710$  the incidents of ATC in the US.

NOTE Confidence: 0.79554164

 $00{:}05{:}08.710 \dashrightarrow 00{:}05{:}12.700$  We see that is actually particularly

NOTE Confidence: 0.79554164

 $00:05:12.700 \longrightarrow 00:05:19.248$  hygge about 8. Per 100,000 in the.

NOTE Confidence: 0.79554164

 $00{:}05{:}19.250 \dashrightarrow 00{:}05{:}21.820$  Massachusetts, Connecticut and New York.

NOTE Confidence: 0.79554164

 $00:05:21.820 \longrightarrow 00:05:26.218$  So if we look back more.

NOTE Confidence: 0.79554164

 $00:05:26.220 \longrightarrow 00:05:27.340$  In depth into it,

 $00:05:27.340 \longrightarrow 00:05:29.983$  we see that in the US the liver

NOTE Confidence: 0.79554164

 $00{:}05{:}29.983 \dashrightarrow 00{:}05{:}32.208$  cancer incidence has increased almost

NOTE Confidence: 0.79554164

 $00:05:32.208 \longrightarrow 00:05:34.909$  three times in the last 30 years,

NOTE Confidence: 0.79554164

 $00:05:34.910 \longrightarrow 00:05:36.720$  and the mortality is increased

NOTE Confidence: 0.79554164

 $00:05:36.720 \longrightarrow 00:05:38.530$  almost two times as shown.

NOTE Confidence: 0.79554164

 $00:05:38.530 \longrightarrow 00:05:41.057$  Also in this graph on the right,

NOTE Confidence: 0.79554164

 $00:05:41.060 \longrightarrow 00:05:44.420$  if we look at the numbers and

NOTE Confidence: 0.79554164

 $00:05:44.420 \longrightarrow 00:05:47.270$  compare the number with two big.

NOTE Confidence: 0.79554164

 $00{:}05{:}47.270 \dashrightarrow 00{:}05{:}49.958$  GI killers in their adjustive system,

NOTE Confidence: 0.79554164

 $00:05:49.960 \longrightarrow 00:05:51.820$  like bankers and call,

NOTE Confidence: 0.79554164

 $00{:}05{:}51.820 \dashrightarrow 00{:}05{:}54.610$  and we see that in Connecticut

NOTE Confidence: 0.79554164

 $00:05:54.700 \longrightarrow 00:05:57.644$  we have a record of 480 cases per

NOTE Confidence: 0.79554164

 $00:05:57.644 \longrightarrow 00:06:00.462$  year and this is a combination

NOTE Confidence: 0.79554164

00:06:00.462 --> 00:06:02.947 between HCC an intra Patrick.

NOTE Confidence: 0.7645225

 $00:06:05.080 \longrightarrow 00:06:06.908$  Cinema also the interparticle

NOTE Confidence: 0.7645225

 $00{:}06{:}06{.}908 \dashrightarrow 00{:}06{:}09{.}193$  answer carcinoma is really minority,

 $00:06:09.200 \longrightarrow 00:06:12.840$  so we have 480 new cases and \$320

NOTE Confidence: 0.7645225

 $00{:}06{:}12.840 \dashrightarrow 00{:}06{:}15.557$  unfortunately and this is a figure

NOTE Confidence: 0.7645225

 $00:06:15.557 \longrightarrow 00:06:18.125$  which is similar to another big

NOTE Confidence: 0.7645225

 $00:06:18.223 \longrightarrow 00:06:21.258$  killer like the pancreatic cancer.

NOTE Confidence: 0.7645225

 $00:06:21.260 \longrightarrow 00:06:26.630$  730 and 520. So what?

NOTE Confidence: 0.7645225

 $00:06:26.630 \longrightarrow 00:06:28.590$  How does the molecular

NOTE Confidence: 0.7645225

00:06:28.590 --> 00:06:31.230 pathogenesis of apples for casino?

NOTE Confidence: 0.7645225

 $00:06:31.230 \longrightarrow 00:06:33.258$  We have said it.

NOTE Confidence: 0.68951565

 $00{:}06{:}35.310 \dashrightarrow 00{:}06{:}37.722$  Most of the patients have cirrhosis

NOTE Confidence: 0.68951565

 $00:06:37.722 \longrightarrow 00:06:40.667$  and in fact the main theory is

NOTE Confidence: 0.68951565

 $00:06:40.667 \longrightarrow 00:06:42.757$  that in the cirrhotic nodule

NOTE Confidence: 0.68951565

00:06:42.757 --> 00:06:45.426 there are Even so happens that

NOTE Confidence: 0.68951565

 $00{:}06{:}45.426 \dashrightarrow 00{:}06{:}47.616$  brings to Korando casino man.

NOTE Confidence: 0.68951565

 $00:06:47.620 \longrightarrow 00:06:49.517$  I'm in one of these is the.

NOTE Confidence: 0.5154471

 $00:06:51.700 \longrightarrow 00:06:52.870$  Alter the.

00:06:55.030 --> 00:06:58.398 TRT promoter that basically.

NOTE Confidence: 0.8252465

 $00:07:01.390 \longrightarrow 00:07:04.048$  Blocks the ability of the liver

NOTE Confidence: 0.8252465

 $00{:}07{:}04.048 \dashrightarrow 00{:}07{:}06.381$  cell under information to undergo

NOTE Confidence: 0.8252465

 $00:07:06.381 \longrightarrow 00:07:08.776$  senescence and an among them.

NOTE Confidence: 0.8252465

 $00:07:08.780 \longrightarrow 00:07:12.408$  There are other possible.

NOTE Confidence: 0.8252465

00:07:12.410 --> 00:07:14.720 But the genetic event like P53,

NOTE Confidence: 0.8252465

 $00:07:14.720 \longrightarrow 00:07:17.030$  which is basically associated with aflatoxin,

NOTE Confidence: 0.8252465

 $00:07:17.030 \longrightarrow 00:07:18.185$  better cotton imitation,

NOTE Confidence: 0.8252465

 $00:07:18.185 \longrightarrow 00:07:20.495$  and so on and so forth.

NOTE Confidence: 0.8252465

 $00:07:20.500 \longrightarrow 00:07:22.492$  But this is a scenario that

NOTE Confidence: 0.8252465

 $00{:}07{:}22.492 \dashrightarrow 00{:}07{:}24.730$  is not very well understood.

NOTE Confidence: 0.8252465

 $00:07:24.730 \longrightarrow 00:07:27.226$  All we can say for now is as

NOTE Confidence: 0.8252465

 $00:07:27.226 \longrightarrow 00:07:29.739$  there are two different classes,

NOTE Confidence: 0.8252465

00:07:29.740 --> 00:07:30.991 one name proliferation,

NOTE Confidence: 0.8252465

 $00:07:30.991 \longrightarrow 00:07:33.493$  the other non proliferation that are

NOTE Confidence: 0.8252465

 $00{:}07{:}33.493 \dashrightarrow 00{:}07{:}35.430$  different in terms of their prognosis

 $00:07:35.430 \longrightarrow 00:07:37.882$  and in terms of their ability to

NOTE Confidence: 0.8252465

 $00{:}07{:}37.882 \dashrightarrow 00{:}07{:}39.746$  respond eventually to immunotherapy.

NOTE Confidence: 0.76618826

 $00:07:41.910 \longrightarrow 00:07:44.668$  So I put the cell carcinoma is

NOTE Confidence: 0.76618826

00:07:44.668 --> 00:07:46.864 a very peculiar cancer because

NOTE Confidence: 0.76618826

 $00:07:46.864 \longrightarrow 00:07:49.630$  he has a 2 dual personality.

NOTE Confidence: 0.76618826

 $00:07:49.630 \longrightarrow 00:07:51.868$  It's a cancer in a failing

NOTE Confidence: 0.76618826

00:07:51.868 --> 00:07:54.937 vital organ and it can be seen

NOTE Confidence: 0.76618826

 $00{:}07{:}54.937 \dashrightarrow 00{:}07{:}56.925$  from a biological perspective.

NOTE Confidence: 0.76618826

 $00:07:56.930 \longrightarrow 00:07:59.070$  There are inflammation induced phenomenon,

NOTE Confidence: 0.76618826

 $00:07:59.070 \longrightarrow 00:08:00.026$  oncogenic viruses,

NOTE Confidence: 0.76618826

00:08:00.026 --> 00:08:01.938 literally natural general mutational

NOTE Confidence: 0.76618826

 $00{:}08{:}01.938 \dashrightarrow 00{:}08{:}05.014$  landscape and this brings to a complex

NOTE Confidence: 0.76618826

 $00{:}08{:}05.014 \dashrightarrow 00{:}08{:}07.216$  tumor fenotype with the witches aggressive.

NOTE Confidence: 0.76618826

 $00:08:07.220 \longrightarrow 00:08:10.076$  It is a terror generals with

NOTE Confidence: 0.76618826

 $00:08:10.076 \longrightarrow 00:08:11.980$  a high recurrence rate.

00:08:11.980 --> 00:08:14.647 When is Sonic Liquor point of view?

NOTE Confidence: 0.76618826

 $00{:}08{:}14.650 \dashrightarrow 00{:}08{:}16.555$  We have any plastic disease

NOTE Confidence: 0.76618826

 $00:08:16.555 \longrightarrow 00:08:18.079$  and the liver disease,

NOTE Confidence: 0.76618826

 $00:08:18.080 \longrightarrow 00:08:19.460$  and so the street.

NOTE Confidence: 0.76618826

 $00:08:19.460 \longrightarrow 00:08:21.185$  The treatment strategy has to

NOTE Confidence: 0.76618826

 $00:08:21.185 \longrightarrow 00:08:23.197$  be tailored according both to

NOTE Confidence: 0.76618826

 $00{:}08{:}23.197 \dashrightarrow 00{:}08{:}25.591$  the tumor stage and the function

NOTE Confidence: 0.76618826

 $00:08:25.663 \longrightarrow 00:08:27.219$  of stage liver disease,

NOTE Confidence: 0.76618826

 $00{:}08{:}27.220 \dashrightarrow 00{:}08{:}29.642$  and this creates some of the peculiar

NOTE Confidence: 0.76618826

 $00:08:29.642 \longrightarrow 00:08:32.547$  things in that management of this disease.

NOTE Confidence: 0.76618826

 $00{:}08{:}32.550 \dashrightarrow 00{:}08{:}34.854$  So we don't have one single way to

NOTE Confidence: 0.76618826

 $00:08:34.854 \longrightarrow 00:08:37.289$  manage it that you have resection

NOTE Confidence: 0.76618826

 $00{:}08{:}37.289 \dashrightarrow 00{:}08{:}39.073$ ablation came embolization value

NOTE Confidence: 0.76618826

 $00:08:39.073 \longrightarrow 00:08:40.560$  or addition therapy.

NOTE Confidence: 0.76618826

 $00:08:40.560 \longrightarrow 00:08:42.840$  Systemic therapy still has a.

NOTE Confidence: 0.76618826

 $00{:}08{:}42.840 \dashrightarrow 00{:}08{:}44.800$  At growing Bastille small role,

 $00:08:44.800 \longrightarrow 00:08:46.760$  we have the possibility to

NOTE Confidence: 0.76618826

 $00:08:46.760 \longrightarrow 00:08:47.936$  transport the patient.

NOTE Confidence: 0.76618826

 $00:08:47.940 \longrightarrow 00:08:50.677$  The only solid organ that can be

NOTE Confidence: 0.76618826

00:08:50.677 --> 00:08:52.781 transplanted and most of these

NOTE Confidence: 0.76618826

00:08:52.781 --> 00:08:54.489 patients actually die because

NOTE Confidence: 0.76618826

 $00:08:54.489 \longrightarrow 00:08:57.516$  of liver failure and in fact one

NOTE Confidence: 0.76618826

 $00:08:57.516 \longrightarrow 00:09:00.407$  professional figure that is involved in this.

NOTE Confidence: 0.76618826

 $00:09:00.410 \longrightarrow 00:09:01.940$  It is the hepatologist.

NOTE Confidence: 0.84268975

 $00:09:04.350 \longrightarrow 00:09:06.950$  What, because of all this,

NOTE Confidence: 0.84268975

 $00{:}09{:}06.950 \dashrightarrow 00{:}09{:}08.504$  different professionals involved

NOTE Confidence: 0.84268975

 $00:09:08.504 \longrightarrow 00:09:11.612$  in in this in the treatment,

NOTE Confidence: 0.84268975

 $00:09:11.620 \longrightarrow 00:09:14.884$  the entry points usually are multiple

NOTE Confidence: 0.84268975

 $00{:}09{:}14.884 \dashrightarrow 00{:}09{:}18.318$  Ann and this multiple entry points

NOTE Confidence: 0.84268975

 $00{:}09{:}18.318 \dashrightarrow 00{:}09{:}21.223$  in the system creates different

NOTE Confidence: 0.84268975

 $00:09:21.223 \longrightarrow 00:09:24.630$  trajectory for the patient with way.

 $00:09:24.630 \longrightarrow 00:09:26.912$  Dispassion of resource is an an can

NOTE Confidence: 0.84268975

 $00{:}09{:}26.912 \dashrightarrow 00{:}09{:}29.855$  impact on the outcome because there is a

NOTE Confidence: 0.84268975

 $00:09:29.855 \longrightarrow 00:09:32.577$  confusion and you don't really know what

NOTE Confidence: 0.84268975

 $00:09:32.577 \longrightarrow 00:09:35.216$  the part where the patient should follow.

NOTE Confidence: 0.84268975

 $00:09:35.220 \longrightarrow 00:09:38.145$  And this is one of the reason why it

NOTE Confidence: 0.84268975

 $00:09:38.145 \longrightarrow 00:09:41.059$  is important to have a team work.

NOTE Confidence: 0.84268975

 $00:09:41.060 \longrightarrow 00:09:42.880$  So to give an example,

NOTE Confidence: 0.84268975

 $00:09:42.880 \longrightarrow 00:09:45.688$  probably will take the whole day to this

NOTE Confidence: 0.84268975

 $00{:}09{:}45.688 \dashrightarrow 00{:}09{:}49.089$  guy to figure out how to change the tires,

NOTE Confidence: 0.84268975

 $00:09:49.090 \longrightarrow 00:09:51.460$  whereas the Formula One team can

NOTE Confidence: 0.84268975

 $00{:}09{:}51.460 \dashrightarrow 00{:}09{:}54.090$  do it exactly in 2.5 seconds.

NOTE Confidence: 0.84268975

 $00:09:54.090 \longrightarrow 00:09:56.547$  Which is amazing and is this love?

NOTE Confidence: 0.84268975

 $00:09:56.550 \longrightarrow 00:09:59.366$  Is this out of their coordination of care?

NOTE Confidence: 0.84268975

 $00{:}09{:}59.370 \dashrightarrow 00{:}10{:}01.476$  So treatment of Apple Circus nominees,

NOTE Confidence: 0.84268975

00:10:01.480 --> 00:10:02.482 coordination of care,

NOTE Confidence: 0.84268975

 $00:10:02.482 \longrightarrow 00:10:04.820$  and this is the trajectory that the

 $00:10:04.881 \longrightarrow 00:10:07.107$  program has followed through the year.

NOTE Confidence: 0.84268975

 $00:10:07.110 \longrightarrow 00:10:09.870$  So we started as a conference and I

NOTE Confidence: 0.84268975

 $00:10:09.870 \longrightarrow 00:10:12.390$  remember this few people with me wrong.

NOTE Confidence: 0.84268975

 $00:10:12.390 \longrightarrow 00:10:13.572$  Salom Jeff Pollack.

NOTE Confidence: 0.84268975

 $00{:}10{:}13.572 \dashrightarrow 00{:}10{:}15.936$  Jeff Wayne Rubber Dam part starting

NOTE Confidence: 0.84268975

 $00:10:15.936 \longrightarrow 00:10:17.913$  this little room and then he

NOTE Confidence: 0.84268975

 $00:10:17.913 \longrightarrow 00:10:19.423$  grew to a tumor board.

NOTE Confidence: 0.84268975

00:10:19.430 --> 00:10:21.398 Thanks to Tamar Daddy and then

NOTE Confidence: 0.84268975

00:10:21.398 --> 00:10:23.310 now it's becoming a program.

NOTE Confidence: 0.84268975

00:10:23.310 --> 00:10:25.360 And maybe it's really it's

NOTE Confidence: 0.84268975

 $00{:}10{:}25.360 \dashrightarrow 00{:}10{:}27.910$  it's ready for the next step.

NOTE Confidence: 0.84268975

 $00{:}10{:}27.910 \dashrightarrow 00{:}10{:}30.154$  So when it became a program

NOTE Confidence: 0.84268975

 $00{:}10{:}30.154 \dashrightarrow 00{:}10{:}32.550$  we designed in IDL structure,

NOTE Confidence: 0.84268975

00:10:32.550 --> 00:10:35.497 which is the patient can come into

NOTE Confidence: 0.84268975

00:10:35.497 --> 00:10:38.038 the system through a single point.

00:10:38.040 --> 00:10:40.150 Still working on that aspect,

NOTE Confidence: 0.84268975

 $00:10:40.150 \longrightarrow 00:10:42.712$  and then it's actually discussing the

NOTE Confidence: 0.84268975

 $00:10:42.712 \longrightarrow 00:10:45.209$  tumor board where they treat him,

NOTE Confidence: 0.84268975

 $00{:}10{:}45.210 \dashrightarrow 00{:}10{:}47.590$  allocation happens and is allocated

NOTE Confidence: 0.84268975

 $00:10:47.590 \longrightarrow 00:10:49.970$  to the different specialty according

NOTE Confidence: 0.84268975

 $00:10:50.041 \longrightarrow 00:10:51.955$  to the best treatment are an.

NOTE Confidence: 0.84268975

 $00{:}10{:}51.960 \dashrightarrow 00{:}10{:}54.830$  After that it gets follow-up be 'cause

NOTE Confidence: 0.84268975

 $00{:}10{:}54.830 \dashrightarrow 00{:}10{:}57.988$  we need to treat the risk factor.

NOTE Confidence: 0.84268975

 $00:10:57.990 \longrightarrow 00:11:00.948$  We need to mind the liver.

NOTE Confidence: 0.84268975

 $00:11:00.950 \longrightarrow 00:11:03.740$  Help us some chemo prevention protocols

NOTE Confidence: 0.84268975

 $00{:}11{:}03.740 \dashrightarrow 00{:}11{:}06.370$  and mirroring this clinical operation.

NOTE Confidence: 0.84268975

 $00:11:06.370 \longrightarrow 00:11:09.235$  There is also research component

NOTE Confidence: 0.84268975

 $00:11:09.235 \longrightarrow 00:11:12.950$  which is again a team effort.

NOTE Confidence: 0.84268975

 $00:11:12.950 \longrightarrow 00:11:16.316$  So where are we? So we begin with the.

NOTE Confidence: 0.84268975

00:11:16.320 --> 00:11:19.506 This is a map of the Smiler Care center

NOTE Confidence: 0.84268975

 $00{:}11{:}19.506 \dashrightarrow 00{:}11{:}22.916$  OK and this is the two main site for

 $00:11:22.916 \longrightarrow 00:11:26.018$  liver care here at again you have in

NOTE Confidence: 0.84268975

 $00{:}11{:}26.018 \dashrightarrow 00{:}11{:}28.809$  hospital and the VA off without but

NOTE Confidence: 0.84268975

 $00:11:28.809 \longrightarrow 00:11:31.347$  through the recent year there was

NOTE Confidence: 0.84268975

00:11:31.347 --> 00:11:34.290 open a site in in Bridgeville with

NOTE Confidence: 0.84268975

 $00{:}11{:}34.290 \dashrightarrow 00{:}11{:}36.730$  magnetic so insight in the ambari

NOTE Confidence: 0.84268975

 $00:11:36.730 \longrightarrow 00:11:39.285$  came to stand for my shift key.

NOTE Confidence: 0.84268975

00:11:39.290 --> 00:11:40.822 James Mattis T is,

NOTE Confidence: 0.84268975

 $00:11:40.822 \longrightarrow 00:11:41.588$  you know,

NOTE Confidence: 0.84268975

 $00{:}11{:}41.590 \dashrightarrow 00{:}11{:}43.900$  the westerly side and soon Alan

NOTE Confidence: 0.84268975

 $00:11:43.900 \longrightarrow 00:11:46.570$  Jaffe will go to West for now.

NOTE Confidence: 0.84268975

00:11:46.570 --> 00:11:48.802 This is in combination with with

NOTE Confidence: 0.84268975

 $00{:}11{:}48.802 \dashrightarrow 00{:}11{:}50.682$  the with the transplant team

NOTE Confidence: 0.84268975

 $00{:}11{:}50.682 \dashrightarrow 00{:}11{:}52.957$  with which we have a very good

NOTE Confidence: 0.84268975

 $00{:}11{:}52.957 \dashrightarrow 00{:}11{:}54.610$  long standing collaboration.

NOTE Confidence: 0.84268975

 $00:11:54.610 \longrightarrow 00:11:58.226$  Now it really takes a village to treat

 $00:11:58.226 \longrightarrow 00:12:01.116$  this cancer and here you can see.

NOTE Confidence: 0.84268975

 $00:12:01.120 \longrightarrow 00:12:03.526$  Not all of their colleagues that

NOTE Confidence: 0.84268975

00:12:03.526 --> 00:12:06.149 participates and I have to say it's

NOTE Confidence: 0.84268975

 $00:12:06.149 \longrightarrow 00:12:08.354$  it's a real privilege to be able

NOTE Confidence: 0.84268975

 $00:12:08.429 \longrightarrow 00:12:10.649$  to work with these individuals,

NOTE Confidence: 0.84268975

 $00:12:10.650 \longrightarrow 00:12:12.550$  and they are extremely skilled.

NOTE Confidence: 0.84268975

 $00:12:12.550 \longrightarrow 00:12:15.147$  All of them are leaders in their

NOTE Confidence: 0.84268975

00:12:15.147 --> 00:12:17.878 own right are in their own field,

NOTE Confidence: 0.84268975

 $00:12:17.880 \longrightarrow 00:12:20.414$  and so the discussion that we have

NOTE Confidence: 0.84268975

00:12:20.414 --> 00:12:22.967 are so enlightening and we follow a

NOTE Confidence: 0.84268975

 $00{:}12{:}22.967 \dashrightarrow 00{:}12{:}25.061$  like a structure of discussion going

NOTE Confidence: 0.84268975

00:12:25.128 --> 00:12:27.408 through and analyze the reception,

NOTE Confidence: 0.8491186

 $00:12:27.410 \longrightarrow 00:12:28.400$  the transplant candidacy,

NOTE Confidence: 0.8491186

 $00:12:28.400 \longrightarrow 00:12:31.244$  the OR whether we need to use local

NOTE Confidence: 0.8491186

00:12:31.244 --> 00:12:33.116 regional treatment like ablation,

NOTE Confidence: 0.8491186

 $00:12:33.120 \longrightarrow 00:12:33.968$  criminalization, radiation.

00:12:33.968 --> 00:12:38.139 It's I don't have the time to go into this,

NOTE Confidence: 0.8491186

 $00{:}12{:}38.140 \dashrightarrow 00{:}12{:}41.212$  but it's it's every single all of this

NOTE Confidence: 0.8491186

00:12:41.212 --> 00:12:42.998 possible treatment is very complex

NOTE Confidence: 0.8491186

 $00:12:42.998 \longrightarrow 00:12:45.210$  and the decision making is a is

NOTE Confidence: 0.8491186

 $00:12:45.285 \longrightarrow 00:12:47.709$  even more complex because it depends

NOTE Confidence: 0.8491186

00:12:47.709 --> 00:12:49.702 from systemic and local factors,

NOTE Confidence: 0.8491186

 $00:12:49.702 \longrightarrow 00:12:51.934$  and in fact we really an.

NOTE Confidence: 0.8491186

 $00:12:51.940 \longrightarrow 00:12:53.805$  We basically follow the Barcelona

NOTE Confidence: 0.8491186

 $00:12:53.805 \longrightarrow 00:12:56.040$  Liver cancer treatment, which is a.

NOTE Confidence: 0.81663

 $00{:}12{:}58.460 \dashrightarrow 00{:}13{:}01.022$  Used by master Lever Societies an

NOTE Confidence: 0.81663

 $00:13:01.022 \longrightarrow 00:13:04.329$  but it really has a lot of troubles.

NOTE Confidence: 0.81663

 $00:13:04.330 \longrightarrow 00:13:05.842$  OK, there are changes.

NOTE Confidence: 0.81663

 $00{:}13{:}05.842 \dashrightarrow 00{:}13{:}08.110$  This is the latest version and

NOTE Confidence: 0.81663

00:13:08.184 --> 00:13:10.609 takes into account liver function,

NOTE Confidence: 0.81663

00:13:10.610 --> 00:13:12.705 performance status and then

 $00:13:12.705 \longrightarrow 00:13:14.800$  atomic location of the cancer.

NOTE Confidence: 0.81663

 $00{:}13{:}14.800 \dashrightarrow 00{:}13{:}17.212$  But really there are lot of

NOTE Confidence: 0.81663

 $00:13:17.212 \longrightarrow 00:13:19.756$  troubles and we cannot be so

NOTE Confidence: 0.81663

00:13:19.756 --> 00:13:22.312 strict with the categories and for

NOTE Confidence: 0.81663

 $00:13:22.312 \longrightarrow 00:13:24.858$  example this was written in 2019.

NOTE Confidence: 0.81663

 $00:13:24.860 \longrightarrow 00:13:26.985$  Now the first line treatment

NOTE Confidence: 0.81663

 $00:13:26.985 \longrightarrow 00:13:29.110$  is that is above but.

NOTE Confidence: 0.81663

 $00:13:29.110 \longrightarrow 00:13:30.870$  Cannot be only confined to

NOTE Confidence: 0.81663

00:13:30.870 --> 00:13:32.630 patient at about to die,

NOTE Confidence: 0.81663

 $00:13:32.630 \longrightarrow 00:13:34.390$  as in this staging system,

NOTE Confidence: 0.81663

 $00:13:34.390 \longrightarrow 00:13:36.420$  so a lot of things have changed

NOTE Confidence: 0.81663

 $00:13:36.420 \longrightarrow 00:13:38.419$  and that made difficult by the

NOTE Confidence: 0.81663

00:13:38.419 --> 00:13:40.543 fact that we have multiple theology

NOTE Confidence: 0.81663

 $00:13:40.543 \longrightarrow 00:13:42.837$  at the underlying liver disease.

NOTE Confidence: 0.81663

 $00:13:42.840 \longrightarrow 00:13:44.946$  The frequent comma abilities in fact,

NOTE Confidence: 0.81663

 $00:13:44.950 \longrightarrow 00:13:46.702$  this is a cancer.

 $00{:}13{:}46.702 \dashrightarrow 00{:}13{:}49.790$  That picture above 65 years of age.

NOTE Confidence: 0.81663

 $00{:}13{:}49.790 \dashrightarrow 00{:}13{:}51.454$  Multiple treatment option and

NOTE Confidence: 0.81663

 $00:13:51.454 \longrightarrow 00:13:54.264$  70% of them have a recurrence of

NOTE Confidence: 0.81663

 $00:13:54.264 \longrightarrow 00:13:57.258$  the cancer in the next 20 months.

NOTE Confidence: 0.81663

 $00:13:57.260 \longrightarrow 00:13:58.920$  We have liver transplantation

NOTE Confidence: 0.81663

 $00:13:58.920 \longrightarrow 00:14:00.165$  and other actors,

NOTE Confidence: 0.81663

 $00:14:00.170 \longrightarrow 00:14:04.335$  so the only way to maintain a.

NOTE Confidence: 0.81663

 $00{:}14{:}04.340 \dashrightarrow 00{:}14{:}06.518$  Structure approach this is to is

NOTE Confidence: 0.81663

 $00:14:06.518 \longrightarrow 00:14:08.999$  to that room and board with four

NOTE Confidence: 0.81663

 $00:14:08.999 \longrightarrow 00:14:11.712$  hours is not a way where we present

NOTE Confidence: 0.81663

00:14:11.712 --> 00:14:14.154 strange cases is really the machine

NOTE Confidence: 0.81663

 $00:14:14.154 \longrightarrow 00:14:17.190$  Ann and the credit for this goes to

NOTE Confidence: 0.81663

00:14:17.190 --> 00:14:19.799 my colleague and friend to Mark Addy,

NOTE Confidence: 0.81663

 $00:14:19.800 \longrightarrow 00:14:22.480$  who set it up and now we we

NOTE Confidence: 0.81663

 $00:14:22.480 \longrightarrow 00:14:24.579$  discussed 13 cases each week.

 $00:14:24.580 \longrightarrow 00:14:27.149$  Last year we even with the kovit

NOTE Confidence: 0.81663

 $00{:}14{:}27.149 \dashrightarrow 00{:}14{:}30.323$  we discuss 520 cases and one of the

NOTE Confidence: 0.81663

 $00{:}14{:}30.323 \dashrightarrow 00{:}14{:}32.729$  busiest actually tumor Board 2 of

NOTE Confidence: 0.81663

 $00:14:32.729 \longrightarrow 00:14:35.369$  200 of them with new cases we have.

NOTE Confidence: 0.81663

 $00:14:35.370 \longrightarrow 00:14:37.350$  300 patient and follow up.

NOTE Confidence: 0.81663

 $00:14:37.350 \longrightarrow 00:14:39.732$  150 new cases and these actually

NOTE Confidence: 0.81663

 $00{:}14{:}39.732 \dashrightarrow 00{:}14{:}41.710$  treated in several different ways,

NOTE Confidence: 0.81663

 $00:14:41.710 \longrightarrow 00:14:45.643$  but this is not the venue to to go

NOTE Confidence: 0.81663

 $00{:}14{:}45.643 \dashrightarrow 00{:}14{:}49.940$  through the volumes or to their substantial.

NOTE Confidence: 0.81663

 $00:14:49.940 \longrightarrow 00:14:52.257$  The tumor board is also where we

NOTE Confidence: 0.81663

00:14:52.257 --> 00:14:54.778 got ideas for research and ideas

NOTE Confidence: 0.81663

 $00{:}14{:}54.778 \dashrightarrow 00{:}14{:}57.203$  for for improvement and innovation.

NOTE Confidence: 0.81663

 $00:14:57.210 \longrightarrow 00:15:00.010$  This is that list of items that we

NOTE Confidence: 0.81663

 $00:15:00.010 \longrightarrow 00:15:02.869$  discussed at the last steering committee.

NOTE Confidence: 0.81663

 $00:15:02.870 \longrightarrow 00:15:03.750$  For example,

NOTE Confidence: 0.81663

00:15:03.750 --> 00:15:06.390 several of this question that I'm

 $00:15:06.390 \longrightarrow 00:15:10.530$  not going to read all of them, but.

NOTE Confidence: 0.81663

 $00{:}15{:}10.530 \dashrightarrow 00{:}15{:}13.498$  Generate. Recent opportunities.

NOTE Confidence: 0.81663

00:15:13.498 --> 00:15:15.550 Anne Anne, Anne,

NOTE Confidence: 0.81663

 $00:15:15.550 \longrightarrow 00:15:18.150$  Anne and also great care I I wanna

NOTE Confidence: 0.81663

 $00:15:18.150 \longrightarrow 00:15:20.180$  go briefly through this case.

NOTE Confidence: 0.81663

 $00:15:20.180 \longrightarrow 00:15:22.665$  This was a patient. Refer to doctor.

NOTE Confidence: 0.81663

00:15:22.670 --> 00:15:24.770 She's key for transfer evaluation

NOTE Confidence: 0.81663

00:15:24.770 --> 00:15:27.328 Mike so the patient realized that

NOTE Confidence: 0.81663

 $00:15:27.328 \longrightarrow 00:15:29.248$  he had actually liver cancer.

NOTE Confidence: 0.81663

00:15:29.250 --> 00:15:30.930 And Moran had infiltrative

NOTE Confidence: 0.81663

 $00:15:30.930 \longrightarrow 00:15:32.610$  hepatocellular carcinoma with with

NOTE Confidence: 0.81663

 $00:15:32.610 \longrightarrow 00:15:34.849$  the tumour portal vein thrombosis.

NOTE Confidence: 0.81663

 $00:15:34.850 \longrightarrow 00:15:37.818$  So we discussed the case at the

NOTE Confidence: 0.81663

 $00{:}15{:}37.818 \dashrightarrow 00{:}15{:}41.063$  tumor board and it was decided that

NOTE Confidence: 0.81663

00:15:41.063 --> 00:15:44.530 there was no other option rather than

 $00:15:44.530 \longrightarrow 00:15:47.860$  medical treatment or offering a trial.

NOTE Confidence: 0.81663

 $00:15:47.860 \longrightarrow 00:15:50.266$  Stacy did try to give him

NOTE Confidence: 0.81663

 $00:15:50.266 \longrightarrow 00:15:52.110$  softening by the beginning I,

NOTE Confidence: 0.81663

 $00:15:52.110 \longrightarrow 00:15:54.532$  but this was denied by the insurance

NOTE Confidence: 0.81663

00:15:54.532 --> 00:15:56.935 and so it happened at Stacy

NOTE Confidence: 0.81663

 $00{:}15{:}56.935 \dashrightarrow 00{:}15{:}59.509$  adjust open atrial at the initial

NOTE Confidence: 0.81663

 $00:15:59.509 \longrightarrow 00:16:01.367$  trial with a diesel Bev,

NOTE Confidence: 0.81663

 $00:16:01.370 \longrightarrow 00:16:03.300$  which is now you know,

NOTE Confidence: 0.81663

 $00:16:03.300 \longrightarrow 00:16:05.982$  the first line treatment for back

NOTE Confidence: 0.81663

 $00{:}16{:}05{.}982 \dashrightarrow 00{:}16{:}09{.}229$  in that time was actually we were

NOTE Confidence: 0.81663

 $00{:}16{:}09.229 \mathrel{--}{>} 00{:}16{:}11.965$  very lucky that we could offer

NOTE Confidence: 0.81663

 $00:16:11.965 \longrightarrow 00:16:14.296$  him and as you see here.

NOTE Confidence: 0.81663

 $00:16:14.300 \longrightarrow 00:16:16.300$  In the graph of plotting

NOTE Confidence: 0.81663

 $00:16:16.300 \longrightarrow 00:16:17.500$  the alpha fetoprotein,

NOTE Confidence: 0.81663

 $00:16:17.500 \longrightarrow 00:16:19.500$  he had a complete response.

NOTE Confidence: 0.8041078

 $00:16:21.850 \longrightarrow 00:16:24.016$  But in the next two years,

 $00:16:24.020 \longrightarrow 00:16:26.090$  this patient was completely and the

NOTE Confidence: 0.8041078

00:16:26.090 --> 00:16:28.370 quality of life of this patient,

NOTE Confidence: 0.8041078

 $00:16:28.370 \longrightarrow 00:16:29.794$  which was completely altered

NOTE Confidence: 0.8041078

 $00:16:29.794 \longrightarrow 00:16:31.574$  by recurrent severe episodes of

NOTE Confidence: 0.8041078

 $00:16:31.574 \longrightarrow 00:16:32.709$  portosystemic several opathy.

NOTE Confidence: 0.8041078

 $00{:}16{:}32.710 \dashrightarrow 00{:}16{:}35.334$  As you can see here from the ammonia

NOTE Confidence: 0.8041078

 $00:16:35.334 \longrightarrow 00:16:37.562$  and actually in during one of

NOTE Confidence: 0.8041078

 $00:16:37.562 \longrightarrow 00:16:39.437$  these emission it also discussion

NOTE Confidence: 0.8041078

00:16:39.437 --> 00:16:41.758 about goals of care was initiated,

NOTE Confidence: 0.8041078

 $00:16:41.760 \longrightarrow 00:16:44.595$  so we had a patient who was treated by

NOTE Confidence: 0.8041078

 $00{:}16{:}44.595 \dashrightarrow 00{:}16{:}47.189$  with you from this malignant tumor.

NOTE Confidence: 0.8041078

 $00{:}16{:}47.190 \dashrightarrow 00{:}16{:}49.759$  But he was dying because I believe

NOTE Confidence: 0.8041078

 $00{:}16{:}49.759 \dashrightarrow 00{:}16{:}51.270$  this is an act.

NOTE Confidence: 0.8041078

 $00{:}16{:}51.270 \dashrightarrow 00{:}16{:}53.905$ . 2 very bright hepatologist wanagas

NOTE Confidence: 0.8041078

 $00:16:53.905 \longrightarrow 00:16:56.540$  intervals with system are in,

 $00:16:56.540 \longrightarrow 00:16:58.121$  another is stalled.

NOTE Confidence: 0.8041078

00:16:58.121 --> 00:17:00.756 Slacker, which is an interventional

NOTE Confidence: 0.8041078

00:17:00.756 --> 00:17:01.810 hepatology calling,

NOTE Confidence: 0.8041078

 $00:17:01.810 \longrightarrow 00:17:04.966$  decided to embolize his plane arena.

NOTE Confidence: 0.8041078

 $00:17:04.970 \longrightarrow 00:17:08.132$  Shanta and now the patient is

NOTE Confidence: 0.8041078

 $00:17:08.132 \longrightarrow 00:17:10.160$  functional cancer free, happy.

NOTE Confidence: 0.8041078

 $00:17:10.160 \longrightarrow 00:17:12.800$  And when he refers to what

NOTE Confidence: 0.8041078

00:17:12.800 --> 00:17:15.080 happened with the insurance,

NOTE Confidence: 0.8041078

 $00{:}17{:}15.080 \dashrightarrow 00{:}17{:}17.210$  he quotes wisdom churches saying pessimist

NOTE Confidence: 0.8041078

00:17:17.210 --> 00:17:19.320 sees difficulty in every opportunity,

NOTE Confidence: 0.8041078

00:17:19.320 --> 00:17:20.856 an optimist sees opportunity

NOTE Confidence: 0.8041078

 $00:17:20.856 \longrightarrow 00:17:22.008$  in every difficulty.

NOTE Confidence: 0.8041078

 $00{:}17{:}22.010 \dashrightarrow 00{:}17{:}25.026$  So this is a case which we learn

NOTE Confidence: 0.8041078

 $00:17:25.026 \longrightarrow 00:17:28.165$  a lot about it an an in fact.

NOTE Confidence: 0.8041078

00:17:28.170 --> 00:17:28.954 Now particularly,

NOTE Confidence: 0.8041078

00:17:28.954 --> 00:17:29.738 you know,

 $00:17:29.738 \longrightarrow 00:17:32.535$  one of the things that was interesting

NOTE Confidence: 0.8041078

 $00{:}17{:}32.535 \dashrightarrow 00{:}17{:}35.076$  in the Gary case was that he

NOTE Confidence: 0.8041078

00:17:35.076 --> 00:17:37.410 never had a recurrence an will.

NOTE Confidence: 0.8041078

 $00:17:37.410 \longrightarrow 00:17:38.565$  I said occurrences,

NOTE Confidence: 0.8041078

00:17:38.565 --> 00:17:40.105 something that playing sour

NOTE Confidence: 0.8041078

 $00:17:40.105 \longrightarrow 00:17:42.700$  patient 6070% of them in there.

NOTE Confidence: 0.8041078

 $00:17:42.700 \longrightarrow 00:17:44.975$  In their first two years,

NOTE Confidence: 0.8041078

 $00{:}17{:}44.980 \dashrightarrow 00{:}17{:}47.948$  so that prompted the opening of a

NOTE Confidence: 0.8041078

00:17:47.948 --> 00:17:50.863 try again by Stacy and D'istria

NOTE Confidence: 0.8041078

 $00{:}17{:}50.863 \dashrightarrow 00{:}17{:}53.443$  will actually try to address

NOTE Confidence: 0.8041078

 $00{:}17{:}53.443 \dashrightarrow 00{:}17{:}56.469$  the role of adjuvant treatment

NOTE Confidence: 0.8041078

00:17:56.469 --> 00:17:58.997 after surgery or ablation.

NOTE Confidence: 0.8041078

 $00{:}17{:}59.000 \dashrightarrow 00{:}18{:}01.085$  Another tria is being brought

NOTE Confidence: 0.8041078

00:18:01.085 --> 00:18:02.753 here by David Madore.

NOTE Confidence: 0.8041078

 $00:18:02.760 \longrightarrow 00:18:04.432$  Fu actually addresses and

 $00:18:04.432 \longrightarrow 00:18:06.104$  other nuances of this,

NOTE Confidence: 0.8041078

 $00:18:06.110 \longrightarrow 00:18:08.686$  so he his aim is to understand

NOTE Confidence: 0.8041078

 $00:18:08.686 \longrightarrow 00:18:11.750$  whether there is a benefit in what

NOTE Confidence: 0.8041078

 $00:18:11.750 \longrightarrow 00:18:13.630$  we call combination treatment.

NOTE Confidence: 0.8041078

 $00:18:13.630 \longrightarrow 00:18:16.132$  So the idea to combine came

NOTE Confidence: 0.8041078

 $00:18:16.132 \longrightarrow 00:18:17.383$  embolization with the.

NOTE Confidence: 0.62811226

00:18:19.590 --> 00:18:23.126 Even on Koleji, in combination with a PKI.

NOTE Confidence: 0.62811226

00:18:23.130 --> 00:18:25.758 And another important aspect of the

NOTE Confidence: 0.62811226

 $00{:}18{:}25.758 \mathrel{--}{>} 00{:}18{:}29.374$  program is the fact that we really tried

NOTE Confidence: 0.62811226

 $00:18:29.374 \longrightarrow 00:18:32.050$  to record and measure the outcomes.

NOTE Confidence: 0.62811226

 $00{:}18{:}32.050 \dashrightarrow 00{:}18{:}34.280$  Ariel's affair with John awfully.

NOTE Confidence: 0.7676826

00:18:38.290 --> 00:18:41.237 My tarantula Shapiro at there are curating

NOTE Confidence: 0.7676826

00:18:41.237 --> 00:18:44.229 a database of 1000 patients in India

NOTE Confidence: 0.7676826

 $00{:}18{:}44.229 \to 00{:}18{:}47.166$  and the survival code divided by BCSC

NOTE Confidence: 0.7676826

 $00:18:47.166 \longrightarrow 00:18:51.438$  states that you see, here are our own.

NOTE Confidence: 0.7676826

 $00:18:51.438 \longrightarrow 00:18:54.898$  Outcomes so we can really.

 $00:18:54.900 \longrightarrow 00:18:57.138$  Make the termination letter based on.

NOTE Confidence: 0.7676826

00:18:57.140 --> 00:18:58.985 Now our environment in expertise

NOTE Confidence: 0.7676826

 $00:18:58.985 \longrightarrow 00:19:01.230$  and is simple example that the

NOTE Confidence: 0.7676826

00:19:01.230 --> 00:19:03.252 outcome is outstanding up to more

NOTE Confidence: 0.7676826

 $00:19:03.252 \longrightarrow 00:19:05.566$  than three years for this campaign

NOTE Confidence: 0.7676826

00:19:05.566 --> 00:19:07.210 patient with initial cancer,

NOTE Confidence: 0.7676826

 $00:19:07.210 \longrightarrow 00:19:09.891$  things are changing after this an and

NOTE Confidence: 0.7676826

 $00:19:09.891 \dashrightarrow 00:19:12.886$  there's a lot to be discussed in among

NOTE Confidence: 0.7676826

 $00:19:12.886 \dashrightarrow 00:19:16.159$  these patients and I I don't have it here,

NOTE Confidence: 0.7676826

 $00:19:16.160 \longrightarrow 00:19:18.398$  but if anybody has a doubt

NOTE Confidence: 0.7676826

00:19:18.398 --> 00:19:19.144 about transplantation,

NOTE Confidence: 0.7676826

 $00:19:19.150 \dashrightarrow 00:19:22.444$  I can tell you that the code was transfer

NOTE Confidence: 0.7676826

 $00{:}19{:}22.444 \dashrightarrow 00{:}19{:}25.448$  stations like this so outstanding long term.

NOTE Confidence: 0.7676826

00:19:25.450 --> 00:19:28.530 Result for the few patient again get it,

NOTE Confidence: 0.7676826

 $00:19:28.530 \longrightarrow 00:19:30.460$  but this is a very,

00:19:30.460 --> 00:19:32.875 very important aspect of what we do

NOTE Confidence: 0.7676826

 $00{:}19{:}32.875 \dashrightarrow 00{:}19{:}35.745$  an an it's going to be so complex

NOTE Confidence: 0.7676826

 $00{:}19{:}35.745 \dashrightarrow 00{:}19{:}38.469$  that in fact Julius with Jim Duncan

NOTE Confidence: 0.7676826

 $00:19:38.469 \longrightarrow 00:19:41.121$  Manderly and John actually very much

NOTE Confidence: 0.7676826

00:19:41.121 --> 00:19:43.063 involved in trying to understand

NOTE Confidence: 0.7676826

 $00:19:43.063 \longrightarrow 00:19:45.520$  the use that we can have artificial

NOTE Confidence: 0.7676826

 $00:19:45.582 \longrightarrow 00:19:47.398$  intelligence in the diagonal.

NOTE Confidence: 0.7676826

 $00:19:47.400 \longrightarrow 00:19:49.895$  This characterization treatment of this

NOTE Confidence: 0.7676826

 $00{:}19{:}49.895 \dashrightarrow 00{:}19{:}53.191$  Council and we expect that this would

NOTE Confidence: 0.7676826

00:19:53.191 --> 00:19:56.087 be a great aid to our decision making

NOTE Confidence: 0.7676826

 $00{:}19{:}56.172 \dashrightarrow 00{:}19{:}58.968$  and also discovery of new approaches.

NOTE Confidence: 0.7676826

 $00:19:58.970 \longrightarrow 00:20:02.648$  So what the liver cancer program

NOTE Confidence: 0.7676826

 $00:20:02.648 \longrightarrow 00:20:05.100$  doesn't have a formalized?

NOTE Confidence: 0.6834885

 $00{:}20{:}08.420 \dashrightarrow 00{:}20{:}10.440$  Visas program but is actually

NOTE Confidence: 0.6834885

 $00:20:10.440 \longrightarrow 00:20:12.460$  the assembly of of several

NOTE Confidence: 0.6834885

 $00{:}20{:}12.536 \dashrightarrow 00{:}20{:}14.630$  different interrested people.

 $00:20:14.630 \longrightarrow 00:20:17.020$  What have we done to.

NOTE Confidence: 0.80727184

 $00:20:19.030 \longrightarrow 00:20:21.346$  Put together these people so the

NOTE Confidence: 0.80727184

 $00:20:21.346 \longrightarrow 00:20:23.996$  first thing that we have been doing

NOTE Confidence: 0.80727184

 $00:20:23.996 \longrightarrow 00:20:26.902$  with Julius De Mar is is these liver

NOTE Confidence: 0.80727184

 $00:20:26.902 \longrightarrow 00:20:29.530$  cancer talks their monthly in the

NOTE Confidence: 0.80727184

 $00:20:29.530 \longrightarrow 00:20:31.662$  late late afternoon on Thursday.

NOTE Confidence: 0.80727184

00:20:31.662 --> 00:20:34.910 Each of them with two or three percent

NOTE Confidence: 0.80727184

 $00:20:34.998 \longrightarrow 00:20:37.546$  Asia and this has to be ongoing.

NOTE Confidence: 0.80727184

 $00:20:37.550 \longrightarrow 00:20:39.520$  Research are now published work.

NOTE Confidence: 0.80727184

 $00{:}20{:}39.520 \dashrightarrow 00{:}20{:}41.856$  It covers all the aspects, clinical,

NOTE Confidence: 0.80727184

 $00:20:41.856 \longrightarrow 00:20:44.052$  translation and healthcare and and this

NOTE Confidence: 0.80727184

 $00:20:44.052 \longrightarrow 00:20:46.219$  actually this approach Spark collaboration.

NOTE Confidence: 0.80727184

 $00{:}20{:}46.220 \dashrightarrow 00{:}20{:}48.240$  There were paper grant application

NOTE Confidence: 0.80727184

 $00{:}20{:}48.240 \dashrightarrow 00{:}20{:}50.260$  and also a big step.

NOTE Confidence: 0.80727184

 $00:20:50.260 \longrightarrow 00:20:53.207$  Forward was at last October when again

00:20:53.207 --> 00:20:56.579 with the help of the Miami Justice Ann,

NOTE Confidence: 0.80727184

00:20:56.580 --> 00:20:59.852 and thanks to the help of Gary Honeycutt's

NOTE Confidence: 0.80727184

 $00:20:59.852 \longrightarrow 00:21:02.889$  and his team in the Cancer Center,

NOTE Confidence: 0.80727184

00:21:02.890 --> 00:21:06.033 we put forward the first liver cancer

NOTE Confidence: 0.80727184

 $00:21:06.033 \longrightarrow 00:21:08.613$  Super Summit which is called pre

NOTE Confidence: 0.80727184

00:21:08.613 --> 00:21:11.301 Lude because he was not in person.

NOTE Confidence: 0.80727184

00:21:11.310 --> 00:21:12.902 Where was Virtu are,

NOTE Confidence: 0.80727184

 $00:21:12.902 \longrightarrow 00:21:15.859$  but the mission was to address the

NOTE Confidence: 0.80727184

00:21:15.859 --> 00:21:18.805 Uncle logic challenges or liver cancer

NOTE Confidence: 0.80727184

 $00:21:18.805 \longrightarrow 00:21:21.610$  to the collaboration amount of abide.

NOTE Confidence: 0.80727184

 $00:21:21.610 \longrightarrow 00:21:24.110$  Spectrum will be a faculty.

NOTE Confidence: 0.80727184

 $00{:}21{:}24.110 \dashrightarrow 00{:}21{:}26.917$  And I'm I'm gonna really run through

NOTE Confidence: 0.80727184

 $00:21:26.917 \longrightarrow 00:21:29.946$  some of this visa suspect and what

NOTE Confidence: 0.80727184

 $00:21:29.946 \longrightarrow 00:21:33.015$  in what I call the Commonwealth to

NOTE Confidence: 0.80727184

00:21:33.015 --> 00:21:35.654 liver cancer is at yeah OK because

NOTE Confidence: 0.80727184

 $00:21:35.654 \longrightarrow 00:21:37.640$  it's not again formalized structure,

 $00:21:37.640 \longrightarrow 00:21:40.510$  but is the gathering of of interested

NOTE Confidence: 0.80727184

00:21:40.573 --> 00:21:42.967 people coming from the medical school,

NOTE Confidence: 0.80727184

00:21:42.970 --> 00:21:45.020 the School of Public Health?

NOTE Confidence: 0.80727184

00:21:45.020 --> 00:21:47.070 the VA system involving departments

NOTE Confidence: 0.80727184

00:21:47.070 --> 00:21:48.710 like surgery, internal medicine,

NOTE Confidence: 0.80727184

00:21:48.710 --> 00:21:50.826 the Cancer Center, the year,

NOTE Confidence: 0.80727184

 $00:21:50.826 \longrightarrow 00:21:51.712$  liver cancer,

NOTE Confidence: 0.80727184

 $00{:}21{:}51.712 \longrightarrow 00{:}21{:}53.927$  the Department of Pathology and

NOTE Confidence: 0.80727184

 $00:21:53.927 \longrightarrow 00:21:55.679$  so on and so forth.

NOTE Confidence: 0.80727184

 $00:21:55.680 \longrightarrow 00:21:58.210$  But all these people actually.

NOTE Confidence: 0.80727184

00:21:58.210 --> 00:22:01.787 In a 2019-2020 publish it 72 papers,

NOTE Confidence: 0.80727184

 $00{:}22{:}01.790 \dashrightarrow 00{:}22{:}05.150$  an 38 of them original article 7R

NOTE Confidence: 0.80727184

 $00{:}22{:}05.150 \dashrightarrow 00{:}22{:}09.416$  position paper 14 reviews and 14 of them

NOTE Confidence: 0.80727184

 $00:22:09.416 \longrightarrow 00:22:12.146$  are actually publishing in journals

NOTE Confidence: 0.80727184

00:22:12.240 --> 00:22:16.096 with an impact factor around or above 20,

 $00:22:16.100 \longrightarrow 00:22:19.160$  which I think is pretty remarkable.

NOTE Confidence: 0.80727184

 $00:22:19.160 \longrightarrow 00:22:23.248$  So just a very quickly glancing through it.

NOTE Confidence: 0.80727184

 $00:22:23.250 \longrightarrow 00:22:26.315$  The number of our faculties

NOTE Confidence: 0.80727184

 $00:22:26.315 \longrightarrow 00:22:28.154$  are actually involved.

NOTE Confidence: 0.80727184

00:22:28.160 --> 00:22:30.560 In studying the different risk

NOTE Confidence: 0.80727184

00:22:30.560 --> 00:22:32.960 factors that I mentioned before,

NOTE Confidence: 0.80727184

00:22:32.960 --> 00:22:35.360 so we have outstanding work

NOTE Confidence: 0.80727184

00:22:35.360 --> 00:22:36.800 performing virally theology,

NOTE Confidence: 0.80727184

00:22:36.800 --> 00:22:38.240 interaction with aging,

NOTE Confidence: 0.80727184

 $00:22:38.240 \longrightarrow 00:22:39.200$  the HIV.

NOTE Confidence: 0.80727184

 $00:22:39.200 \longrightarrow 00:22:42.080$  We have food program that addresses

NOTE Confidence: 0.80727184

 $00:22:42.080 \longrightarrow 00:22:43.040$  the obesity,

NOTE Confidence: 0.80727184

 $00{:}22{:}43.040 \dashrightarrow 00{:}22{:}45.735$  diabetes and affolder alcoholic liver

NOTE Confidence: 0.80727184

 $00:22:45.735 \longrightarrow 00:22:48.430$  diseases in other regions branch

NOTE Confidence: 0.80727184

00:22:48.513 --> 00:22:51.103 which is which is growing an Ann

NOTE Confidence: 0.80727184

 $00:22:51.103 \longrightarrow 00:22:53.600$  and also health care disparities.

 $00:22:53.600 \longrightarrow 00:22:56.909$  An for example.

NOTE Confidence: 0.80727184

 $00:22:56.910 \longrightarrow 00:22:57.420$  Razor,

NOTE Confidence: 0.80727184

 $00:22:57.420 \longrightarrow 00:23:00.480$  osean and other faculties are addressing.

NOTE Confidence: 0.8019739

 $00:23:03.280 \longrightarrow 00:23:05.130$  Some of the. Differences that

NOTE Confidence: 0.8019739

 $00:23:05.130 \longrightarrow 00:23:06.980$  we see even in connecticu.

NOTE Confidence: 0.8019739

 $00:23:06.980 \longrightarrow 00:23:10.964$  So for example, as you can see here.

NOTE Confidence: 0.8019739

 $00:23:10.970 \longrightarrow 00:23:13.388$  The incidence of HCC is clearly

NOTE Confidence: 0.8019739

 $00:23:13.388 \longrightarrow 00:23:15.948$  higher in this panic and black

NOTE Confidence: 0.8019739

 $00{:}23{:}15.948 \dashrightarrow 00{:}23{:}18.118$  population and hopefully will will

NOTE Confidence: 0.8019739

 $00:23:18.118 \longrightarrow 00:23:21.436$  try to nail down what the causes are.

NOTE Confidence: 0.8019739

 $00:23:21.440 \longrightarrow 00:23:26.108$  So outstanding results in outcome research,

NOTE Confidence: 0.8019739

00:23:26.110 --> 00:23:30.000 mostly addressing the role of

NOTE Confidence: 0.8019739

 $00{:}23{:}30.000 \dashrightarrow 00{:}23{:}33.890$  surveillance and all of.

NOTE Confidence: 0.8397243

 $00:23:36.930 \longrightarrow 00:23:38.458$  Antiviral treatment and the

NOTE Confidence: 0.8397243

 $00:23:38.458 \longrightarrow 00:23:40.368$  growing group of faculties are

00:23:40.368 --> 00:23:42.459 also interested in concert cost,

NOTE Confidence: 0.8397243

 $00{:}23{:}42.460 \dashrightarrow 00{:}23{:}44.040$  effectiveness and care delivery.

NOTE Confidence: 0.8397243

 $00:23:44.040 \longrightarrow 00:23:46.410$  We do a lot of things,

NOTE Confidence: 0.8397243

 $00:23:46.410 \longrightarrow 00:23:48.748$  but we don't really know their value

NOTE Confidence: 0.8397243

 $00:23:48.748 \longrightarrow 00:23:51.150$  in terms of cost effectiveness,

NOTE Confidence: 0.8397243

 $00:23:51.150 \longrightarrow 00:23:54.108$  so this is another growing area.

NOTE Confidence: 0.8397243

 $00:23:54.110 \longrightarrow 00:23:57.206$  Translation studies that also growing and

NOTE Confidence: 0.8397243

00:23:57.206 --> 00:24:00.868 just to mention several faculties in Basic,

NOTE Confidence: 0.8397243

 $00:24:00.870 \longrightarrow 00:24:03.470$  more basic studies are interested

NOTE Confidence: 0.8397243

 $00:24:03.470 \longrightarrow 00:24:06.070$  in the transition between Nashville,

NOTE Confidence: 0.8397243

 $00{:}24{:}06.070 \dashrightarrow 00{:}24{:}10.060$  roses and and cancer and in human

NOTE Confidence: 0.8397243

 $00{:}24{:}10.060 \dashrightarrow 00{:}24{:}14.428$  Hansa ran and a lot of people

NOTE Confidence: 0.8397243

 $00:24:14.428 \longrightarrow 00:24:17.593$  is actually interesting in the.

NOTE Confidence: 0.8397243

00:24:17.600 --> 00:24:21.578 Role of the tumor micro environment.

NOTE Confidence: 0.8397243

00:24:21.580 --> 00:24:23.730 Which this is, I think,

NOTE Confidence: 0.8397243

 $00:24:23.730 \longrightarrow 00:24:25.014$  is very interesting.

00:24:25.014 --> 00:24:27.154 This is staining for Alpha,

NOTE Confidence: 0.8397243

00:24:27.160 --> 00:24:28.444 SMA, identifying fiber,

NOTE Confidence: 0.8397243

 $00:24:28.444 \longrightarrow 00:24:29.300$  ask cancer,

NOTE Confidence: 0.8397243

 $00:24:29.300 \longrightarrow 00:24:30.563$  associated fibroblasts in

NOTE Confidence: 0.8397243

 $00{:}24{:}30.563 \dashrightarrow 00{:}24{:}32.247$  cholangiocarcinoma and in hepatoma

NOTE Confidence: 0.8397243

 $00:24:32.247 \longrightarrow 00:24:34.450$  you see two very different.

NOTE Confidence: 0.73542595

 $00:24:38.210 \longrightarrow 00:24:40.274$  Pathology Ann and these are correlated

NOTE Confidence: 0.73542595

 $00:24:40.274 \longrightarrow 00:24:42.570$  to two very different aggressiveness.

NOTE Confidence: 0.73542595

 $00:24:42.570 \longrightarrow 00:24:45.090$  Also the tumor let me very briefly

NOTE Confidence: 0.73542595

 $00{:}24{:}45.090 \dashrightarrow 00{:}24{:}48.362$  mention some of our work in the macro

NOTE Confidence: 0.73542595

 $00:24:48.362 \longrightarrow 00:24:50.482$  environment or the calendar carcinoma

NOTE Confidence: 0.73542595

 $00:24:50.562 \longrightarrow 00:24:53.278$  showing the central role of calf or

NOTE Confidence: 0.73542595

 $00{:}24{:}53.278 \dashrightarrow 00{:}24{:}55.322$  the Cancer Society fiberglassed in

NOTE Confidence: 0.73542595

 $00:24:55.322 \longrightarrow 00:24:57.502$  determining several of the aspects

NOTE Confidence: 0.73542595

 $00:24:57.502 \longrightarrow 00:25:00.999$  of the two Moran now our Co other

 $00:25:00.999 \longrightarrow 00:25:02.687$  colleagues are addressing this

NOTE Confidence: 0.73542595

 $00{:}25{:}02.687 \dashrightarrow 00{:}25{:}05.189$  using single cell transcriptomics.

NOTE Confidence: 0.73542595

 $00:25:05.190 \longrightarrow 00:25:07.242$  This is also an interest of

NOTE Confidence: 0.73542595

 $00:25:07.242 \longrightarrow 00:25:08.610$  our colleagues in radiology.

NOTE Confidence: 0.73542595

 $00:25:08.610 \longrightarrow 00:25:09.978$  They're trying to use.

NOTE Confidence: 0.7527786

 $00:25:12.190 \longrightarrow 00:25:15.144$  The tools of radiology to generate reliable

NOTE Confidence: 0.7527786

 $00:25:15.144 \longrightarrow 00:25:17.370$  imaging biomarkers for immunotherapy.

NOTE Confidence: 0.7527786

 $00:25:17.370 \longrightarrow 00:25:19.730$  This is I, I think,

NOTE Confidence: 0.7527786

 $00{:}25{:}19.730 \dashrightarrow 00{:}25{:}23.041$  it's granted or or or proposed for

NOTE Confidence: 0.7527786

 $00:25:23.041 \longrightarrow 00:25:27.677$  the NIH by David matter of MGM Duncan

NOTE Confidence: 0.7527786

 $00{:}25{:}27.677 \dashrightarrow 00{:}25{:}31.730$  interest on the metabolic aspect is also.

NOTE Confidence: 0.7527786

00:25:31.730 --> 00:25:33.960 Followed by Michael Nathanson,

NOTE Confidence: 0.7527786

 $00:25:33.960 \longrightarrow 00:25:36.844$  lab, and here is work from Emma

NOTE Confidence: 0.7527786

 $00:25:36.844 \longrightarrow 00:25:39.310$  tells where I'm like nothing.

NOTE Confidence: 0.7527786

 $00:25:39.310 \longrightarrow 00:25:43.334$  So I'm looking at the IP3 receptor and

NOTE Confidence: 0.7527786

00:25:43.334 --> 00:25:45.557 mitochondrial functionality in 80C and CCA,

 $00:25:45.560 \longrightarrow 00:25:48.832$  and they're all in in the in chronic

NOTE Confidence: 0.7527786

 $00:25:48.832 \longrightarrow 00:25:52.206$  affect like like existence of up doses

NOTE Confidence: 0.7527786

 $00:25:52.206 \longrightarrow 00:25:55.181$  or generating up talking factor of

NOTE Confidence: 0.7527786

00:25:55.181 --> 00:25:57.683 this was published very well last

NOTE Confidence: 0.7527786

 $00:25:57.683 \longrightarrow 00:26:01.240$  year and and finally mentioning.

NOTE Confidence: 0.7527786

00:26:01.240 --> 00:26:02.641 Tell you who,

NOTE Confidence: 0.7527786

00:26:02.641 --> 00:26:06.290 just join and the chair of pathology is,

NOTE Confidence: 0.7527786

00:26:06.290 --> 00:26:09.882 you know, a very well renowned liver cancer

NOTE Confidence: 0.7527786

 $00:26:09.882 \longrightarrow 00:26:12.717$  researcher and is doing several things.

NOTE Confidence: 0.7527786

 $00:26:12.720 \longrightarrow 00:26:14.990$  Among this he explaining to

NOTE Confidence: 0.7527786

00:26:14.990 --> 00:26:16.352 detect circulating metallated

NOTE Confidence: 0.7527786

00:26:16.352 --> 00:26:18.679 DNA as an early diagnosis.

NOTE Confidence: 0.7527786

00:26:18.680 --> 00:26:20.231 Wait, you see,

NOTE Confidence: 0.7527786

 $00:26:20.231 \longrightarrow 00:26:23.333$  and we're really looking forward very

NOTE Confidence: 0.7527786

 $00:26:23.333 \longrightarrow 00:26:26.488$  much to this study is an an also.

 $00:26:26.490 \longrightarrow 00:26:29.250$  He is trying to is using

NOTE Confidence: 0.7527786

 $00{:}26{:}29.250 \dashrightarrow 00{:}26{:}32.069$  Kartiana Glypican 3 as a target.

NOTE Confidence: 0.7527786

00:26:32.070 --> 00:26:34.471 Hopefully not that big of a TC

NOTE Confidence: 0.7527786

 $00{:}26{:}34.471 \dashrightarrow 00{:}26{:}36.841$  and and I'm I'm gonna finish

NOTE Confidence: 0.7527786

 $00:26:36.841 \longrightarrow 00:26:39.349$  now because the time is over.

NOTE Confidence: 0.7527786

00:26:39.350 --> 00:26:42.750 But you know this is just an example of the

NOTE Confidence: 0.7527786

 $00:26:42.835 \longrightarrow 00:26:46.235$  richness of the research that that we have.

NOTE Confidence: 0.7527786

 $00:26:46.240 \longrightarrow 00:26:49.304$  And really this is and I have to

NOTE Confidence: 0.7527786

 $00{:}26{:}49.304 \dashrightarrow 00{:}26{:}52.443$  thank all the department that are

NOTE Confidence: 0.7527786

 $00:26:52.443 \longrightarrow 00:26:55.283$  involved in this enterprise and.

NOTE Confidence: 0.7527786

 $00{:}26{:}55.290 \dashrightarrow 00{:}26{:}57.936$  You know each of these department.

NOTE Confidence: 0.7527786

 $00:26:57.940 \longrightarrow 00:27:00.275$  There are some hepatologist hiding

NOTE Confidence: 0.7527786

 $00:27:00.275 \longrightarrow 00:27:03.489$  there and and this is what what

NOTE Confidence: 0.7527786

 $00:27:03.489 \longrightarrow 00:27:05.454$  will I call your liver,

NOTE Confidence: 0.7527786

 $00:27:05.460 \longrightarrow 00:27:08.106$  which is a very old tradition.

NOTE Confidence: 0.7527786

00:27:08.110 --> 00:27:10.710 Here is going to celebrate

 $00:27:10.710 \longrightarrow 00:27:12.270$  the Diamond Jubilee.

NOTE Confidence: 0.7527786

 $00:27:12.270 \longrightarrow 00:27:15.150$  Next year and I thank you for your attention.

NOTE Confidence: 0.8417528

00:27:17.070 --> 00:27:18.700 Thank you very much, Mario.

NOTE Confidence: 0.8417528

 $00:27:18.700 \longrightarrow 00:27:20.325$  Very interesting talk. Are there

NOTE Confidence: 0.8417528

 $00:27:20.325 \longrightarrow 00:27:21.950$  any questions from the audience?

NOTE Confidence: 0.8524205

 $00:27:28.590 \longrightarrow 00:27:30.456$  I can start with one.

NOTE Confidence: 0.8524205

 $00:27:30.456 \longrightarrow 00:27:33.185$  So recently drugs have been developed

NOTE Confidence: 0.8524205

 $00:27:33.185 \longrightarrow 00:27:36.090$  that will cure hepatitis C virus.

NOTE Confidence: 0.8524205

 $00:27:36.090 \longrightarrow 00:27:37.615$  What fraction of people in

NOTE Confidence: 0.8524205

 $00:27:37.615 \longrightarrow 00:27:38.835$  this country are affected?

NOTE Confidence: 0.8524205

 $00:27:38.840 \longrightarrow 00:27:40.968$  People are being treated by these drugs.

NOTE Confidence: 0.8524205

 $00:27:40.970 \longrightarrow 00:27:43.105$  And what's the effect on liver cancer?

NOTE Confidence: 0.810661100000001

 $00{:}27{:}43.860 \dashrightarrow 00{:}27{:}47.066$  Tell the the strategy would be

NOTE Confidence: 0.810661100000001

 $00{:}27{:}47.066 \dashrightarrow 00{:}27{:}49.610$  worldwide application of of HPV and

NOTE Confidence: 0.810661100000001

 $00:27:49.610 \longrightarrow 00:27:52.158$  therefore I would say that a growing

00:27:52.245 --> 00:27:54.897 amount of patients she is being

NOTE Confidence: 0.810661100000001

 $00{:}27{:}54.897 \dashrightarrow 00{:}27{:}57.849$  treated should be treated that has had

NOTE Confidence: 0.810661100000001

 $00:27:57.849 \longrightarrow 00:28:00.600$  like a slowing down during the COVID

NOTE Confidence: 0.810661100000001

00:28:00.688 --> 00:28:03.496 crisis but should resume full time.

NOTE Confidence: 0.810661100000001

 $00:28:03.500 \longrightarrow 00:28:06.118$  The question of the effect on liver

NOTE Confidence: 0.810661100000001

00:28:06.118 --> 00:28:08.784 cancer is a very good question

NOTE Confidence: 0.810661100000001

 $00{:}28{:}08.784 \dashrightarrow 00{:}28{:}11.700$  because there has been a great

NOTE Confidence: 0.810661100000001

00:28:11.700 --> 00:28:14.338 controversy becauses a lot of patient.

NOTE Confidence: 0.810661100000001

 $00:28:14.340 \longrightarrow 00:28:16.160$  After eradication of the virus,

NOTE Confidence: 0.810661100000001

 $00:28:16.160 \longrightarrow 00:28:17.975$  have the path surprised that

NOTE Confidence: 0.810661100000001

00:28:17.975 --> 00:28:19.064 delivered Carson happens.

NOTE Confidence: 0.810661100000001

 $00{:}28{:}19.070 \dashrightarrow 00{:}28{:}21.452$  Anyway, this is happening in patients

NOTE Confidence: 0.810661100000001

 $00:28:21.452 \longrightarrow 00:28:23.519$  that were treated already with

NOTE Confidence: 0.810661100000001

 $00:28:23.519 \longrightarrow 00:28:25.569$  significant fibers in their liver.

NOTE Confidence: 0.810661100000001

00:28:25.570 --> 00:28:27.405 And it was initially proposed

NOTE Confidence: 0.810661100000001

 $00:28:27.405 \longrightarrow 00:28:29.240$  that actually the allocation of

 $00:28:29.300 \longrightarrow 00:28:31.400$  the virus would get rid of some

NOTE Confidence: 0.810661100000001

 $00:28:31.400 \longrightarrow 00:28:33.090$  kind of beneficial information,

NOTE Confidence: 0.810661100000001

 $00:28:33.090 \longrightarrow 00:28:35.154$  but further studies have shown that

NOTE Confidence: 0.810661100000001

 $00:28:35.154 \longrightarrow 00:28:37.379$  actually the the risk is decreased,

NOTE Confidence: 0.810661100000001

 $00:28:37.380 \longrightarrow 00:28:38.552$  but it's not zero.

NOTE Confidence: 0.810661100000001

 $00:28:38.552 \longrightarrow 00:28:40.845$  So why is not zero is something

NOTE Confidence: 0.810661100000001

 $00:28:40.845 \longrightarrow 00:28:43.110$  that we need to understand.

NOTE Confidence: 0.810661100000001

 $00:28:43.110 \longrightarrow 00:28:46.054$  My personal opinion is that we are simply

NOTE Confidence: 0.810661100000001

 $00{:}28{:}46.054 \dashrightarrow 00{:}28{:}48.478$  eliminating one of the many risk factors.

NOTE Confidence: 0.810661100000001

 $00:28:48.480 \longrightarrow 00:28:50.601$  You know the the regular guy is

NOTE Confidence: 0.810661100000001

 $00{:}28{:}50.601 \dashrightarrow 00{:}28{:}53.227$ a guy that didn't know to have

NOTE Confidence: 0.810661100000001

00:28:53.227 --> 00:28:55.272 actitis is a little overweight,

NOTE Confidence: 0.810661100000001 00:28:55.280 --> 00:28:56.292 has smoked.

NOTE Confidence: 0.810661100000001

00:28:56.292 --> 00:28:58.316 Is drinking, you know,

NOTE Confidence: 0.810661100000001

00:28:58.320 --> 00:29:02.737 not drunk but enjoying the wine Ann.

00:29:02.740 --> 00:29:05.674 It just doesn't know it an an therefore yeah,

NOTE Confidence: 0.810661100000001

 $00{:}29{:}05.680 \dashrightarrow 00{:}29{:}07.808$  will you ever you have four risk

NOTE Confidence: 0.810661100000001

00:29:07.808 --> 00:29:09.928 factor of which you eliminate one?

NOTE Confidence: 0.810661100000001

 $00:29:09.930 \longrightarrow 00:29:12.546$  This is why this is a internal medicine.

NOTE Confidence: 0.810661100000001

 $00:29:12.550 \longrightarrow 00:29:14.620$  This is right because you really

NOTE Confidence: 0.810661100000001

 $00:29:14.620 \longrightarrow 00:29:16.830$  have to address all the risk

NOTE Confidence: 0.810661100000001

00:29:16.830 --> 00:29:18.725 factor in every single patient.

NOTE Confidence: 0.81066110000000100:29:18.730 --> 00:29:19.132 Otherwise,

NOTE Confidence: 0.810661100000001

00:29:19.132 --> 00:29:21.544 you may fail like like the

NOTE Confidence: 0.810661100000001

 $00:29:21.544 \longrightarrow 00:29:23.745$  eradication of appetite is C shows

NOTE Confidence: 0.810661100000001

 $00{:}29{:}23.745 \dashrightarrow 00{:}29{:}25.599$  in certain patients and so the

NOTE Confidence: 0.810661100000001

 $00:29:25.599 \longrightarrow 00:29:27.206$  basic clinical recommendation is

NOTE Confidence: 0.810661100000001

 $00:29:27.206 \longrightarrow 00:29:30.062$  that the patient that you were ever

NOTE Confidence: 0.810661100000001

 $00:29:30.070 \longrightarrow 00:29:33.016$  advocated while he was erotica still

NOTE Confidence: 0.810661100000001

 $00:29:33.016 \longrightarrow 00:29:36.019$  needs to undergo the six months.

NOTE Confidence: 0.810661100000001

 $00:29:36.020 \longrightarrow 00:29:38.980$  Screening and surveillance for ACC.

 $00:29:40.810 \longrightarrow 00:29:42.180$  Are there other other questions?

NOTE Confidence: 0.8398359

 $00:29:48.580 \longrightarrow 00:29:52.114$  OK, with that I I do see the vineyard

NOTE Confidence: 0.8398359

 $00:29:52.114 \longrightarrow 00:29:54.480$  behind your folder there in moderation.

NOTE Confidence: 0.8107145

00:29:55.750 --> 00:29:57.360 Yeah moderation, OK thank you.

NOTE Confidence: 0.8107145

 $00:29:57.360 \longrightarrow 00:29:58.646$  Thank you very much.

NOTE Confidence: 0.8107145

00:29:58.646 --> 00:30:00.258 Mario, thank you, thank you.

NOTE Confidence: 0.80257034

 $00:30:01.300 \longrightarrow 00:30:03.675$  So our next speaker today

NOTE Confidence: 0.80257034

 $00:30:03.675 \longrightarrow 00:30:05.575$  is is Jonathan Levinthal.

NOTE Confidence: 0.80257034

 $00:30:05.580 \longrightarrow 00:30:08.040$  Who is, I'm sorry, just lossed.

NOTE Confidence: 0.75871557

00:30:10.480 --> 00:30:13.000 My CHEAT SHEET here.

NOTE Confidence: 0.75871557

 $00{:}30{:}13.000 \dashrightarrow 00{:}30{:}14.950$  So Jonathan is assistant professor

NOTE Confidence: 0.75871557

 $00:30:14.950 \longrightarrow 00:30:17.333$  of Dermatology and the director of

NOTE Confidence: 0.75871557

 $00{:}30{:}17.333 \dashrightarrow 00{:}30{:}19.158$  the Yale Uncle Dermatology Clinic.

NOTE Confidence: 0.75871557

 $00:30:19.160 \dashrightarrow 00:30:22.240$  He received his MD degree from New York

NOTE Confidence: 0.75871557

 $00:30:22.240 \longrightarrow 00:30:24.940$  University and is residency here at Yale.

 $00:30:24.940 \longrightarrow 00:30:26.860$  He specializes in caring for

NOTE Confidence: 0.75871557

 $00:30:26.860 \longrightarrow 00:30:28.396$  patients with skin cancer,

NOTE Confidence: 0.75871557

 $00:30:28.400 \longrightarrow 00:30:30.225$  beginning with skin screening programs

NOTE Confidence: 0.75871557

 $00:30:30.225 \longrightarrow 00:30:32.923$  to detect cancers and sun damage and

NOTE Confidence: 0.75871557

 $00:30:32.923 \longrightarrow 00:30:34.555$  optimize prevention and therapy.

NOTE Confidence: 0.75871557

 $00:30:34.560 \longrightarrow 00:30:36.645$  The clinic serves a dermatologic

NOTE Confidence: 0.75871557

 $00:30:36.645 \longrightarrow 00:30:38.730$  needs of cancer patients dealing

NOTE Confidence: 0.75871557

 $00:30:38.795 \longrightarrow 00:30:40.715$  with a variety of skin issues,

NOTE Confidence: 0.75871557

 $00{:}30{:}40.720 --> 00{:}30{:}42.645$  including skin changes due to

NOTE Confidence: 0.75871557

00:30:42.645 --> 00:30:44.180 chemo therapies, can infections.

NOTE Confidence: 0.75871557

 $00:30:44.180 \longrightarrow 00:30:46.080$  Cancer involvement in the scan,

NOTE Confidence: 0.75871557

00:30:46.080 --> 00:30:46.736 radiation, dermatitis,

NOTE Confidence: 0.75871557

00:30:46.736 --> 00:30:48.704 and other changes due to radiation,

NOTE Confidence: 0.75871557

 $00:30:48.710 \longrightarrow 00:30:50.350$  so we'll hear that today.

NOTE Confidence: 0.75871557

 $00:30:50.350 \dashrightarrow 00:30:51.990$  So Jonathan I'm looking forward

NOTE Confidence: 0.75871557

00:30:51.990 --> 00:30:53.640 hearing you talk. Thank you.

 $00:30:54.280 \longrightarrow 00:30:56.009$  Thank you so much and it's a

NOTE Confidence: 0.8538746

 $00{:}30{:}56.009 {\:{\mbox{--}}\!>} 00{:}30{:}57.578$  real pleasure to be here today.

NOTE Confidence: 0.8538746

 $00:30:57.580 \longrightarrow 00:30:59.232$  So today I'm going to talk about

NOTE Confidence: 0.8538746

00:30:59.232 --> 00:31:00.630 dermatologic conditions in cancer patients,

NOTE Confidence: 0.8538746

 $00{:}31{:}00.630 \dashrightarrow 00{:}31{:}02.082$  and I'm going to provide updates

NOTE Confidence: 0.8538746

 $00:31:02.082 \longrightarrow 00:31:03.420$  from the ankle dermatology program.

NOTE Confidence: 0.82274705

 $00:31:05.490 \longrightarrow 00:31:08.106$  So here is a list of my disclosures,

NOTE Confidence: 0.82274705

 $00:31:08.110 \longrightarrow 00:31:10.000$  mostly from serving on advisory

NOTE Confidence: 0.82274705

 $00:31:10.000 \longrightarrow 00:31:11.890$  councils with fellow Aqua dermatologist

NOTE Confidence: 0.82274705

 $00:31:11.951 \longrightarrow 00:31:13.551$  throughout the country looking at

NOTE Confidence: 0.82274705

 $00:31:13.551 \longrightarrow 00:31:15.600$  skin toxicities as well as some

NOTE Confidence: 0.82274705

 $00:31:15.600 \longrightarrow 00:31:17.176$  clinical trial research funding.

NOTE Confidence: 0.82274705

 $00{:}31{:}17.180 \dashrightarrow 00{:}31{:}18.825$  So the objectives of the talks I

NOTE Confidence: 0.82274705

 $00{:}31{:}18.825 \dashrightarrow 00{:}31{:}20.525$  wanted to start by introducing you

NOTE Confidence: 0.82274705

 $00:31:20.525 \longrightarrow 00:31:22.090$  to the Aqua dermatology program.

 $00:31:22.090 \longrightarrow 00:31:24.134$  Then I wanted to discuss the importance

NOTE Confidence: 0.82274705

 $00:31:24.134 \longrightarrow 00:31:25.772$  of cutaneous toxicities and how they

NOTE Confidence: 0.82274705

00:31:25.772 --> 00:31:27.188 can impact patients quality of life

NOTE Confidence: 0.82274705

 $00:31:27.188 \longrightarrow 00:31:28.920$  as well as their cancer therapies.

NOTE Confidence: 0.82274705

 $00:31:28.920 \longrightarrow 00:31:30.252$  When severe, I wanted to highlight

NOTE Confidence: 0.82274705

00:31:30.252 --> 00:31:31.707 some of the most common toxicities

NOTE Confidence: 0.82274705

 $00:31:31.707 \longrightarrow 00:31:33.273$  that I see from select targeted

NOTE Confidence: 0.82274705

 $00:31:33.273 \longrightarrow 00:31:34.495$  and immune checkpoint inhibitors

NOTE Confidence: 0.82274705

 $00{:}31{:}34.495 \dashrightarrow 00{:}31{:}35.799$  and also traditional chemotherapy

NOTE Confidence: 0.82274705

 $00{:}31{:}35.799 \dashrightarrow 00{:}31{:}37.926$  as well and discuss the role that

NOTE Confidence: 0.82274705

 $00:31:37.926 \longrightarrow 00:31:39.014$  aren't with their mythology.

NOTE Confidence: 0.82274705

 $00:31:39.020 \longrightarrow 00:31:41.230$  Plays at a Cancer Center.

NOTE Confidence: 0.82274705

00:31:41.230 --> 00:31:42.618 So for some background,

NOTE Confidence: 0.82274705

 $00:31:42.618 \longrightarrow 00:31:44.353$  the Uncle Dermatology program was

NOTE Confidence: 0.82274705

00:31:44.353 --> 00:31:46.270 established by my great mentor and friend,

NOTE Confidence: 0.82274705

 $00{:}31{:}46.270 --> 00{:}31{:}46.938$  Jennifer Choi.

00:31:46.938 --> 00:31:48.608 Shortly after she graduated residency

NOTE Confidence: 0.82274705

 $00{:}31{:}48.608 \dashrightarrow 00{:}31{:}50.984$  and then I had a great opportunity

NOTE Confidence: 0.82274705

 $00:31:50.984 \longrightarrow 00:31:52.958$  when she got recruited to Northwestern

NOTE Confidence: 0.82274705

 $00:31:53.012 \longrightarrow 00:31:54.902$  as a chief resident to start seeing

NOTE Confidence: 0.82274705

 $00:31:54.902 \longrightarrow 00:31:56.665$  patients in the clinic for which

NOTE Confidence: 0.82274705

 $00:31:56.665 \longrightarrow 00:31:58.555$  I've led the clinic ever since.

NOTE Confidence: 0.82274705

 $00:31:58.560 \longrightarrow 00:32:00.384$  And we've really seen a tremendous

NOTE Confidence: 0.82274705

 $00:32:00.384 \longrightarrow 00:32:02.299$  outgrow of support from so many

NOTE Confidence: 0.82274705

00:32:02.299 --> 00:32:03.909 colleagues in Metanx terjung Radon,

NOTE Confidence: 0.82274705

 $00:32:03.910 \longrightarrow 00:32:04.552$  an anthology,

NOTE Confidence: 0.82274705

 $00:32:04.552 \longrightarrow 00:32:06.478$  and the clinic has really grown

NOTE Confidence: 0.82274705

 $00:32:06.478 \dashrightarrow 00:32:07.689$  dramatically over the years.

NOTE Confidence: 0.82274705

 $00{:}32{:}07.690 \dashrightarrow 00{:}32{:}09.580$  It's a very robust, busy clinic.

NOTE Confidence: 0.82274705

 $00:32:09.580 \longrightarrow 00:32:12.196$  Some days we see up to 50 patients.

NOTE Confidence: 0.82274705

 $00:32:12.200 \longrightarrow 00:32:14.568$  And I just have a great team of

 $00:32:14.568 \longrightarrow 00:32:16.511$  nurses residents as well as research

NOTE Confidence: 0.82274705

00:32:16.511 --> 00:32:18.982 fellows and support from the Yale

NOTE Confidence: 0.82274705

 $00:32:18.982 \dashrightarrow 00:32:20.906$  Center for Clinical Investigation.

NOTE Confidence: 0.82274705

 $00:32:20.910 \longrightarrow 00:32:22.860$  So the field of supportive Uncle

NOTE Confidence: 0.82274705

 $00:32:22.860 \longrightarrow 00:32:24.160$  Dermatology really blossomed in

NOTE Confidence: 0.82274705

 $00:32:24.213 \longrightarrow 00:32:26.306$  the 1990s with the advent of many

NOTE Confidence: 0.82274705

 $00:32:26.306 \longrightarrow 00:32:27.820$  different targeted kinase inhibitors,

NOTE Confidence: 0.82274705

00:32:27.820 --> 00:32:29.704 which skin toxicities were so common

NOTE Confidence: 0.82274705

 $00{:}32{:}29.704 \dashrightarrow 00{:}32{:}31.694$  in almost the majority of patients

NOTE Confidence: 0.82274705

00:32:31.694 --> 00:32:33.394 and it really encompasses many

NOTE Confidence: 0.82274705

 $00:32:33.394 \longrightarrow 00:32:35.060$  different things that we service,

NOTE Confidence: 0.82274705

 $00:32:35.060 \longrightarrow 00:32:36.860$  so there's definitely all the toxicities

NOTE Confidence: 0.82274705

 $00:32:36.860 \longrightarrow 00:32:39.330$  that we see from the systemic therapies,

NOTE Confidence: 0.82274705

 $00:32:39.330 \longrightarrow 00:32:39.996$  radiation therapies,

NOTE Confidence: 0.82274705

 $00:32:39.996 \longrightarrow 00:32:41.994$  graft versus host disease as well

NOTE Confidence: 0.82274705

 $00:32:41.994 \longrightarrow 00:32:43.280$  as complications from cancer.

 $00:32:43.280 \longrightarrow 00:32:45.260$  Going to the skin with metastases,

NOTE Confidence: 0.82274705

 $00:32:45.260 \longrightarrow 00:32:47.640$  but there's really a lot of other

NOTE Confidence: 0.82274705

 $00:32:47.640 \longrightarrow 00:32:49.356$  indirect complications that we treat

NOTE Confidence: 0.82274705

 $00:32:49.356 \longrightarrow 00:32:51.276$  in clinic and that includes paranoia.

NOTE Confidence: 0.82274705

 $00:32:51.280 \longrightarrow 00:32:52.724$  Plastic disease, infectious complications,

NOTE Confidence: 0.82274705

 $00{:}32{:}52.724 \dashrightarrow 00{:}32{:}54.529$  especially in patients who are

NOTE Confidence: 0.82274705

00:32:54.529 --> 00:32:56.317 immuno suppressed as well as being

NOTE Confidence: 0.82274705

 $00:32:56.317 \dashrightarrow 00:32:57.692$  part of the survivorship program.

NOTE Confidence: 0.82274705

00:32:57.700 --> 00:32:59.305 For many patients who have

NOTE Confidence: 0.82274705

 $00:32:59.305 \longrightarrow 00:33:00.268$  survived cancer now,

NOTE Confidence: 0.82274705

 $00{:}33{:}00.270 \dashrightarrow 00{:}33{:}02.140$  an increased risk for developing

NOTE Confidence: 0.82274705

 $00{:}33{:}02.140 \dashrightarrow 00{:}33{:}03.636$  cutaneous carcinogenesis and then

NOTE Confidence: 0.82274705

 $00{:}33{:}03.636 \dashrightarrow 00{:}33{:}05.737$  also part of the umbrella is that

NOTE Confidence: 0.82274705

 $00:33:05.737 \dashrightarrow 00:33:07.329$  the Melanoma program I'm part of.

NOTE Confidence: 0.82274705

 $00:33:07.330 \longrightarrow 00:33:09.376$  It falls under the umbrella of

 $00:33:09.376 \longrightarrow 00:33:11.478$  Uncle Dermatology and so a lot of

NOTE Confidence: 0.82274705

 $00{:}33{:}11.478 \dashrightarrow 00{:}33{:}13.493$  what I do is also high risk in

NOTE Confidence: 0.82274705

 $00:33:13.493 \longrightarrow 00:33:15.418$  cancer screening to diagnose and

NOTE Confidence: 0.82274705

 $00:33:15.418 \longrightarrow 00:33:17.732$  treat many different types of skin

NOTE Confidence: 0.82274705

 $00:33:17.732 \longrightarrow 00:33:19.662$  cancers and also collaborate with

NOTE Confidence: 0.82274705

00:33:19.662 --> 00:33:21.685 the cancer genetics program to

NOTE Confidence: 0.82274705

00:33:21.685 --> 00:33:23.285 obtain tissue for genetics.

NOTE Confidence: 0.82274705

 $00:33:23.290 \longrightarrow 00:33:25.551$  So wanted to start by discussing the

NOTE Confidence: 0.82274705

 $00{:}33{:}25.551 \dashrightarrow 00{:}33{:}27.530$  cutaneous toxicities are not just cosmetic.

NOTE Confidence: 0.82274705

 $00{:}33{:}27.530 \dashrightarrow 00{:}33{:}29.240$  These are really important issues

NOTE Confidence: 0.82274705

 $00{:}33{:}29.240 \dashrightarrow 00{:}33{:}30.608$  that impact patients quality

NOTE Confidence: 0.82274705

 $00:33:30.608 \longrightarrow 00:33:32.497$  of life and there's been many

NOTE Confidence: 0.82274705

00:33:32.497 --> 00:33:34.377 studies over the years looking at

NOTE Confidence: 0.82274705

 $00:33:34.377 \longrightarrow 00:33:35.997$  validated quality of life surveys.

NOTE Confidence: 0.82274705

 $00:33:36.000 \longrightarrow 00:33:36.315$  Anan.

NOTE Confidence: 0.82274705

 $00:33:36.315 \longrightarrow 00:33:38.520$  It's just so so common for these

 $00:33:38.520 \longrightarrow 00:33:40.556$  toxicities to to impact in both

NOTE Confidence: 0.82274705

 $00:33:40.556 \longrightarrow 00:33:42.560$  physical as well as emotional domains

NOTE Confidence: 0.82274705

 $00:33:42.621 \longrightarrow 00:33:44.826$  and so one interesting concept is that

NOTE Confidence: 0.82274705

00:33:44.826 --> 00:33:46.761 women seem to be affected greater

NOTE Confidence: 0.82274705

00:33:46.761 --> 00:33:49.050 than men in terms of their quality

NOTE Confidence: 0.82286793

 $00:33:49.114 \longrightarrow 00:33:50.896$  of life and it's probably because

NOTE Confidence: 0.82286793

 $00:33:50.896 \longrightarrow 00:33:52.870$  of the types of regiments they

NOTE Confidence: 0.82286793

 $00:33:52.870 \longrightarrow 00:33:54.685$  did receive for breast and.

NOTE Confidence: 0.82286793

 $00:33:54.690 \longrightarrow 00:33:56.050$  Other gynecological cancers which

NOTE Confidence: 0.82286793

 $00:33:56.050 \longrightarrow 00:33:58.450$  frequently impact the here in the nails,

NOTE Confidence: 0.82286793

00:33:58.450 --> 00:34:01.186 and so this can affect women's self image,

NOTE Confidence: 0.82286793

00:34:01.190 --> 00:34:01.872 cultural identity,

NOTE Confidence: 0.82286793

 $00{:}34{:}01.872 \dashrightarrow 00{:}34{:}03.918$  sexuality as well as mental health.

NOTE Confidence: 0.82286793

00:34:03.920 --> 00:34:05.544 Feelings of depression, anxiety,

NOTE Confidence: 0.82286793

 $00:34:05.544 \longrightarrow 00:34:08.810$  and a loss of control over their body.

 $00:34:08.810 \longrightarrow 00:34:09.719$  The hallmark examples

NOTE Confidence: 0.82286793

00:34:09.719 --> 00:34:10.628 chemotherapy induced alopecia,

NOTE Confidence: 0.82286793

 $00:34:10.630 \longrightarrow 00:34:12.744$  which we see from the cytotoxic agents,

NOTE Confidence: 0.82286793

00:34:12.750 --> 00:34:14.568 in particular an one homework study,

NOTE Confidence: 0.82286793

 $00:34:14.570 \longrightarrow 00:34:16.698$  showed that almost 60% of women with

NOTE Confidence: 0.82286793

00:34:16.698 --> 00:34:18.287 breast cancer preparing for chemo

NOTE Confidence: 0.82286793

 $00:34:18.287 \longrightarrow 00:34:20.141$  considered this to be the worst

NOTE Confidence: 0.82286793

 $00{:}34{:}20.141 \dashrightarrow 00{:}34{:}21.347$  possible associated side effect

NOTE Confidence: 0.82286793

 $00{:}34{:}21.347 \dashrightarrow 00{:}34{:}22.746$  and almost 10% even considered

NOTE Confidence: 0.82286793

 $00:34:22.746 \longrightarrow 00:34:24.564$  declining treatment in fear of it.

NOTE Confidence: 0.82286793

 $00:34:24.570 \longrightarrow 00:34:25.778$  So these are real,

NOTE Confidence: 0.82286793

 $00:34:25.778 \longrightarrow 00:34:27.288$  very real and important issues,

NOTE Confidence: 0.82286793

 $00:34:27.290 \longrightarrow 00:34:29.348$  and there's been so many other studies

NOTE Confidence: 0.82286793

 $00:34:29.348 \longrightarrow 00:34:31.229$  looking at the acne acne reform,

NOTE Confidence: 0.82286793

 $00:34:31.230 \longrightarrow 00:34:32.442$  ranch hand, foot rashes,

NOTE Confidence: 0.82286793

 $00:34:32.442 \longrightarrow 00:34:33.989$  nail changes in mucus, itis,

00:34:33.989 --> 00:34:36.292 all of which I'm going to discuss

NOTE Confidence: 0.82286793

 $00:34:36.292 \longrightarrow 00:34:38.876$  in which can impact quality of life.

NOTE Confidence: 0.82286793

00:34:38.880 --> 00:34:41.136 So the study on the left kind of

NOTE Confidence: 0.82286793

00:34:41.136 --> 00:34:42.922 highlights an important concept that

NOTE Confidence: 0.82286793

 $00:34:42.922 \longrightarrow 00:34:45.624$  it's not just those main toxicities that

NOTE Confidence: 0.82286793

 $00:34:45.691 \longrightarrow 00:34:47.899$  can impact patients quality of life.

NOTE Confidence: 0.82286793

 $00:34:47.900 \longrightarrow 00:34:49.874$  In this study of targeted agents

NOTE Confidence: 0.82286793

 $00:34:49.874 \longrightarrow 00:34:51.720$  in breast and colorectal cancers,

NOTE Confidence: 0.82286793

00:34:51.720 --> 00:34:53.796 you'll see that things like itching,

NOTE Confidence: 0.82286793

00:34:53.800 --> 00:34:56.229 dryness of the skin, easy bruise ability,

NOTE Confidence: 0.82286793

00:34:56.230 --> 00:34:56.976 pigmentary changes,

NOTE Confidence: 0.82286793

 $00{:}34{:}56.976 \dashrightarrow 00{:}34{:}59.214$  they can all be associated with

NOTE Confidence: 0.82286793

 $00:34:59.214 \longrightarrow 00:35:01.527$  with poor quality of life and the

NOTE Confidence: 0.82286793

 $00:35:01.527 \longrightarrow 00:35:03.798$  study on the right looked at the

NOTE Confidence: 0.82286793

 $00:35:03.798 \longrightarrow 00:35:05.573$  different types of chemotherapy and

00:35:05.573 --> 00:35:07.744 how they impact quality of life.

NOTE Confidence: 0.82286793

 $00:35:07.744 \longrightarrow 00:35:08.848$  And not surprisingly.

NOTE Confidence: 0.82286793

 $00:35:08.850 \longrightarrow 00:35:10.968$  A lot of the more novel,

NOTE Confidence: 0.82286793

 $00:35:10.970 \longrightarrow 00:35:11.680$  targeted therapies,

NOTE Confidence: 0.82286793

00:35:11.680 --> 00:35:13.100 especially the EGFR inhibitors,

NOTE Confidence: 0.82286793

 $00{:}35{:}13.100 \dashrightarrow 00{:}35{:}14.865$  were associated with an increased

NOTE Confidence: 0.82286793

 $00{:}35{:}14.865 \dashrightarrow 00{:}35{:}16.277$  number of skin toxicities,

NOTE Confidence: 0.82286793

00:35:16.280 --> 00:35:18.566 but also those which impact quality

NOTE Confidence: 0.82286793

 $00{:}35{:}18.566 \dashrightarrow 00{:}35{:}21.802$  of life greater than some of the

NOTE Confidence: 0.82286793

 $00:35:21.802 \longrightarrow 00:35:23.437$  traditional chemotherapeutic agents.

NOTE Confidence: 0.82286793

00:35:23.440 --> 00:35:23.864 Unfortunately,

NOTE Confidence: 0.82286793

 $00:35:23.864 \longrightarrow 00:35:25.984$  there's mounting data showing that

NOTE Confidence: 0.82286793

 $00:35:25.984 \longrightarrow 00:35:27.256$  early dermatologic intervention

NOTE Confidence: 0.82286793

 $00{:}35{:}27.256 \dashrightarrow 00{:}35{:}28.980$  can really make a difference,

NOTE Confidence: 0.82286793

 $00:35:28.980 \longrightarrow 00:35:30.985$  and so Uncle dermatology programs

NOTE Confidence: 0.82286793

 $00{:}35{:}30.985 \dashrightarrow 00{:}35{:}33.801$  have been showing up at most of

 $00:35:33.801 \longrightarrow 00:35:35.631$  the premier cancer centers in

NOTE Confidence: 0.82286793

 $00:35:35.631 \longrightarrow 00:35:37.300$  the States and abroad,

NOTE Confidence: 0.82286793

00:35:37.300 --> 00:35:39.860 and one study from MSK show that with

NOTE Confidence: 0.82286793

00:35:39.860 --> 00:35:42.050 outpatient Uncle dermatologic involvement,

NOTE Confidence: 0.82286793

 $00:35:42.050 \longrightarrow 00:35:44.140$  patients on immunotherapy were less

NOTE Confidence: 0.82286793

 $00:35:44.140 \longrightarrow 00:35:46.230$  likely to have interrupted treatment

NOTE Confidence: 0.82286793

 $00:35:46.294 \longrightarrow 00:35:48.390$  5% versus 30% to those managed

NOTE Confidence: 0.82286793

 $00:35:48.390 \longrightarrow 00:35:49.578$  without dermatologic intervention.

NOTE Confidence: 0.82286793

 $00:35:49.580 \longrightarrow 00:35:51.998$  In a recent study by the

NOTE Confidence: 0.82286793

 $00{:}35{:}51.998 \dashrightarrow 00{:}35{:}53.610$  Harvard Group similarly showed.

NOTE Confidence: 0.82286793

 $00:35:53.610 \longrightarrow 00:35:55.030$  The inpatient konsult can also

NOTE Confidence: 0.82286793

 $00:35:55.030 \longrightarrow 00:35:56.450$  decrease the chance of patients

NOTE Confidence: 0.82286793

 $00{:}35{:}56.496 \dashrightarrow 00{:}35{:}58.168$  receiving systemic immune suppression

NOTE Confidence: 0.82286793

 $00:35:58.168 \longrightarrow 00:35:59.840$  and immune therapy discontinuation.

NOTE Confidence: 0.82286793

00:35:59.840 --> 00:36:00.185 Now,

 $00:36:00.185 \longrightarrow 00:36:02.255$  we haven't performed a comparative study.

NOTE Confidence: 0.82286793

 $00:36:02.260 \longrightarrow 00:36:04.060$  We did perform a very large

NOTE Confidence: 0.82286793

 $00:36:04.060 \longrightarrow 00:36:05.751$  study recently that was published

NOTE Confidence: 0.82286793

 $00:36:05.751 \longrightarrow 00:36:07.447$  of over 100 immunotherapy.

NOTE Confidence: 0.82286793

 $00:36:07.450 \longrightarrow 00:36:10.555$  Rash is 1/4 of which presented to my clinic,

NOTE Confidence: 0.82286793

 $00:36:10.560 \longrightarrow 00:36:12.290$  often with disruption of immunotherapy.

NOTE Confidence: 0.82286793

 $00:36:12.290 \longrightarrow 00:36:14.020$  But with early dermatologic intervention,

NOTE Confidence: 0.82286793

 $00:36:14.020 \longrightarrow 00:36:15.868$  over 90% of these patients were

NOTE Confidence: 0.82286793

 $00{:}36{:}15.868 \dashrightarrow 00{:}36{:}18.180$  able to remain on their treatment,

NOTE Confidence: 0.82286793

 $00:36:18.180 \longrightarrow 00:36:21.456$  so I think these numbers are compelling.

NOTE Confidence: 0.82286793

 $00{:}36{:}21.460 \dashrightarrow 00{:}36{:}23.002$  So wanted to start by focusing

NOTE Confidence: 0.82286793

 $00:36:23.002 \longrightarrow 00:36:24.810$  on some of the toxicities that

NOTE Confidence: 0.82286793

 $00:36:24.810 \longrightarrow 00:36:26.605$  I see from targeted therapy.

NOTE Confidence: 0.82286793

00:36:26.610 --> 00:36:28.308 I mean there's so many different

NOTE Confidence: 0.82286793

 $00:36:28.308 \longrightarrow 00:36:29.940$  types of agents to discuss,

NOTE Confidence: 0.82286793

 $00:36:29.940 \longrightarrow 00:36:31.686$  I think I'm just going to

 $00:36:31.686 \longrightarrow 00:36:33.580$  review some of the main ones.

NOTE Confidence: 0.82286793

 $00{:}36{:}33.580 \dashrightarrow 00{:}36{:}35.596$  In the interest of time so the EGFR

NOTE Confidence: 0.82286793

 $00:36:35.596 \longrightarrow 00:36:37.922$  inhibitors are a class that are commonly

NOTE Confidence: 0.82286793

 $00:36:37.922 \longrightarrow 00:36:39.334$  associated with cutaneous toxicities.

NOTE Confidence: 0.82286793

 $00:36:39.340 \longrightarrow 00:36:40.004$  Not surprisingly,

NOTE Confidence: 0.82286793

 $00:36:40.004 \longrightarrow 00:36:41.664$  as the epidermal growth factor

NOTE Confidence: 0.82286793

 $00:36:41.664 \longrightarrow 00:36:43.280$  receptor is expressed in the skin,

NOTE Confidence: 0.8393097

 $00:36:43.280 \longrightarrow 00:36:45.314$  hair and nails, and really important

NOTE Confidence: 0.8393097

 $00:36:45.314 \longrightarrow 00:36:47.434$  for homeostasis and some of the

NOTE Confidence: 0.8393097

 $00{:}36{:}47.434 \dashrightarrow 00{:}36{:}49.184$  monoclonal antibodies likes to talk

NOTE Confidence: 0.8393097

 $00:36:49.184 \longrightarrow 00:36:51.115$  some mad panitumumab as well as

NOTE Confidence: 0.8393097

 $00:36:51.115 \longrightarrow 00:36:52.747$  the 1st and 2nd generation drugs.

NOTE Confidence: 0.8393097

 $00:36:52.750 \longrightarrow 00:36:53.930$  Presents with cutaneous toxicities

NOTE Confidence: 0.8393097

 $00:36:53.930 \longrightarrow 00:36:55.405$  in the majority of cases.

NOTE Confidence: 0.8393097

00:36:55.410 --> 00:36:56.610 Fortunately, the third generation

00:36:56.610 --> 00:36:58.110 drugs like OC murdered him

NOTE Confidence: 0.8393097

00:36:58.110 --> 00:36:59.537 for a lung cancer patients.

NOTE Confidence: 0.8393097

 $00:36:59.540 \longrightarrow 00:37:01.598$  They don't seem to get the rest,

NOTE Confidence: 0.8393097

 $00:37:01.600 \longrightarrow 00:37:03.080$  the rest nearly as often,

NOTE Confidence: 0.8393097

 $00:37:03.080 \longrightarrow 00:37:04.308$  probably less than 30%,

NOTE Confidence: 0.8393097

 $00:37:04.308 \dashrightarrow 00:37:06.150$  and so the most common toxicity

NOTE Confidence: 0.8393097

 $00:37:06.213 \longrightarrow 00:37:07.857$  that we see is the papulopustular

NOTE Confidence: 0.8393097

 $00:37:07.857 \longrightarrow 00:37:09.569$  for the acne or form rash,

NOTE Confidence: 0.8393097

 $00{:}37{:}09.570 \dashrightarrow 00{:}37{:}11.628$  and this usually manifests on patients face,

NOTE Confidence: 0.8393097

 $00:37:11.630 \longrightarrow 00:37:12.750$  scalp, chest and back.

NOTE Confidence: 0.8393097

 $00{:}37{:}12.750 \dashrightarrow 00{:}37{:}14.150$  Although it could be wide spread

NOTE Confidence: 0.8393097

 $00:37:14.150 \longrightarrow 00:37:15.699$  and one common misconception is

NOTE Confidence: 0.8393097

 $00:37:15.699 \longrightarrow 00:37:17.523$  that it's just a sterile technique.

NOTE Confidence: 0.8393097

 $00:37:17.530 \longrightarrow 00:37:19.300$  Reform drug eruption, which is true.

NOTE Confidence: 0.8393097

00:37:19.300 --> 00:37:19.615 However,

NOTE Confidence: 0.8393097

 $00:37:19.615 \longrightarrow 00:37:22.135$  I find a large percentage of these patients.

 $00:37:22.140 \longrightarrow 00:37:24.457$  Especially when they get to higher grades

NOTE Confidence: 0.8393097

 $00{:}37{:}24.457 \dashrightarrow 00{:}37{:}26.080$  often have coinfection with staff.

NOTE Confidence: 0.8393097

 $00:37:26.080 \longrightarrow 00:37:27.720$  Both M RSA an MSA,

NOTE Confidence: 0.8393097

 $00:37:27.720 \longrightarrow 00:37:29.688$  so that's a good therapeutic Pearl

NOTE Confidence: 0.8393097

 $00:37:29.688 \dashrightarrow 00:37:31.700$  to obtain wound cultures and hear

NOTE Confidence: 0.8393097

 $00:37:31.700 \longrightarrow 00:37:33.620$  examples of the Packers and pustules.

NOTE Confidence: 0.8393097

 $00:37:33.620 \longrightarrow 00:37:35.588$  Note all this year is crusting.

NOTE Confidence: 0.8393097

 $00:37:35.590 \longrightarrow 00:37:38.206$  It was all in petition eyes with staff.

NOTE Confidence: 0.8393097

 $00{:}37{:}38.210 \dashrightarrow 00{:}37{:}39.710$  Oreius is a more typical scenario

NOTE Confidence: 0.8393097

 $00:37:39.710 \longrightarrow 00:37:41.970$  in one of the more robust severe

NOTE Confidence: 0.8393097

 $00{:}37{:}41.970 \dashrightarrow 00{:}37{:}43.570$  toxicities that might require

NOTE Confidence: 0.8393097

 $00:37:43.570 \longrightarrow 00:37:44.770$  more aggressive treatment,

NOTE Confidence: 0.8393097

 $00{:}37{:}44.770 --> 00{:}37{:}45.763$  which I'll discuss.

NOTE Confidence: 0.8393097

00:37:45.763 --> 00:37:47.749 We see lots of nail infections

NOTE Confidence: 0.8393097

 $00:37:47.749 \longrightarrow 00:37:49.207$  paronychium and because of the

00:37:49.207 --> 00:37:50.809 piercing of the nail plate into

NOTE Confidence: 0.8393097

 $00:37:50.867 \longrightarrow 00:37:52.737$  the hyponychium patients can get

NOTE Confidence: 0.8393097

 $00:37:52.737 \longrightarrow 00:37:54.233$  this friable granulation tissue

NOTE Confidence: 0.8393097

 $00:37:54.233 \longrightarrow 00:37:55.582$  known as pyogenic granulomas.

NOTE Confidence: 0.8393097

 $00:37:55.582 \longrightarrow 00:37:57.202$  These can be exquisitely tender

NOTE Confidence: 0.8393097

 $00{:}37{:}57.202 \dashrightarrow 00{:}37{:}58.944$  and painful and definitely impacts

NOTE Confidence: 0.8393097

00:37:58.944 --> 00:38:00.328 patients quality of lights.

NOTE Confidence: 0.8393097

 $00:38:00.330 \longrightarrow 00:38:02.298$  It's not uncommon to see her

NOTE Confidence: 0.8393097

00:38:02.298 --> 00:38:02.954 growth abnormalities,

NOTE Confidence: 0.8393097

 $00:38:02.960 \longrightarrow 00:38:03.911$  including elongated eyelashes.

NOTE Confidence: 0.8393097

 $00{:}38{:}03.911 \dashrightarrow 00{:}38{:}05.813$  Some patients have a hard time

NOTE Confidence: 0.8393097

00:38:05.813 --> 00:38:06.910 trimming their eyelashes,

NOTE Confidence: 0.8393097

 $00:38:06.910 \longrightarrow 00:38:08.222$  which are curving inward

NOTE Confidence: 0.8393097

 $00{:}38{:}08.222 \dashrightarrow 00{:}38{:}09.534$  and irritating their eyes,

NOTE Confidence: 0.8393097

 $00:38:09.540 \longrightarrow 00:38:11.586$  so they'll just see me analysis

NOTE Confidence: 0.8393097

 $00{:}38{:}11.586 \dashrightarrow 00{:}38{:}13.373$  them with with cutting their

00:38:13.373 --> 00:38:15.893 eyelashes we see lots of dryness and

NOTE Confidence: 0.8393097

 $00:38:15.893 \longrightarrow 00:38:17.750$  painful cracks and fissures too.

NOTE Confidence: 0.8393097

 $00:38:17.750 \longrightarrow 00:38:19.330$  There is an example of,

NOTE Confidence: 0.8393097

00:38:19.330 --> 00:38:21.058 you know a patient who presented

NOTE Confidence: 0.8393097

 $00:38:21.058 \longrightarrow 00:38:23.288$  with a neck near former option which

NOTE Confidence: 0.8393097

 $00:38:23.288 \longrightarrow 00:38:25.322$  was in petition eyes with staff.

NOTE Confidence: 0.8393097

00:38:25.330 --> 00:38:27.226 She responded quite well to Doxie,

NOTE Confidence: 0.8393097

 $00{:}38{:}27.230 \dashrightarrow 00{:}38{:}28.494$  cyclin topical steroid ointments,

NOTE Confidence: 0.8393097

 $00:38:28.494 \longrightarrow 00:38:29.126$  antibiotic ointments.

NOTE Confidence: 0.8393097

 $00{:}38{:}29.130 \dashrightarrow 00{:}38{:}31.069$  And I'm a big fan of antiseptic

NOTE Confidence: 0.8393097

 $00{:}38{:}31.069 \dashrightarrow 00{:}38{:}32.725$  soaks like aluminum acetate removed

NOTE Confidence: 0.8393097

 $00:38:32.725 \longrightarrow 00:38:33.868$  a serious crusting.

NOTE Confidence: 0.8393097

 $00:38:33.870 \longrightarrow 00:38:35.760$  Here's another example of a patient.

NOTE Confidence: 0.8393097

 $00:38:35.760 \longrightarrow 00:38:37.380$  Also recently from the Lung Cancer

NOTE Confidence: 0.8393097

00:38:37.380 --> 00:38:39.441 Group who also had quite a severe

00:38:39.441 --> 00:38:40.991 acne deformed mesh occasionally in

NOTE Confidence: 0.8393097

 $00{:}38{:}40.991 \dashrightarrow 00{:}38{:}42.756$  very severe circumstances there can

NOTE Confidence: 0.8393097

 $00:38:42.756 \longrightarrow 00:38:44.928$  actually be associated alopecia as well.

NOTE Confidence: 0.8393097

 $00:38:44.930 \longrightarrow 00:38:46.505$  She responded very well to

NOTE Confidence: 0.8393097

 $00:38:46.505 \longrightarrow 00:38:47.135$  dermatologic intervention.

NOTE Confidence: 0.8393097

 $00:38:47.140 \longrightarrow 00:38:48.840$  I wanted to highlight that.

NOTE Confidence: 0.8393097

 $00:38:48.840 \longrightarrow 00:38:50.440$  While the acne reformers typically

NOTE Confidence: 0.8393097

00:38:50.440 --> 00:38:52.040 presents during the first few

NOTE Confidence: 0.8393097

 $00{:}38{:}52.098 \dashrightarrow 00{:}38{:}53.891$  weeks on the head, chest and back,

NOTE Confidence: 0.8393097

 $00:38:53.891 \longrightarrow 00:38:55.970$  we have seen uncommon presentations as well,

NOTE Confidence: 0.8393097

 $00{:}38{:}55.970 \dashrightarrow 00{:}38{:}57.740$  which are described in the literature

NOTE Confidence: 0.8393097

 $00:38:57.740 \longrightarrow 00:38:59.530$  and those are prepared drug eruptions

NOTE Confidence: 0.8393097

 $00:38:59.530 \longrightarrow 00:39:01.210$  which likely fall into the category

NOTE Confidence: 0.8393097

 $00:39:01.210 \longrightarrow 00:39:03.098$  of the late acne reform toxicity.

NOTE Confidence: 0.8393097

 $00:39:03.100 \longrightarrow 00:39:04.580$  In these cases usually present

NOTE Confidence: 0.8393097

 $00:39:04.580 \longrightarrow 00:39:05.764$  many months into treatment,

 $00:39:05.770 \longrightarrow 00:39:07.420$  and they often present on the

NOTE Confidence: 0.8393097

 $00:39:07.420 \longrightarrow 00:39:09.040$  lower extremities in the buttocks,

NOTE Confidence: 0.8393097

 $00:39:09.040 \longrightarrow 00:39:11.119$  and as you can see with these

NOTE Confidence: 0.8393097

00:39:11.119 --> 00:39:12.010 perperek looking lesions,

NOTE Confidence: 0.8393097

 $00{:}39{:}12.010 \dashrightarrow 00{:}39{:}14.015$  and they're also frequently Co

NOTE Confidence: 0.8393097

 $00:39:14.015 \longrightarrow 00:39:16.650$  infected with staff on Moon culture.

NOTE Confidence: 0.8393097

 $00:39:16.650 \longrightarrow 00:39:18.673$  Here's an example of a patient with

NOTE Confidence: 0.8393097

00:39:18.673 --> 00:39:21.073 head and neck cancer who responded

NOTE Confidence: 0.8393097

 $00{:}39{:}21.073 \dashrightarrow 00{:}39{:}22.546$  to dermatologic intervention.

NOTE Confidence: 0.8393097

 $00:39:22.550 \longrightarrow 00:39:24.517$  And here's an example of a patient

NOTE Confidence: 0.8393097

 $00:39:24.517 \longrightarrow 00:39:25.360$  who has pretty

NOTE Confidence: 0.78627217

00:39:25.417 --> 00:39:27.937 typical pyogenic granuloma with Paronychium,

NOTE Confidence: 0.78627217

 $00{:}39{:}27.940 \dashrightarrow 00{:}39{:}29.730$  who responded to the topical

NOTE Confidence: 0.78627217

00:39:29.730 --> 00:39:31.162 beta blocker timolol gel.

NOTE Confidence: 0.78627217

 $00:39:31.170 \longrightarrow 00:39:33.480$  Many of these cases are non responsive

 $00:39:33.480 \longrightarrow 00:39:35.309$  to conservative approaches and sometimes

NOTE Confidence: 0.78627217

 $00:39:35.309 \longrightarrow 00:39:37.269$  procedural intervention may be required,

NOTE Confidence: 0.78627217

 $00:39:37.270 \longrightarrow 00:39:40.133$  like using silver nitrate to court arise

NOTE Confidence: 0.78627217

 $00:39:40.133 \longrightarrow 00:39:42.678$  these granulomas or even nail avulsion

NOTE Confidence: 0.78627217

 $00:39:42.678 \longrightarrow 00:39:45.590$  for the really recalcitrant cases will do.

NOTE Confidence: 0.78627217

00:39:45.590 --> 00:39:47.599 So there's many hot topics around EGFR

NOTE Confidence: 0.78627217

 $00:39:47.599 \longrightarrow 00:39:49.641$  inhibitors one over the years has been

NOTE Confidence: 0.78627217

 $00:39:49.641 \longrightarrow 00:39:51.333$  looking at pre emptive versus reactive

NOTE Confidence: 0.78627217

 $00{:}39{:}51.387 \dashrightarrow 00{:}39{:}53.199$  therapy and there's various phase two

NOTE Confidence: 0.78627217

 $00:39:53.199 \longrightarrow 00:39:55.274$  trials which have shown that doc see

NOTE Confidence: 0.78627217

 $00{:}39{:}55.274 \dashrightarrow 00{:}39{:}56.714$  cycling Minocycline with with topical

NOTE Confidence: 0.78627217

 $00:39:56.714 \longrightarrow 00:39:58.227$  steroids and moisturizers can actually

NOTE Confidence: 0.78627217

00:39:58.227 --> 00:39:59.997 reduce the severity of the rash.

NOTE Confidence: 0.78627217

 $00:40:00.000 \longrightarrow 00:40:01.674$  The overall incidence is probably not

NOTE Confidence: 0.78627217

 $00:40:01.674 \longrightarrow 00:40:03.753$  affected and I think the approach towards

NOTE Confidence: 0.78627217

 $00:40:03.753 \longrightarrow 00:40:05.874$  the rest differs depending on the program.

00:40:05.880 --> 00:40:08.216 Here they've been looking at lots of new

NOTE Confidence: 0.78627217

 $00{:}40{:}08.216 \dashrightarrow 00{:}40{:}09.988$  novel approaches for treating the rash,

NOTE Confidence: 0.78627217

 $00:40:09.990 \longrightarrow 00:40:11.455$  none of which are really

NOTE Confidence: 0.78627217

 $00:40:11.455 \longrightarrow 00:40:12.334$  gained widespread use.

NOTE Confidence: 0.78627217

 $00:40:12.340 \longrightarrow 00:40:14.676$  Some of the data is very mixed with

NOTE Confidence: 0.78627217

 $00:40:14.676 \longrightarrow 00:40:16.939$  these drugs and so we definitely need.

NOTE Confidence: 0.78627217

00:40:16.940 --> 00:40:18.844 New approaches and then I just wanted

NOTE Confidence: 0.78627217

 $00{:}40{:}18.844 \to 00{:}40{:}20.844$  to briefly mention that there's a few

NOTE Confidence: 0.78627217

 $00{:}40{:}20.844 \dashrightarrow 00{:}40{:}22.536$  clinical trials which we're doing here.

NOTE Confidence: 0.78627217

 $00:40:22.540 \longrightarrow 00:40:24.112$  Studying the rash one is currently

NOTE Confidence: 0.78627217

00:40:24.112 --> 00:40:25.485 recruiting and I really appreciate

NOTE Confidence: 0.78627217

 $00:40:25.485 \longrightarrow 00:40:27.111$  my awe some collaborators in the head

NOTE Confidence: 0.78627217

 $00{:}40{:}27.111 \dashrightarrow 00{:}40{:}28.878$  and neck and thoracic group which

NOTE Confidence: 0.78627217

 $00:40:28.878 \longrightarrow 00:40:30.378$  are helping to recruit patients.

NOTE Confidence: 0.78627217

 $00:40:30.380 \longrightarrow 00:40:32.258$  And that's to better understand the

 $00:40:32.258 \longrightarrow 00:40:34.058$  microbiome of the populations or option

NOTE Confidence: 0.78627217

 $00{:}40{:}34.058 \to 00{:}40{:}35.780$  and see how changes in the microflora

NOTE Confidence: 0.78627217

 $00:40:35.780 \longrightarrow 00:40:37.697$  can be associated with the severity of

NOTE Confidence: 0.78627217

 $00{:}40{:}37.697 \dashrightarrow 00{:}40{:}39.761$  the rash and response to rash treatment.

NOTE Confidence: 0.78627217

 $00:40:39.761 \longrightarrow 00:40:42.050$  And then there's a company that we're

NOTE Confidence: 0.78627217

00:40:42.113 --> 00:40:44.128 working with that's developing a

NOTE Confidence: 0.78627217

 $00:40:44.128 \longrightarrow 00:40:46.143$  novel probiotic with staff epidermal

NOTE Confidence: 0.78627217

 $00:40:46.205 \longrightarrow 00:40:47.921$  disappointment to look to see if

NOTE Confidence: 0.78627217

 $00:40:47.921 \longrightarrow 00:40:49.716$  this is going to reduce secondary

NOTE Confidence: 0.78627217

 $00:40:49.716 \longrightarrow 00:40:51.008$  infections with staff wareus,

NOTE Confidence: 0.78627217

 $00{:}40{:}51.010 \dashrightarrow 00{:}40{:}52.294$  which are commonly associated

NOTE Confidence: 0.78627217

 $00:40:52.294 \longrightarrow 00:40:53.257$  with severe rashes.

NOTE Confidence: 0.78627217

 $00{:}40{:}53.260 \dashrightarrow 00{:}40{:}55.654$  And so this is in development

NOTE Confidence: 0.78627217

 $00{:}40{:}55.654 \dashrightarrow 00{:}40{:}58.699$  hoping to do this trial next year.

NOTE Confidence: 0.78627217

 $00:40:58.700 \longrightarrow 00:40:59.642$  So shifting gears,

NOTE Confidence: 0.78627217

 $00:40:59.642 \longrightarrow 00:41:01.212$  I wanted to briefly discuss

 $00:41:01.212 \longrightarrow 00:41:02.260$  other targeted agents,

NOTE Confidence: 0.78627217

 $00:41:02.260 \longrightarrow 00:41:04.325$  which we see a lot of toxicities

NOTE Confidence: 0.78627217

 $00:41:04.325 \longrightarrow 00:41:06.150$  from in the breast group.

NOTE Confidence: 0.78627217

 $00:41:06.150 \longrightarrow 00:41:08.040$  They heard two inhibitors as well

NOTE Confidence: 0.78627217

 $00:41:08.040 \longrightarrow 00:41:10.022$  as American hitters used for various

NOTE Confidence: 0.78627217

 $00:41:10.022 \longrightarrow 00:41:12.008$  cancers can actually share some of

NOTE Confidence: 0.78627217

00:41:12.008 --> 00:41:13.929 the properties of the EGFR inhibitor.

NOTE Confidence: 0.78627217

 $00:41:13.930 \longrightarrow 00:41:15.550$  Reactions will often see folliculitis,

NOTE Confidence: 0.78627217

 $00{:}41{:}15.550 \dashrightarrow 00{:}41{:}17.488$  eruptions and a cne or form rashes.

NOTE Confidence: 0.78627217

00:41:17.490 --> 00:41:18.020 However,

NOTE Confidence: 0.78627217

 $00{:}41{:}18.020 \dashrightarrow 00{:}41{:}21.730$  they usually less severe and less frequent.

NOTE Confidence: 0.78627217

 $00:41:21.730 \longrightarrow 00:41:23.935$  I wanted to talk about another very

NOTE Confidence: 0.78627217

 $00{:}41{:}23.935 \dashrightarrow 00{:}41{:}25.516$  important toxicity which comes to

NOTE Confidence: 0.78627217

 $00:41:25.516 \longrightarrow 00:41:27.250$  clinic and that's the hand foot

NOTE Confidence: 0.78627217

 $00:41:27.250 \longrightarrow 00:41:27.828$  skin reaction.

 $00:41:27.830 \longrightarrow 00:41:29.355$  So these usually develop from

NOTE Confidence: 0.78627217

 $00{:}41{:}29.355 \dashrightarrow 00{:}41{:}30.575$  the anti angiogenesis agents,

NOTE Confidence: 0.78627217

 $00:41:30.580 \longrightarrow 00:41:32.589$  some of which we just heard about

NOTE Confidence: 0.78627217

 $00:41:32.589 \longrightarrow 00:41:34.784$  which are used in the paddle cellular

NOTE Confidence: 0.78627217

 $00:41:34.784 \longrightarrow 00:41:37.289$  carcinoma such as the anti veg F agents.

NOTE Confidence: 0.78627217

00:41:37.290 --> 00:41:39.394 And here's a list of the FDA approved

NOTE Confidence: 0.78627217

 $00:41:39.394 \longrightarrow 00:41:41.664$  ones and so this seems to be one

NOTE Confidence: 0.78627217

 $00:41:41.664 \longrightarrow 00:41:43.594$  of those toxicities which just so

NOTE Confidence: 0.78627217

00:41:43.594 --> 00:41:45.826 frequently impacts patients quality of life.

NOTE Confidence: 0.78627217

00:41:45.830 --> 00:41:47.748 They have a hard time being able

NOTE Confidence: 0.78627217

 $00{:}41{:}47.748 \dashrightarrow 00{:}41{:}50.098$  to work to do their daily routine.

NOTE Confidence: 0.78627217

 $00:41:50.100 \longrightarrow 00:41:52.158$  It very often impacts their activities

NOTE Confidence: 0.78627217

 $00:41:52.158 \longrightarrow 00:41:53.187$  of daily living.

NOTE Confidence: 0.78627217

 $00{:}41{:}53.190 \dashrightarrow 00{:}41{:}54.690$  Patients usually present early on.

NOTE Confidence: 0.78627217

00:41:54.690 --> 00:41:56.741 We just kind of thickening or hyper

NOTE Confidence: 0.78627217

00:41:56.741 --> 00:41:58.589 keratosis of the palms and soles,

 $00:41:58.590 \longrightarrow 00:42:00.690$  but then over time they get these

NOTE Confidence: 0.78627217

 $00:42:00.690 \longrightarrow 00:42:01.290$  very painful.

NOTE Confidence: 0.78627217

00:42:01.290 --> 00:42:01.968 Callous is,

NOTE Confidence: 0.78627217

 $00:42:01.968 \longrightarrow 00:42:03.663$  sometimes they are inflamed and

NOTE Confidence: 0.78627217

 $00:42:03.663 \longrightarrow 00:42:06.122$  then in the severe cases we even

NOTE Confidence: 0.78627217

 $00:42:06.122 \longrightarrow 00:42:07.837$  see blisters develop as well.

NOTE Confidence: 0.7819162

 $00:42:07.840 \longrightarrow 00:42:10.689$  This rash can be associated with very

NOTE Confidence: 0.7819162

 $00{:}42{:}10.689 \to 00{:}42{:}12.417$  painful dysaes thesia with sometimes

NOTE Confidence: 0.7819162

00:42:12.417 --> 00:42:14.612 will use gabapentinoids like pre

NOTE Confidence: 0.7819162

 $00{:}42{:}14.612 \dashrightarrow 00{:}42{:}16.754$  gabelein or gabapent in to help

NOTE Confidence: 0.7819162

 $00:42:16.754 \longrightarrow 00:42:18.959$  assist with at this stage as well.

NOTE Confidence: 0.7819162

 $00{:}42{:}18.960 \dashrightarrow 00{:}42{:}20.855$  These drugs also are associated

NOTE Confidence: 0.7819162

 $00:42:20.855 \longrightarrow 00:42:23.193$  with genital eruptions as well as

NOTE Confidence: 0.7819162

 $00:42:23.193 \longrightarrow 00:42:25.078$  splinter hemorrhages on the nails.

NOTE Confidence: 0.7819162

 $00:42:25.080 \longrightarrow 00:42:27.264$  So we don't really have great treatments

 $00:42:27.264 \longrightarrow 00:42:29.966$  for the hand foot skin reaction right now.

NOTE Confidence: 0.7819162

 $00{:}42{:}29.970 \to 00{:}42{:}31.274$  Unfortunately, many patients don't

NOTE Confidence: 0.7819162

 $00:42:31.274 \longrightarrow 00:42:33.230$  respond to moisturizers and karata lytic,

NOTE Confidence: 0.7819162

 $00:42:33.230 \longrightarrow 00:42:34.810$  or topical steroid ointments and

NOTE Confidence: 0.7819162

 $00:42:34.810 \longrightarrow 00:42:36.820$  so dose reduction is often needed.

NOTE Confidence: 0.7819162

 $00{:}42{:}36.820 \dashrightarrow 00{:}42{:}39.244$  So we're doing a study looking at a

NOTE Confidence: 0.7819162

 $00:42:39.244 \longrightarrow 00:42:40.669$  novel topical nitroglycerin ointment

NOTE Confidence: 0.7819162

 $00:42:40.669 \longrightarrow 00:42:43.308$  to treat grade two or grade three

NOTE Confidence: 0.7819162

00:42:43.308 --> 00:42:45.457 hand foot skin rash and the first

NOTE Confidence: 0.7819162

 $00:42:45.457 \longrightarrow 00:42:47.904$  phase is going to be comparing it to

NOTE Confidence: 0.7819162

 $00{:}42{:}47.904 \longrightarrow 00{:}42{:}49.860$  vehicle and then the second phase.

NOTE Confidence: 0.7819162

 $00{:}42{:}49.860 \dashrightarrow 00{:}42{:}51.156$  Comparing pyren lower percentages

NOTE Confidence: 0.7819162

 $00:42:51.156 \longrightarrow 00:42:53.496$  and so if you have any patients

NOTE Confidence: 0.7819162

 $00:42:53.496 \longrightarrow 00:42:55.524$  who present with hand foot skin.

NOTE Confidence: 0.7819162

 $00:42:55.530 \longrightarrow 00:42:57.532$  On these approved drugs on the left

NOTE Confidence: 0.7819162

00:42:57.532 --> 00:42:59.995 who have great to her Grade 3 and

 $00{:}42{:}59.995 \dashrightarrow 00{:}43{:}01.540$  really most patients eventually get

NOTE Confidence: 0.7819162

 $00:43:01.599 \longrightarrow 00:43:03.923$  to grade 2 because it's almost always

NOTE Confidence: 0.7819162

 $00:43:03.923 \longrightarrow 00:43:05.237$  interfering with her activities

NOTE Confidence: 0.7819162

 $00:43:05.237 \longrightarrow 00:43:06.188$  of daily living.

NOTE Confidence: 0.7819162

 $00:43:06.188 \longrightarrow 00:43:08.680$  Please please I'll refer them to our study.

NOTE Confidence: 0.7819162

 $00:43:08.680 \longrightarrow 00:43:11.704$  We definitely need to do better

NOTE Confidence: 0.7819162

00:43:11.704 --> 00:43:13.720 in managing this toxicity.

NOTE Confidence: 0.7819162

 $00:43:13.720 \longrightarrow 00:43:14.788$  In interest of time,

NOTE Confidence: 0.7819162

00:43:14.788 --> 00:43:16.774 I'm just gonna I'm just just briefly

NOTE Confidence: 0.7819162

 $00:43:16.774 \longrightarrow 00:43:19.028$  highlight that we could spend all day

NOTE Confidence: 0.7819162

 $00:43:19.028 \longrightarrow 00:43:20.711$  talking about the different targeted

NOTE Confidence: 0.7819162

 $00{:}43{:}20.711 \dashrightarrow 00{:}43{:}22.673$  agents in the toxicities I see.

NOTE Confidence: 0.7819162

 $00{:}43{:}22.680 {\:{\mbox{--}}\!>}\ 00{:}43{:}24.843$  Here are some examples just to illustrate

NOTE Confidence: 0.7819162

 $00:43:24.843 \longrightarrow 00:43:27.317$  that really many different classes can do it.

NOTE Confidence: 0.7819162

 $00:43:27.320 \longrightarrow 00:43:29.408$  Since you were on or Brewton if for

00:43:29.408 --> 00:43:31.328 CLL often get perperek eruptions,

NOTE Confidence: 0.7819162

 $00{:}43{:}31.330 \dashrightarrow 00{:}43{:}32.570$  folliculitis patients with breast

NOTE Confidence: 0.7819162

00:43:32.570 --> 00:43:34.424 cancer on PR, 3 kinase inhibitors,

NOTE Confidence: 0.7819162

 $00:43:34.424 \longrightarrow 00:43:35.656$  and get really terrible.

NOTE Confidence: 0.7819162

 $00:43:35.660 \longrightarrow 00:43:36.928$  Morbilliform exanthems some requiring

NOTE Confidence: 0.7819162

 $00:43:36.928 \longrightarrow 00:43:39.462$  the use of Prednisone so wanted to turn

NOTE Confidence: 0.7819162

 $00:43:39.462 \longrightarrow 00:43:40.907$  now to immune checkpoint inhibitors.

NOTE Confidence: 0.7819162

 $00:43:40.910 \longrightarrow 00:43:42.500$  Because I think you pennis

NOTE Confidence: 0.7819162

 $00{:}43{:}42.500 \to 00{:}43{:}43.772$  toxicities are really important.

NOTE Confidence: 0.7819162

 $00:43:43.780 \longrightarrow 00:43:46.030$  To discuss with this class

NOTE Confidence: 0.7819162

 $00:43:46.030 \longrightarrow 00:43:47.830$  of cancer cancer therapy.

NOTE Confidence: 0.7819162

 $00:43:47.830 \longrightarrow 00:43:49.440$  And so all great rash,

NOTE Confidence: 0.7819162

 $00:43:49.440 \longrightarrow 00:43:51.360$  plus parictis it kind of tally.

NOTE Confidence: 0.7819162

 $00:43:51.360 \longrightarrow 00:43:54.223$  It all can occur in up to 50% of

NOTE Confidence: 0.7819162

 $00:43:54.223 \longrightarrow 00:43:55.981$  patients on checkpoint inhibitors at one

NOTE Confidence: 0.7819162

 $00{:}43{:}55.981 \dashrightarrow 00{:}43{:}58.098$  point in time during their treatment.

 $00:43:58.100 \longrightarrow 00:44:00.050$  This is especially true of patients

NOTE Confidence: 0.7819162

 $00:44:00.050 \longrightarrow 00:44:01.630$  who are on combination CTL,

NOTE Confidence: 0.7819162

 $00:44:01.630 \longrightarrow 00:44:03.622$  a foreign PD one therapy and the way

NOTE Confidence: 0.7819162

 $00:44:03.622 \longrightarrow 00:44:05.619$  that I think about the toxicities

NOTE Confidence: 0.7819162

 $00{:}44{:}05.619 \dashrightarrow 00{:}44{:}07.414$  from the checkpoint inhibitors is

NOTE Confidence: 0.7819162

 $00:44:07.414 \longrightarrow 00:44:09.547$  a categorized them into those that

NOTE Confidence: 0.7819162

 $00:44:09.547 \longrightarrow 00:44:11.902$  are the most frequent that we see

NOTE Confidence: 0.7819162

 $00:44:11.902 \longrightarrow 00:44:13.507$  which are the morbilliform rashes,

NOTE Confidence: 0.7819162

 $00:44:13.510 \longrightarrow 00:44:14.608$  the lichenoid rash,

NOTE Confidence: 0.7819162

 $00{:}44{:}14.608 \dashrightarrow 00{:}44{:}17.597$  which I'll discuss a bit more about the

NOTE Confidence: 0.7819162

 $00{:}44{:}17.597 \dashrightarrow 00{:}44{:}20.437$  exame and the parictis as well as psoriasis.

NOTE Confidence: 0.7819162

 $00:44:20.440 \longrightarrow 00:44:22.366$  And then there's the whole category

NOTE Confidence: 0.7819162

 $00{:}44{:}22.366 \dashrightarrow 00{:}44{:}23.979$  of autoimmune disorders which occur

NOTE Confidence: 0.7819162

 $00{:}44{:}23.979 \dashrightarrow 00{:}44{:}25.611$  as immune related adverse events such

NOTE Confidence: 0.7819162

 $00:44:25.611 \longrightarrow 00:44:27.627$  as diddle I go and bullous pemphigoid

 $00:44:27.627 \longrightarrow 00:44:29.648$  which I'll discuss more about as well.

NOTE Confidence: 0.7819162

 $00{:}44{:}29.648 \operatorname{--}{>} 00{:}44{:}30.840$  Fortunately, the severe rashes,

NOTE Confidence: 0.7819162

 $00{:}44{:}30.840 \dashrightarrow 00{:}44{:}32.320$  the life threatening Stevens Johnson

NOTE Confidence: 0.7819162

 $00:44:32.320 \longrightarrow 00:44:33.504$  ones we've seen them,

NOTE Confidence: 0.7819162

 $00:44:33.510 \longrightarrow 00:44:34.398$  but they're not.

NOTE Confidence: 0.7819162

 $00:44:34.398 \longrightarrow 00:44:35.286$  They're not common,

NOTE Confidence: 0.7819162

 $00:44:35.290 \longrightarrow 00:44:37.396$  and then there's kind of the

NOTE Confidence: 0.7819162

 $00:44:37.396 \longrightarrow 00:44:39.266$  miscellaneous category of those that

NOTE Confidence: 0.7819162

 $00{:}44{:}39.266 \dashrightarrow 00{:}44{:}41.690$  are granulomatis like sarcoid for those

NOTE Confidence: 0.7819162

 $00:44:41.690 \longrightarrow 00:44:43.779$  involving the panniculus or the fassia.

NOTE Confidence: 0.7819162

 $00:44:43.780 \longrightarrow 00:44:45.670$  So this is actually one of the

NOTE Confidence: 0.7819162

 $00:44:45.670 \longrightarrow 00:44:46.860$  largest studies out there.

NOTE Confidence: 0.7819162

 $00:44:46.860 \longrightarrow 00:44:48.290$  Looking at the different branches

NOTE Confidence: 0.7819162

 $00{:}44{:}48.290 \dashrightarrow 00{:}44{:}49.998$  from in the rapy that we published

NOTE Confidence: 0.7819162

 $00:44:49.998 \longrightarrow 00:44:51.987$  a couple of years ago and it was a

NOTE Confidence: 0.7819162

 $00{:}44{:}52.041 \dashrightarrow 00{:}44{:}53.004$  retrospective retrospective study

 $00:44:53.004 \longrightarrow 00:44:55.251$  of over 100 rashes that we saw

NOTE Confidence: 0.8337146

 $00{:}44{:}55.260 \dashrightarrow 00{:}44{:}56.744$  in the ankle during clinic and we

NOTE Confidence: 0.8337146

 $00:44:56.744 \longrightarrow 00:44:58.836$  found is that they really have many

NOTE Confidence: 0.8337146

 $00:44:58.836 \longrightarrow 00:45:00.244$  different clinical and histopathologic

NOTE Confidence: 0.8337146

 $00{:}45{:}00.244 \dashrightarrow 00{:}45{:}02.325$  morphologies here and a lot of them

NOTE Confidence: 0.8337146

 $00:45:02.325 \longrightarrow 00:45:03.123$  resembled idiopathic dermatosis

NOTE Confidence: 0.8337146

 $00:45:03.123 \longrightarrow 00:45:04.816$  that that we treat in dermatology.

NOTE Confidence: 0.8337146

 $00:45:04.816 \longrightarrow 00:45:06.261$  For patients who are not

NOTE Confidence: 0.8337146

00:45:06.261 --> 00:45:07.840 on checkpoint inhibitors.

NOTE Confidence: 0.8337146

 $00{:}45{:}07.840 \dashrightarrow 00{:}45{:}09.980$  If you take a look at the yellow box I

NOTE Confidence: 0.8337146

 $00:45:10.041 \longrightarrow 00:45:12.449$  highlighted kind of the top five and

NOTE Confidence: 0.8337146

 $00:45:12.449 \longrightarrow 00:45:14.385$  what's interesting about this is that

NOTE Confidence: 0.8337146

 $00:45:14.385 \longrightarrow 00:45:16.359$  a lot of these common rashes actually

NOTE Confidence: 0.8337146

00:45:16.360 --> 00:45:17.780 develop many months into therapy.

NOTE Confidence: 0.8337146

00:45:17.780 --> 00:45:19.579 The most common one can be sometimes

 $00:45:19.579 \longrightarrow 00:45:20.900$  six months into treatment,

NOTE Confidence: 0.8337146

 $00{:}45{:}20.900 \dashrightarrow 00{:}45{:}22.706$  and I think that's important because

NOTE Confidence: 0.8337146

 $00{:}45{:}22.706 \rightarrow 00{:}45{:}24.203$  patients don't always realize or

NOTE Confidence: 0.8337146

00:45:24.203 --> 00:45:25.679 put together that their new rashes

NOTE Confidence: 0.8337146

00:45:25.679 --> 00:45:27.150 because of their immune therapy,

NOTE Confidence: 0.8337146

 $00:45:27.150 \longrightarrow 00:45:29.182$  and in some of the oncologist who are

NOTE Confidence: 0.8337146

 $00:45:29.182 \longrightarrow 00:45:30.838$  less familiar with these toxicities,

NOTE Confidence: 0.8337146

 $00:45:30.840 \longrightarrow 00:45:31.626$  also may not.

NOTE Confidence: 0.8337146

00:45:31.626 --> 00:45:33.791 And so I I think that's important to

NOTE Confidence: 0.8337146

 $00:45:33.791 \longrightarrow 00:45:35.667$  keep in mind that you can definitely

NOTE Confidence: 0.8337146

 $00{:}45{:}35.667 \dashrightarrow 00{:}45{:}37.378$  get late toxicities to write.

NOTE Confidence: 0.8337146

 $00:45:37.380 \longrightarrow 00:45:39.150$  This is a very prominent feature.

NOTE Confidence: 0.8337146

 $00:45:39.150 \longrightarrow 00:45:40.800$  In most of these containers,

NOTE Confidence: 0.8337146

 $00{:}45{:}40.800 \dashrightarrow 00{:}45{:}42.152$  toxicities for tunately were able

NOTE Confidence: 0.8337146

 $00:45:42.152 \longrightarrow 00:45:44.180$  to manage these patients in the

NOTE Confidence: 0.8337146

 $00:45:44.237 \longrightarrow 00:45:45.397$  vast majority of time,

00:45:45.400 --> 00:45:47.560 topically by 20% of patients required

NOTE Confidence: 0.8337146

00:45:47.560 --> 00:45:49.333 Prednisone because of the severity

NOTE Confidence: 0.8337146

 $00:45:49.333 \longrightarrow 00:45:51.326$  of the rash and 25% had disruption

NOTE Confidence: 0.8337146

 $00:45:51.326 \longrightarrow 00:45:53.294$  of immune therapy at some point,

NOTE Confidence: 0.8337146

00:45:53.300 --> 00:45:55.596 sometimes before they saw me in clinic,

NOTE Confidence: 0.8337146

 $00:45:55.600 \longrightarrow 00:45:57.568$  or sometimes because the rash progressed.

NOTE Confidence: 0.8337146

 $00:45:57.570 \longrightarrow 00:45:58.228$  But really,

NOTE Confidence: 0.8337146

00:45:58.228 --> 00:45:59.873 the vast majority can remain

NOTE Confidence: 0.8337146

00:45:59.873 --> 00:46:00.860 on immune therapy.

NOTE Confidence: 0.8337146

 $00{:}46{:}00.860 \dashrightarrow 00{:}46{:}03.500$  It was just the cases of Stevens Johnson,

NOTE Confidence: 0.8337146

 $00{:}46{:}03.500 \dashrightarrow 00{:}46{:}05.630$  a really bad bullous pemphigoid where

NOTE Confidence: 0.8337146

 $00:46:05.630 \longrightarrow 00:46:07.708$  immune therapy was discontinued and another

NOTE Confidence: 0.8337146

 $00:46:07.708 \longrightarrow 00:46:09.829$  important concept here is for the rashes.

NOTE Confidence: 0.8337146

 $00:46:09.830 \longrightarrow 00:46:11.070$  That do recur after

NOTE Confidence: 0.8337146

 $00:46:11.070 \longrightarrow 00:46:12.620$  Prednisone or or that persist.

 $00:46:12.620 \longrightarrow 00:46:14.762$  Targeting the dermatosis in a more

NOTE Confidence: 0.8337146

 $00{:}46{:}14.762 \dashrightarrow 00{:}46{:}16.805$  efficient way is probably going to

NOTE Confidence: 0.8337146

 $00:46:16.805 \longrightarrow 00:46:18.723$  be the future of how these rashes

NOTE Confidence: 0.8337146

 $00:46:18.723 \longrightarrow 00:46:21.060$  are treated and so we've had a great

NOTE Confidence: 0.8337146

00:46:21.060 --> 00:46:22.880 deal of success using things like

NOTE Confidence: 0.8337146

 $00:46:22.880 \longrightarrow 00:46:24.480$  asset reading for the psoriasis

NOTE Confidence: 0.8337146

 $00:46:24.480 \longrightarrow 00:46:26.311$  or lichenoid rash Om Alisme after

NOTE Confidence: 0.8337146

 $00:46:26.311 \longrightarrow 00:46:27.731$  methotrexate for the Bulls tend

NOTE Confidence: 0.8337146

 $00:46:27.731 \longrightarrow 00:46:29.648$  to glide and the TNF inhibitors

NOTE Confidence: 0.8337146

00:46:29.648 --> 00:46:30.596 for Stevens Johnson,

NOTE Confidence: 0.8337146

 $00:46:30.600 \longrightarrow 00:46:32.770$  which is how we treat it typically.

NOTE Confidence: 0.8337146

 $00:46:32.770 \longrightarrow 00:46:34.758$  More recently for for the cases that

NOTE Confidence: 0.8337146

 $00:46:34.758 \longrightarrow 00:46:36.489$  are not associated with checkpoint,

NOTE Confidence: 0.8337146

 $00:46:36.490 \longrightarrow 00:46:38.548$  I wanted to take a moment

NOTE Confidence: 0.8337146

 $00:46:38.548 \longrightarrow 00:46:39.920$  to discuss that the.

NOTE Confidence: 0.8337146

 $00:46:39.920 \longrightarrow 00:46:41.405$  What what the lichenoid dermatitis

 $00{:}46{:}41.405 \dashrightarrow 00{:}46{:}43.509$  is we throw around the term lichenoid

NOTE Confidence: 0.8337146

 $00{:}46{:}43.509 \dashrightarrow 00{:}46{:}45.195$  alot in dermatology and I'm not

NOTE Confidence: 0.8337146

 $00:46:45.195 \longrightarrow 00:46:47.172$  sure if the if our colleagues in

NOTE Confidence: 0.8337146

 $00:46:47.172 \longrightarrow 00:46:48.792$  meddock or familiar with it and

NOTE Confidence: 0.8337146

 $00:46:48.792 \longrightarrow 00:46:50.888$  so like in what looks like like in

NOTE Confidence: 0.8337146

 $00{:}46{:}50.888 \dashrightarrow 00{:}46{:}52.665$  which an Organism that grows on

NOTE Confidence: 0.8337146

00:46:52.665 --> 00:46:54.782 trees kind of scaly and crusty looks

NOTE Confidence: 0.8337146

 $00:46:54.782 \longrightarrow 00:46:56.564$  kind of like the rash does.

NOTE Confidence: 0.8337146

 $00{:}46{:}56.570 \dashrightarrow 00{:}46{:}58.232$  And then there's the histologic term

NOTE Confidence: 0.8337146

 $00:46:58.232 \longrightarrow 00:46:59.979$  of lichenoid dermatitis which is an

NOTE Confidence: 0.8337146

 $00:46:59.979 \longrightarrow 00:47:01.449$  interface dermatitis with the bandlike

NOTE Confidence: 0.8337146

 $00:47:01.449 \longrightarrow 00:47:02.590$  infiltrate of lymphocytes ANAN.

NOTE Confidence: 0.8337146

 $00:47:02.590 \longrightarrow 00:47:04.708$  This is the most common histopathologic

NOTE Confidence: 0.8337146

 $00:47:04.708 \longrightarrow 00:47:06.899$  finding that we see in the skin.

NOTE Confidence: 0.8337146

 $00:47:06.900 \longrightarrow 00:47:08.986$  And so the lichenoid rash can occur

 $00:47:08.986 \longrightarrow 00:47:11.739$  in up to a third quarter to 1/3 of

NOTE Confidence: 0.8337146

 $00:47:11.739 \longrightarrow 00:47:14.628$  patients on PD one and PD Wagon one agents.

NOTE Confidence: 0.8337146

 $00:47:14.630 \longrightarrow 00:47:17.222$  And this is kind of a more severe

NOTE Confidence: 0.8337146

00:47:17.222 --> 00:47:18.718 example highlighting the pink

NOTE Confidence: 0.8337146

 $00:47:18.718 \longrightarrow 00:47:20.688$  violaceous scaly patches and plaques.

NOTE Confidence: 0.8337146

 $00{:}47{:}20.690 \dashrightarrow 00{:}47{:}22.976$  Here's a patient who responded to

NOTE Confidence: 0.8337146

 $00:47:22.976 \longrightarrow 00:47:24.878$  Acitretin were very persistent Palmer

NOTE Confidence: 0.8337146

00:47:24.878 --> 00:47:26.738 planter involvement and he did not

NOTE Confidence: 0.8337146

 $00{:}47{:}26.738 \dashrightarrow 00{:}47{:}29.138$  do as well with topical steroids or

NOTE Confidence: 0.8337146

 $00:47:29.138 \longrightarrow 00:47:31.250$  even a short course of Prednisone.

NOTE Confidence: 0.79664147

 $00:47:31.250 \longrightarrow 00:47:33.315$  I also wanted to highlight that this

NOTE Confidence: 0.79664147

 $00:47:33.315 \longrightarrow 00:47:35.279$  lichenoid rash can involve the mucosa,

NOTE Confidence: 0.79664147

 $00:47:35.280 \longrightarrow 00:47:36.464$  and when that occurs,

NOTE Confidence: 0.79664147

 $00:47:36.464 \longrightarrow 00:47:38.240$  it can really be quite severe

NOTE Confidence: 0.79664147

 $00:47:38.303 \longrightarrow 00:47:39.813$  with ulcerations on the genitals

NOTE Confidence: 0.79664147

 $00:47:39.813 \longrightarrow 00:47:41.790$  as well as the oral mucosa.

 $00:47:41.790 \longrightarrow 00:47:43.750$  Anan this this clearly is very

NOTE Confidence: 0.79664147

 $00{:}47{:}43.750 \dashrightarrow 00{:}47{:}45.995$  painful and we were very low threshold

NOTE Confidence: 0.79664147

 $00:47:45.995 \longrightarrow 00:47:47.675$  for Prednisone in these cases.

NOTE Confidence: 0.79664147

 $00:47:47.680 \longrightarrow 00:47:49.975$  Sometimes we try things like

NOTE Confidence: 0.79664147

 $00{:}47{:}49.975 \dashrightarrow 00{:}47{:}52.270$  hydroxychloroquine in those that persist.

NOTE Confidence: 0.79664147

 $00:47:52.270 \longrightarrow 00:47:54.190$  So in addition to the lichenoid

NOTE Confidence: 0.79664147

 $00:47:54.190 \longrightarrow 00:47:55.470$  rash from checkpoint inhibitors,

NOTE Confidence: 0.79664147

 $00{:}47{:}55.470 \dashrightarrow 00{:}47{:}57.390$  we can also see eczematous presentations.

NOTE Confidence: 0.79664147

 $00:47:57.390 \longrightarrow 00:47:58.642$  Sorry, acid form presentations.

NOTE Confidence: 0.79664147

 $00:47:58.642 \longrightarrow 00:48:00.207$  And then there's patients that

NOTE Confidence: 0.79664147

 $00{:}48{:}00.207 \dashrightarrow 00{:}48{:}01.862$  just have terrible parictis even

NOTE Confidence: 0.79664147

00:48:01.862 --> 00:48:03.150 without an associated rash.

NOTE Confidence: 0.79664147

 $00{:}48{:}03.150 \dashrightarrow 00{:}48{:}04.750$  So here's a typical scenario

NOTE Confidence: 0.79664147

 $00{:}48{:}04.750 \dashrightarrow 00{:}48{:}06.350$  of a patient with psoriasis,

NOTE Confidence: 0.79664147

 $00:48:06.350 \longrightarrow 00:48:07.630$  then goes on checkpoint

00:48:07.630 --> 00:48:08.910 inhibitor therapy and flares,

NOTE Confidence: 0.79664147

 $00:48:08.910 \longrightarrow 00:48:11.150$  and she responded very well to phototherapy,

NOTE Confidence: 0.79664147

 $00:48:11.150 \longrightarrow 00:48:12.920$  which is a really nice non

NOTE Confidence: 0.79664147

 $00:48:12.920 \longrightarrow 00:48:14.670$  systemic option for these patients.

NOTE Confidence: 0.79664147

 $00:48:14.670 \longrightarrow 00:48:16.590$  Here's an example of widespread eczema,

NOTE Confidence: 0.79664147

00:48:16.590 --> 00:48:19.110 and here's a patient that I share with

NOTE Confidence: 0.79664147

 $00{:}48{:}19.110 \dashrightarrow 00{:}48{:}21.016$  Doctor Goldberg who just developed just

NOTE Confidence: 0.79664147

00:48:21.016 --> 00:48:23.310 severe itch and she comes to clinic,

NOTE Confidence: 0.79664147

 $00:48:23.310 \longrightarrow 00:48:24.658$  covered in bandages and

NOTE Confidence: 0.79664147

 $00:48:24.658 \longrightarrow 00:48:26.006$  explorations and she eventually.

NOTE Confidence: 0.79664147

 $00{:}48{:}26.010 {\:{\mbox{--}}\!>}\ 00{:}48{:}27.710$  Did somewhat better with pre

NOTE Confidence: 0.79664147

00:48:27.710 --> 00:48:28.730 gabelein and phototherapy,

NOTE Confidence: 0.79664147

 $00:48:28.730 \longrightarrow 00:48:30.884$  so just highlighting that the different

NOTE Confidence: 0.79664147

 $00:48:30.884 \longrightarrow 00:48:32.775$  the spectrum of these papulos quamous

NOTE Confidence: 0.79664147

 $00:48:32.775 \longrightarrow 00:48:35.505$  rash as we call them from dermatology.

NOTE Confidence: 0.79664147

 $00:48:35.510 \longrightarrow 00:48:37.596$  So both paper boy is one of those

 $00:48:37.596 \longrightarrow 00:48:39.240$  rashes which is not common,

NOTE Confidence: 0.79664147

 $00{:}48{:}39.240 {\:{\circ}{\circ}{\circ}}>00{:}48{:}41.165$  but it's a very important one because

NOTE Confidence: 0.79664147

00:48:41.165 --> 00:48:43.325 it has a great deal of associated

NOTE Confidence: 0.79664147

 $00:48:43.325 \longrightarrow 00:48:45.632$  morbidity with it and so for those

NOTE Confidence: 0.79664147

 $00:48:45.632 \longrightarrow 00:48:47.327$  who aren't familiar with it,

NOTE Confidence: 0.79664147

00:48:47.330 --> 00:48:48.534 it's an autoimmune blistering

NOTE Confidence: 0.79664147

 $00:48:48.534 \longrightarrow 00:48:50.687$  disease with deposition of IG G and

NOTE Confidence: 0.79664147

 $00{:}48{:}50.687 \dashrightarrow 00{:}48{:}52.167$  compliment at the dermal epidermal

NOTE Confidence: 0.79664147

 $00:48:52.167 \longrightarrow 00:48:54.377$  junction is seen here in my patients

NOTE Confidence: 0.79664147

 $00:48:54.377 \longrightarrow 00:48:56.002$  tissue sample and patients also

NOTE Confidence: 0.79664147

00:48:56.002 --> 00:48:57.545 make autoantibodies against BP 180,

NOTE Confidence: 0.79664147

 $00:48:57.545 \longrightarrow 00:48:59.998$  so we conducted a study a few years

NOTE Confidence: 0.79664147

 $00{:}48{:}59.998 \dashrightarrow 00{:}49{:}01.924$ ago at our uncle during clinic

NOTE Confidence: 0.79664147

 $00:49:01.924 \longrightarrow 00:49:04.496$  and we found that about 1% of the

NOTE Confidence: 0.79664147

 $00:49:04.496 \longrightarrow 00:49:05.868$  patients on checkpoint inhibitors

00:49:05.868 --> 00:49:08.118 with PD one or PD wagon one.

NOTE Confidence: 0.79664147

 $00:49:08.120 \longrightarrow 00:49:09.680$  Based on our pharmacy develop

NOTE Confidence: 0.79664147

 $00:49:09.680 \longrightarrow 00:49:11.730$  this rash so it's not common,

NOTE Confidence: 0.79664147

 $00:49:11.730 \longrightarrow 00:49:14.208$  but but it definitely can be quite

NOTE Confidence: 0.79664147

 $00:49:14.208 \longrightarrow 00:49:16.073$  extensive and the latency is

NOTE Confidence: 0.79664147

 $00:49:16.073 \longrightarrow 00:49:18.269$  also usually four to six months.

NOTE Confidence: 0.79664147

00:49:18.270 --> 00:49:18.623 Clinically,

NOTE Confidence: 0.79664147

 $00:49:18.623 \longrightarrow 00:49:20.388$  patients will often present with

NOTE Confidence: 0.79664147

 $00{:}49{:}20.388 \operatorname{--}{>} 00{:}49{:}22.092$  just worsening queritis even before

NOTE Confidence: 0.79664147

 $00:49:22.092 \longrightarrow 00:49:23.060$  the onset of rash.

NOTE Confidence: 0.79664147

 $00{:}49{:}23.060 \dashrightarrow 00{:}49{:}24.914$  Then they get these urticaria lesions

NOTE Confidence: 0.79664147

 $00:49:24.914 \longrightarrow 00:49:26.560$  with tense vesicles and bullae,

NOTE Confidence: 0.79664147

 $00:49:26.560 \longrightarrow 00:49:27.968$  which can become eroded,

NOTE Confidence: 0.79664147

 $00{:}49{:}27.968 \dashrightarrow 00{:}49{:}30.080$  and you can also get mucosal

NOTE Confidence: 0.79664147

 $00:49:30.150 \longrightarrow 00:49:31.479$  involvement as well.

NOTE Confidence: 0.79664147

 $00:49:31.480 \longrightarrow 00:49:33.020$  Think about the bullous pemphigoid

 $00:49:33.020 \longrightarrow 00:49:35.627$  rash is unlike a lot of the more

NOTE Confidence: 0.79664147

 $00{:}49{:}35.627 \dashrightarrow 00{:}49{:}37.307$  common exanthems and lichenoid rash.

NOTE Confidence: 0.79664147

 $00:49:37.310 \longrightarrow 00:49:38.750$  These typically require Prednisone due

NOTE Confidence: 0.79664147

 $00:49:38.750 \longrightarrow 00:49:40.668$  to the severity of the presentation

NOTE Confidence: 0.79664147

 $00:49:40.668 \longrightarrow 00:49:41.518$  with blisters.

NOTE Confidence: 0.79664147

 $00:49:41.520 \longrightarrow 00:49:43.506$  We've also had cases which have

NOTE Confidence: 0.79664147

 $00:49:43.506 \longrightarrow 00:49:44.830$  persisted even after immunotherapy

NOTE Confidence: 0.79664147

 $00:49:44.886 \longrightarrow 00:49:45.738$  has been stopped,

NOTE Confidence: 0.79664147

 $00:49:45.740 \longrightarrow 00:49:47.678$  and even after a Prednisone taper

NOTE Confidence: 0.79664147

 $00:49:47.678 \longrightarrow 00:49:48.647$  likely do too.

NOTE Confidence: 0.79664147

 $00{:}49{:}48.650 \dashrightarrow 00{:}49{:}50.516$  I'm just immune activation and so

NOTE Confidence: 0.79664147

00:49:50.516 --> 00:49:52.540 for those cases things like Rituxan,

NOTE Confidence: 0.79664147

00:49:52.540 --> 00:49:53.188 MAB formalism,

NOTE Confidence: 0.79664147

 $00:49:53.188 \longrightarrow 00:49:54.808$  Maverick dupilumab which are biologics,

NOTE Confidence: 0.79664147

00:49:54.810 --> 00:49:58.688 I'll discuss later might be very helpful.

 $00:49:58.690 \longrightarrow 00:50:00.853$  And the one one question about that

NOTE Confidence: 0.79664147

 $00{:}50{:}00.853 \dashrightarrow 00{:}50{:}03.954$  comes up a lot is when to worry about

NOTE Confidence: 0.79664147

 $00:50:03.954 \longrightarrow 00:50:05.960$  a typical macular papular example,

NOTE Confidence: 0.79664147

 $00{:}50{:}05.960 \dashrightarrow 00{:}50{:}08.030$  when should you worry about progression

NOTE Confidence: 0.79664147

00:50:08.030 --> 00:50:09.758 of Stevens, Johnson, and so?

NOTE Confidence: 0.79664147

00:50:09.758 --> 00:50:12.180 My advice with these cases is obviously,

NOTE Confidence: 0.79664147

00:50:12.180 --> 00:50:12.810 you know,

NOTE Confidence: 0.79664147

 $00:50:12.810 \longrightarrow 00:50:15.015$  you can grade it based on the

NOTE Confidence: 0.79664147

00:50:15.015 --> 00:50:16.340 body surface area,

NOTE Confidence: 0.79664147

 $00:50:16.340 \longrightarrow 00:50:20.228$  but when the rash is pink and pure Riddick.

NOTE Confidence: 0.79727185

 $00:50:20.230 \longrightarrow 00:50:22.498$  It's very reassuring when the rash

NOTE Confidence: 0.79727185

 $00:50:22.498 \longrightarrow 00:50:25.230$  starts to become this more dusky color.

NOTE Confidence: 0.79727185

00:50:25.230 --> 00:50:27.078 And painful. That's when you really

NOTE Confidence: 0.79727185

00:50:27.078 --> 00:50:29.418 have to worry about a progression to

NOTE Confidence: 0.79727185

00:50:29.418 --> 00:50:31.168 a more severe cutaneous reaction,

NOTE Confidence: 0.79727185

 $00{:}50{:}31.170 \dashrightarrow 00{:}50{:}33.066$  especially if there is any coastal

 $00:50:33.066 \longrightarrow 00:50:35.287$  involvement or blisters or any systemic signs

NOTE Confidence: 0.79727185

 $00{:}50{:}35.287 {\:{\circ}{\circ}{\circ}}>00{:}50{:}37.387$  or symptoms really have a low threshold

NOTE Confidence: 0.79727185

00:50:37.448 --> 00:50:39.418 for Prednisone and watching carefully,

NOTE Confidence: 0.79727185

 $00:50:39.420 \longrightarrow 00:50:41.185$  we've definitely seen these very

NOTE Confidence: 0.79727185

 $00{:}50{:}41.185 \dashrightarrow 00{:}50{:}42.950$  atypical scenarios where an example

NOTE Confidence: 0.79727185

 $00:50:43.002 \longrightarrow 00:50:44.838$  just progressed and slowly over the

NOTE Confidence: 0.79727185

 $00:50:44.838 \longrightarrow 00:50:46.752$  course of several weeks progressed to

NOTE Confidence: 0.79727185

 $00{:}50{:}46.752 \dashrightarrow 00{:}50{:}48.660$  a Stevens Johnson type of scenario.

NOTE Confidence: 0.79727185

 $00:50:48.660 \longrightarrow 00:50:50.310$  And that's been that's been

NOTE Confidence: 0.79727185

 $00:50:50.310 \longrightarrow 00:50:51.630$  published with checkpoint inhibitors,

NOTE Confidence: 0.79727185

 $00:50:51.630 \longrightarrow 00:50:53.280$  which is actually very different

NOTE Confidence: 0.79727185

 $00:50:53.280 \longrightarrow 00:50:54.270$  than classical Stevens.

NOTE Confidence: 0.79727185

 $00:50:54.270 \longrightarrow 00:50:56.040$  Johnson would just takes off.

NOTE Confidence: 0.79727185

 $00:50:56.040 \longrightarrow 00:50:57.965$  At a very rapid tempo nears examples

NOTE Confidence: 0.79727185

 $00:50:57.965 \longrightarrow 00:50:59.420$  of examples that we've seen,

 $00:50:59.420 \longrightarrow 00:51:01.112$  as well as Stevens Johnson from

NOTE Confidence: 0.79727185

00:51:01.112 --> 00:51:01.676 Hippie Niveau.

NOTE Confidence: 0.8119258

 $00:51:03.830 \longrightarrow 00:51:05.636$  An I think the future direction

NOTE Confidence: 0.8119258

 $00:51:05.636 \longrightarrow 00:51:07.612$  for it for treating these cutaneous

NOTE Confidence: 0.8119258

00:51:07.612 --> 00:51:10.090 toxicities is is looking at a more

NOTE Confidence: 0.8119258

 $00:51:10.090 \longrightarrow 00:51:11.810$  efficient way to shut them down.

NOTE Confidence: 0.8119258

 $00:51:11.810 \longrightarrow 00:51:13.082$  Basically treating the dermatosis

NOTE Confidence: 0.8119258

 $00:51:13.082 \longrightarrow 00:51:14.672$  in the most targeted approach.

NOTE Confidence: 0.8119258

 $00{:}51{:}14.680 \dashrightarrow 00{:}51{:}16.290$  There's definitely a good amount

NOTE Confidence: 0.8119258

00:51:16.290 --> 00:51:17.900 of data suggesting that the

NOTE Confidence: 0.8119258

 $00{:}51{:}17.956 \dashrightarrow 00{:}51{:}19.456$  use of systemic steroids is,

NOTE Confidence: 0.8119258

00:51:19.460 --> 00:51:20.560 in general, fine, inappropriate,

NOTE Confidence: 0.8119258

 $00:51:20.560 \longrightarrow 00:51:22.629$  and it has has not been shown

NOTE Confidence: 0.8119258

 $00{:}51{:}22.629 \dashrightarrow 00{:}51{:}24.434$  to impair tumor response when

NOTE Confidence: 0.8119258

00:51:24.434 --> 00:51:25.517 treating cutaneous toxicities,

NOTE Confidence: 0.8119258

 $00:51:25.520 \longrightarrow 00:51:27.110$  but for those cases that

 $00:51:27.110 \longrightarrow 00:51:28.064$  are just recalcitrant,

NOTE Confidence: 0.8119258

00:51:28.070 --> 00:51:29.888 I think we're going to find

NOTE Confidence: 0.8119258

 $00:51:29.888 \longrightarrow 00:51:32.188$  the use of anti aisle 413 drugs

NOTE Confidence: 0.8119258

 $00:51:32.188 \longrightarrow 00:51:34.554$  like the pillow mab or anti Ige.

NOTE Confidence: 0.8119258

00:51:34.560 --> 00:51:36.215 He antibodies like oh Melissa

NOTE Confidence: 0.8119258

 $00:51:36.215 \longrightarrow 00:51:37.208$  Matthews more frequently.

NOTE Confidence: 0.8119258

00:51:37.210 --> 00:51:39.358 We already have plenty of biologics

NOTE Confidence: 0.8119258

00:51:39.358 --> 00:51:41.758 used in psoriasis and I think there

NOTE Confidence: 0.8119258

00:51:41.758 --> 00:51:43.865 is mounting data in case series of

NOTE Confidence: 0.8119258

 $00{:}51{:}43.935 \dashrightarrow 00{:}51{:}45.855$  these being used for checkpoint rash

NOTE Confidence: 0.8119258

 $00:51:45.855 \longrightarrow 00:51:48.034$  as well as TNS for Stevens Johnson.

NOTE Confidence: 0.8119258

 $00:51:48.034 \longrightarrow 00:51:50.120$  Here's an example of a patient I

NOTE Confidence: 0.8119258

 $00:51:50.176 \longrightarrow 00:51:52.535$  share with Sarah Weiss who had bullous

NOTE Confidence: 0.8119258

 $00:51:52.535 \longrightarrow 00:51:54.312$  pemphigoid which kept flaring when

NOTE Confidence: 0.8119258

00:51:54.312 --> 00:51:56.077 we slowly taper the Prednisone.

00:51:56.080 --> 00:51:56.544 Eventually,

NOTE Confidence: 0.8119258

 $00:51:56.544 \longrightarrow 00:51:58.400$  with the concomitant administration

NOTE Confidence: 0.8119258

 $00:51:58.400 \longrightarrow 00:52:01.499$  of Melissa Map were able to get

NOTE Confidence: 0.8119258

 $00:52:01.499 \longrightarrow 00:52:02.915$  the patient off criticism.

NOTE Confidence: 0.8119258

00:52:02.920 --> 00:52:04.816 And so in the final moments,

NOTE Confidence: 0.8119258

 $00{:}52{:}04.820 \dashrightarrow 00{:}52{:}06.716$  I just wanted to highlight it's

NOTE Confidence: 0.8119258

 $00:52:06.716 \longrightarrow 00:52:07.980$  not the forgotten child,

NOTE Confidence: 0.8119258

 $00{:}52{:}07.980 \dashrightarrow 00{:}52{:}09.876$  because we see lots of toxicities

NOTE Confidence: 0.8119258

 $00{:}52{:}09.876 \dashrightarrow 00{:}52{:}11.140$  from the cytotoxic drugs.

NOTE Confidence: 0.8119258

00:52:11.140 --> 00:52:13.132 But these I think you're probably

NOTE Confidence: 0.8119258

 $00{:}52{:}13.132 \dashrightarrow 00{:}52{:}14.801$  more familiar with because they've

NOTE Confidence: 0.8119258

 $00:52:14.801 \longrightarrow 00:52:16.505$  been around for a long time,

NOTE Confidence: 0.8119258

 $00:52:16.510 \longrightarrow 00:52:17.142$  but definitely,

NOTE Confidence: 0.8119258

 $00{:}52{:}17.142 \dashrightarrow 00{:}52{:}18.722$  alopecia mucositis are kind of

NOTE Confidence: 0.8119258

00:52:18.722 --> 00:52:19.670 your hallmark toxicities.

NOTE Confidence: 0.8119258

 $00:52:19.670 \longrightarrow 00:52:21.310$  Nail changes are really important

 $00:52:21.310 \longrightarrow 00:52:24.089$  and he's come up a lot to my clinic,

NOTE Confidence: 0.8119258

 $00:52:24.090 \longrightarrow 00:52:25.580$  specially young women with breast

NOTE Confidence: 0.8119258

 $00:52:25.580 \longrightarrow 00:52:26.772$  and gynecological cancers on

NOTE Confidence: 0.8119258

 $00{:}52{:}26.772 \dashrightarrow 00{:}52{:}27.879$  taxanes or anthracyclines.

NOTE Confidence: 0.8119258

 $00:52:27.880 \longrightarrow 00:52:29.148$  They get very painful

NOTE Confidence: 0.8119258

00:52:29.148 --> 00:52:30.099 paronychia subungual hemorrhage.

NOTE Confidence: 0.8119258

 $00:52:30.100 \longrightarrow 00:52:33.052$  They can lose the nail plate they can become.

NOTE Confidence: 0.8119258

00:52:33.060 --> 00:52:33.678 Co infected,

NOTE Confidence: 0.8119258

 $00:52:33.678 \longrightarrow 00:52:35.841$  and so I think these toxicities are

NOTE Confidence: 0.8119258

 $00:52:35.841 \longrightarrow 00:52:37.631$  really important and then there's

NOTE Confidence: 0.8119258

00:52:37.631 --> 00:52:39.401 the toxic rash of chemotherapy

NOTE Confidence: 0.8119258

 $00{:}52{:}39.401 \dashrightarrow 00{:}52{:}41.510$  which can be hand foot syndrome

NOTE Confidence: 0.8119258

 $00:52:41.510 \longrightarrow 00:52:43.200$  or malignant intertrigo flow under

NOTE Confidence: 0.8119258

 $00:52:43.200 \longrightarrow 00:52:45.624$  the umbrella of toxic erythema of

NOTE Confidence: 0.8119258

 $00:52:45.624 \longrightarrow 00:52:47.702$  chemo and these reactions occur

00:52:47.702 --> 00:52:49.652 through the ecrivain excretion of

NOTE Confidence: 0.8119258

 $00{:}52{:}49.652 \rightarrow 00{:}52{:}52.519$  chemo in the skin of echoing glands.

NOTE Confidence: 0.8119258

 $00:52:52.520 \longrightarrow 00:52:54.696$  And we just wanted to do a brief

NOTE Confidence: 0.8119258

00:52:54.696 --> 00:52:56.947 shout out to my awesome research

NOTE Confidence: 0.8119258

 $00:52:56.947 \longrightarrow 00:52:58.992$  fellow who just matched into

NOTE Confidence: 0.8119258

 $00:52:58.992 \longrightarrow 00:53:00.180$  dermatology at Cornell.

NOTE Confidence: 0.8119258

 $00{:}53{:}00.180 \dashrightarrow 00{:}53{:}02.118$  Rihanna and she was very interested

NOTE Confidence: 0.8119258

 $00:53:02.118 \longrightarrow 00:53:04.233$  in looking at the cutaneous toxicities

NOTE Confidence: 0.8119258

 $00{:}53{:}04.233 \dashrightarrow 00{:}53{:}06.501$  in patients we've seen with skin

NOTE Confidence: 0.8119258

 $00:53:06.501 \longrightarrow 00:53:08.968$  of color which really make up a

NOTE Confidence: 0.8119258

 $00{:}53{:}08.968 \dashrightarrow 00{:}53{:}10.613$  large proportion of our clinic.

NOTE Confidence: 0.8119258

 $00:53:10.620 \longrightarrow 00:53:13.049$  And while the diagnosis in general or

NOTE Confidence: 0.8119258

 $00:53:13.049 \longrightarrow 00:53:15.487$  similar to patients without skin of color,

NOTE Confidence: 0.8119258

 $00:53:15.490 \longrightarrow 00:53:17.225$  there's clearly a very prominent

NOTE Confidence: 0.8119258

00:53:17.225 --> 00:53:18.266 finding of hyperpigmentation,

NOTE Confidence: 0.8119258

 $00:53:18.270 \longrightarrow 00:53:20.358$  which is very bothersome and very,

 $00:53:20.360 \longrightarrow 00:53:22.195$  very prevalent after a rash

NOTE Confidence: 0.8119258

 $00:53:22.195 \longrightarrow 00:53:23.663$  are examples of that.

NOTE Confidence: 0.8119258

00:53:23.670 --> 00:53:24.890 Patients who get fatal,

NOTE Confidence: 0.8119258

 $00:53:24.890 \longrightarrow 00:53:26.415$  I go with darker skin.

NOTE Confidence: 0.8119258

 $00:53:26.420 \longrightarrow 00:53:28.256$  It's obviously a lot more noticeable,

NOTE Confidence: 0.8119258

 $00:53:28.260 \longrightarrow 00:53:30.096$  and then there's definitely a propensity

NOTE Confidence: 0.8119258

00:53:30.096 --> 00:53:31.320 for starring starring alopecia,

NOTE Confidence: 0.8119258

 $00:53:31.320 \longrightarrow 00:53:32.850$  but also just keloid scarring.

NOTE Confidence: 0.8119258

 $00:53:32.850 \longrightarrow 00:53:34.970$  Here's an example of a patient with a

NOTE Confidence: 0.8119258

 $00{:}53{:}34.970 \dashrightarrow 00{:}53{:}36.605$  keloid overport site which responded

NOTE Confidence: 0.8119258

 $00:53:36.605 \longrightarrow 00:53:38.355$  well to injection of triamcinolone,

NOTE Confidence: 0.8119258

 $00{:}53{:}38.360 \dashrightarrow 00{:}53{:}40.656$  so I think it's important to look

NOTE Confidence: 0.8119258

 $00{:}53{:}40.656 {\:\dashrightarrow\:} 00{:}53{:}42.786$  at how these toxicities differ

NOTE Confidence: 0.8119258

 $00{:}53{:}42.786 \dashrightarrow 00{:}53{:}44.926$  and in various populations.

NOTE Confidence: 0.8119258

 $00:53:44.930 \longrightarrow 00:53:46.700$  And in closing went to refer

 $00:53:46.700 \longrightarrow 00:53:47.880$  patients to our clinic.

NOTE Confidence: 0.8119258

 $00{:}53{:}47.880 \to 00{:}53{:}49.889$  I think the short answer is any time

NOTE Confidence: 0.8119258

00:53:49.889 --> 00:53:51.720 you need a hand, we're really,

NOTE Confidence: 0.8119258

 $00:53:51.720 \longrightarrow 00:53:53.490$  really happy to see these patients.

NOTE Confidence: 0.828433199999999

 $00:53:53.490 \longrightarrow 00:53:55.366$  It is a privilege definitely for rashes

NOTE Confidence: 0.828433199999999

 $00:53:55.366 \longrightarrow 00:53:57.242$  that are higher grade that are impacting

NOTE Confidence: 0.828433199999999

 $00:53:57.242 \longrightarrow 00:53:59.205$  quality of life or that are recalcitrant

NOTE Confidence: 0.828433199999999

 $00:53:59.205 \longrightarrow 00:54:01.155$  to kind of conservative management.

NOTE Confidence: 0.828433199999999

 $00:54:01.160 \longrightarrow 00:54:02.960$  And definitely anytime there's a red

NOTE Confidence: 0.828433199999999

00:54:02.960 --> 00:54:04.988 flag that I mentioned like skin pain,

NOTE Confidence: 0.828433199999999

 $00{:}54{:}04.990 \dashrightarrow 00{:}54{:}06.800$  duskiness, blisters or plus definitely

NOTE Confidence: 0.828433199999999

 $00:54:06.800 \longrightarrow 00:54:08.610$  send those patients our way.

NOTE Confidence: 0.828433199999999

00:54:08.610 --> 00:54:10.766 So in conclusion, I hope you'll you'll

 $00:54:10.766 \longrightarrow 00:54:12.880$  see from this talk that cutaneous

NOTE Confidence: 0.828433199999999

00:54:12.880 --> 00:54:14.765 toxicities are not just common,

NOTE Confidence: 0.828433199999999

 $00:54:14.770 \longrightarrow 00:54:17.017$  but they're also really important in the

 $00:54:17.017 \longrightarrow 00:54:18.870$  overall management of cancer patients.

NOTE Confidence: 0.828433199999999 00:54:18.870 --> 00:54:19.556 Ann Ann. NOTE Confidence: 0.828433199999999

00:54:19.556 --> 00:54:21.614 I hope that Dermot Earley dermatologic

NOTE Confidence: 0.828433199999999

 $00:54:21.614 \longrightarrow 00:54:23.318$  intervention can make a difference.

NOTE Confidence: 0.828433199999999

 $00{:}54{:}23.320 \dashrightarrow 00{:}54{:}25.025$  Remember that the EGFR acne

NOTE Confidence: 0.828433199999999

00:54:25.025 --> 00:54:26.389 reform rash often starts.

NOTE Confidence: 0.828433199999999

 $00:54:26.390 \longrightarrow 00:54:28.100$  It is a sterile rash,

NOTE Confidence: 0.828433199999999

00:54:28.100 --> 00:54:29.966 but it can often be secondarily

NOTE Confidence: 0.828433199999999

 $00{:}54{:}29.966 \dashrightarrow 00{:}54{:}32.389$  infected and you can get these unusual

NOTE Confidence: 0.828433199999999

 $00:54:32.389 \longrightarrow 00:54:34.254$  late perperek eruptions as well.

 $00:54:34.260 \longrightarrow 00:54:36.633$  Hand foot skin from the anti angiogenesis

NOTE Confidence: 0.828433199999999

 $00:54:36.633 \longrightarrow 00:54:38.859$  drugs and definitely have associated pain.

NOTE Confidence: 0.828433199999999

 $00{:}54{:}38.860 \dashrightarrow 00{:}54{:}40.696$  We don't have great treatments yet,

NOTE Confidence: 0.828433199999999

 $00:54:40.700 \longrightarrow 00:54:42.115$  so please consider referring patients

NOTE Confidence: 0.828433199999999

00:54:42.115 --> 00:54:44.173 to the study using a novel nitroglycerin

 $00:54:44.173 \longrightarrow 00:54:46.224$  ointment to treat it and then turning

NOTE Confidence: 0.828433199999999

 $00:54:46.224 \longrightarrow 00:54:48.040$  to the checkpoint inhibitor rash.

NOTE Confidence: 0.828433199999999

 $00:54:48.040 \longrightarrow 00:54:49.804$  I think the lichenoid one is

NOTE Confidence: 0.828433199999999

 $00:54:49.804 \longrightarrow 00:54:51.710$  the important one to know about.

NOTE Confidence: 0.828433199999999

 $00{:}54{:}51.710 \dashrightarrow 00{:}54{:}53.588$  It's common it can have associated

NOTE Confidence: 0.828433199999999

00:54:53.588 --> 00:54:54.840 parietis and mucosal involvement

NOTE Confidence: 0.828433199999999

00:54:54.895 --> 00:54:56.300 as well as bullous pemphigoid,

NOTE Confidence: 0.828433199999999

 $00.54.56.300 \rightarrow 00.54.57.830$  which frequently requires systemic therapy.

 $00:54:57.830 \longrightarrow 00:54:59.666$  And if there's any red flag,

NOTE Confidence: 0.828433199999999

00.54.59.670 --> 00.55.00.585 signs or symptoms,

 $00{:}55{:}00.585 \dashrightarrow 00{:}55{:}02.415$  obviously you know you have to

NOTE Confidence: 0.828433199999999

 $00:55:02.415 \longrightarrow 00:55:04.328$  treat these patients aggressively.

NOTE Confidence: 0.828433199999999

 $00:55:04.330 \longrightarrow 00:55:06.458$  So I just wanted to thank really all

NOTE Confidence: 0.828433199999999

 $00:55:06.458 \longrightarrow 00:55:08.708$  of my colleagues Ann and Metang.

NOTE Confidence: 0.828433199999999

00:55:08.710 --> 00:55:09.679 Sir John Cradoc,

NOTE Confidence: 0.828433199999999

 $00:55:09.679 \longrightarrow 00:55:11.294$  everyone at Smilow who's supported

 $00:55:11.294 \longrightarrow 00:55:12.780$  our clinic over the years.

NOTE Confidence: 0.828433199999999

 $00:55:12.780 \longrightarrow 00:55:15.060$  I have a really great team from the

NOTE Confidence: 0.828433199999999

 $00:55:15.060 \longrightarrow 00:55:17.785$  admins to the nurses to my chief residents,

NOTE Confidence: 0.828433199999999

 $00:55:17.790 \longrightarrow 00:55:19.974$  many of which have chosen Uncle Dharmas.

NOTE Confidence: 0.828433199999999

 $00:55:19.980 \longrightarrow 00:55:21.877$  Akarere Anatomy very proud and as well

NOTE Confidence: 0.828433199999999

00:55:21.877 --> 00:55:24.679 as my my research fellows, an NYCC I.

NOTE Confidence: 0.828433199999999

00:55:24.679 --> 00:55:26.870 So if you ever have any patients,

NOTE Confidence: 0.828433199999999

 $00{:}55{:}26.870 \dashrightarrow 00{:}55{:}28.430$  I'm very I'm always available.

NOTE Confidence: 0.828433199999999

 $00:55:28.430 \longrightarrow 00:55:30.308$  You can text me call me.

NOTE Confidence: 0.828433199999999

 $00:55:30.310 \longrightarrow 00:55:32.494$  Contact us and we'll gladly see them.

 $00{:}55{:}32.500 \dashrightarrow 00{:}55{:}34.996$  So thank you and I'll take any questions.

NOTE Confidence: 0.8417028

 $00:55:39.340 \longrightarrow 00:55:40.960$  It's terrific, thank you, Jonathan.

NOTE Confidence: 0.8417028

 $00:55:40.960 \longrightarrow 00:55:43.228$  Do you have questions from the audience?

NOTE Confidence: 0.76453024

 $00:55:54.260 \longrightarrow 00:55:56.745$  My recollection is that with the the

NOTE Confidence: 0.76453024

 $00:55:56.745 \longrightarrow 00:55:59.521$  B RAF inhibitors there was a serious

 $00:55:59.521 \longrightarrow 00:56:01.975$  problem with squamous cell carcinoma's is

NOTE Confidence: 0.76453024

 $00:56:01.980 \longrightarrow 00:56:03.138$  that yeah so

NOTE Confidence: 0.791491097

 $00:56:03.140 \longrightarrow 00:56:04.340$  actually had a.

NOTE Confidence: 0.791491097

 $00:56:04.340 \longrightarrow 00:56:07.140$  I had a picture of that slide.

NOTE Confidence: 0.791491097

00:56:07.140 --> 00:56:10.550 I didn't go into it too much but but we had.

NOTE Confidence: 0.791491097

 $00:56:10.550 \longrightarrow 00:56:12.830$  We saw a lot of toxicities over the

NOTE Confidence: 0.791491097

 $00:56:12.830 \longrightarrow 00:56:14.888$  years with the beer at inhibitors,

NOTE Confidence: 0.791491097

 $00:56:14.890 \longrightarrow 00:56:16.720$  but with the concomitant administration

NOTE Confidence: 0.791491097

 $00{:}56{:}16.720 \dashrightarrow 00{:}56{:}18.891$  of the American hitters we've actually

NOTE Confidence: 0.791491097

 $00:56:18.891 \longrightarrow 00:56:20.577$  seen that basically drop down to

NOTE Confidence: 0.791491097

 $00{:}56{:}20.577 \dashrightarrow 00{:}56{:}23.106$  near near 0 and so you can still get

NOTE Confidence: 0.791491097

00:56:23.106 --> 00:56:24.810 phototoxic rash is another odd things,

NOTE Confidence: 0.791491097

00:56:24.810 --> 00:56:26.050 like everything and awesome,

NOTE Confidence: 0.791491097

 $00:56:26.050 \longrightarrow 00:56:27.440$  we've not seen squamous cells

NOTE Confidence: 0.791491097

 $00:56:27.440 \longrightarrow 00:56:29.238$  develop in patients on be right

NOTE Confidence: 0.791491097

 $00:56:29.238 \longrightarrow 00:56:31.008$  contributors to the American hitter.

00:56:31.010 --> 00:56:31.320 Coadministration

NOTE Confidence: 0.80304575

 $00:56:31.320 \longrightarrow 00:56:32.250$  perfect thank you.

NOTE Confidence: 0.86902666

 $00:56:40.430 \longrightarrow 00:56:41.429$  Any other questions?

NOTE Confidence: 0.8423256

00:56:48.780 --> 00:56:50.200 If not, thank you Jonathan.

NOTE Confidence: 0.8423256

00:56:50.200 --> 00:56:51.276 Very interesting. Looks like

NOTE Confidence: 0.8423256

 $00:56:51.276 \longrightarrow 00:56:53.240$  you're making a lot of progress in

NOTE Confidence: 0.8423256

 $00:56:53.240 \longrightarrow 00:56:54.460$  managing these these disorders.

NOTE Confidence: 0.8908938

00:56:55.650 --> 00:56:56.538 Thanks for having me.