WEBVTT

NOTE duration:"00:48:28" NOTE recognizability:0.844

NOTE language:en-us

NOTE Confidence: 0.697841731666667

00:00:00.000 --> 00:00:01.263 Hi. Welcome everybody.

NOTE Confidence: 0.697841731666667

00:00:01.263 --> 00:00:03.298 I'm Barbara burtness. I'm a.

NOTE Confidence: 0.697841731666667

 $00{:}00{:}03.298 \dashrightarrow 00{:}00{:}05.218$  Medical oncologist and work on

NOTE Confidence: 0.697841731666667

00:00:05.218 --> 00:00:07.496 head and neck cancer and I'm

NOTE Confidence: 0.697841731666667

 $00:00:07.496 \longrightarrow 00:00:09.925$  really like I could not be more

NOTE Confidence: 0.697841731666667

 $00:00:10.002 \longrightarrow 00:00:11.946$  extraordinarily delighted than I

NOTE Confidence: 0.697841731666667

 $00{:}00{:}11.946 \dashrightarrow 00{:}00{:}15.040$  am to be today presenting Dr Saral

NOTE Confidence: 0.697841731666667

 $00:00:15.040 \longrightarrow 00:00:17.020$  Mera as our grand round speaker.

NOTE Confidence: 0.697841731666667

 $00{:}00{:}17.020 \dashrightarrow 00{:}00{:}19.276$  Doctor Mehra is an associate professor

NOTE Confidence: 0.697841731666667

 $00:00:19.276 \longrightarrow 00:00:21.145$  of surgery in otolaryngology and

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 $00{:}00{:}21.145 \dashrightarrow 00{:}00{:}23.259$  Section chief of head and neck surgery.

NOTE Confidence: 0.697841731666667

 $00{:}00{:}23.260 \dashrightarrow 00{:}00{:}25.360$  He received his medical degree from

NOTE Confidence: 0.697841731666667

 $00:00:25.360 \longrightarrow 00:00:26.760$  Columbia University College of

00:00:26.818 --> 00:00:28.726 Physicians and Surgeons in New York,

NOTE Confidence: 0.697841731666667

 $00{:}00{:}28.730 \dashrightarrow 00{:}00{:}30.949$  also obtained an MBA there and went

NOTE Confidence: 0.697841731666667

00:00:30.949 --> 00:00:32.831 on to residency in Otolaryngology

NOTE Confidence: 0.697841731666667

 $00:00:32.831 \longrightarrow 00:00:35.411$  Head neck surgery at New York

NOTE Confidence: 0.697841731666667

00:00:35.411 --> 00:00:37.329 Presbyterian Memorial Sloan Kettering,

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 $00:00:37.330 \longrightarrow 00:00:40.000$  and then completed his training with

NOTE Confidence: 0.697841731666667

 $00:00:40.000 \longrightarrow 00:00:42.194$  a extremely coveted fellowship in

NOTE Confidence: 0.697841731666667

00:00:42.194 --> 00:00:44.264 head and neck and thyroid cancer

NOTE Confidence: 0.697841731666667

00:00:44.264 --> 00:00:45.770 surgery at Mount Sinai,

NOTE Confidence: 0.697841731666667

00:00:45.770 --> 00:00:48.362 including Subspecialization in

NOTE Confidence: 0.697841731666667

00:00:48.362 --> 00:00:50.090 complex reconstruction.

NOTE Confidence: 0.697841731666667

00:00:50.090 --> 00:00:51.970 His clinical practice focuses on

NOTE Confidence: 0.697841731666667

 $00:00:51.970 \longrightarrow 00:00:53.850$  treating patients with head and

NOTE Confidence: 0.697841731666667

00:00:53.912 --> 00:00:55.967 neck salivary and thyroid diseases,

NOTE Confidence: 0.697841731666667

00:00:55.970 --> 00:00:57.538 particularly those patients who

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 $00{:}00{:}57.538 \dashrightarrow 00{:}00{:}59.498$  need a very advanced resection

 $00{:}00{:}59.498 \dashrightarrow 00{:}01{:}01.409$  or advanced reconstruction.

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 $00:01:01.410 \dashrightarrow 00:01:02.976$  And I've been privileged to share

NOTE Confidence: 0.697841731666667

 $00:01:02.976 \longrightarrow 00:01:04.469$  many hundreds of patients with him.

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00:01:04.470 --> 00:01:06.941 And I can like very personally say

NOTE Confidence: 0.697841731666667

 $00:01:06.941 \longrightarrow 00:01:08.751$  his oncologic and reconstructive

NOTE Confidence: 0.697841731666667

00:01:08.751 --> 00:01:10.788 outcomes are exceptional.

NOTE Confidence: 0.697841731666667

 $00:01:10.790 \longrightarrow 00:01:12.126$  And so his primary research

NOTE Confidence: 0.697841731666667

 $00{:}01{:}12.126 \to 00{:}01{:}13.860$  interest ties in this very nicely

NOTE Confidence: 0.697841731666667

00:01:13.911 --> 00:01:15.735 because he focuses on measuring and

NOTE Confidence: 0.697841731666667

 $00:01:15.735 \longrightarrow 00:01:17.253$  improving quality in the treatment

NOTE Confidence: 0.697841731666667

00:01:17.253 --> 00:01:18.989 of head neck cancers and I think

NOTE Confidence: 0.697841731666667

 $00{:}01{:}18.989 \dashrightarrow 00{:}01{:}20.585$  one of the central conundrum.

NOTE Confidence: 0.697841731666667

 $00{:}01{:}20.585 \dashrightarrow 00{:}01{:}23.705$  Our field is how do we take exceptional

NOTE Confidence: 0.697841731666667

 $00:01:23.705 \longrightarrow 00:01:26.528$  care and and broaden its accessibility

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 $00:01:26.528 \longrightarrow 00:01:28.211$  and broaden its applicability.

00:01:28.211 --> 00:01:30.248 So he's going to be talking about

NOTE Confidence: 0.697841731666667

 $00{:}01{:}30.248 \dashrightarrow 00{:}01{:}31.758$  quality and outcomes research and

NOTE Confidence: 0.697841731666667

 $00:01:31.758 \longrightarrow 00:01:33.504$  head neck cancer from bench to

NOTE Confidence: 0.697841731666667

00:01:33.504 --> 00:01:35.260 bedside with Yale leading the charge,

NOTE Confidence: 0.697841731666667 00:01:35.260 --> 00:01:35.630 Cyril.

NOTE Confidence: 0.922864263181818

00:01:40.990 --> 00:01:42.868 Thank you so much for that

NOTE Confidence: 0.922864263181818

 $00:01:42.868 \longrightarrow 00:01:44.120$  introduction Barbara and thank

NOTE Confidence: 0.922864263181818

 $00:01:44.175 \longrightarrow 00:01:45.921$  you every body for logging in and

NOTE Confidence: 0.922864263181818

 $00:01:45.921 \longrightarrow 00:01:47.689$  and and listening to this talk.

NOTE Confidence: 0.922864263181818

00:01:47.690 --> 00:01:50.586 I know it's a diverse group of basic

NOTE Confidence: 0.922864263181818

 $00{:}01{:}50.586 \dashrightarrow 00{:}01{:}51.840$  scientist clinical researchers

NOTE Confidence: 0.922864263181818

 $00:01:51.840 \longrightarrow 00:01:53.684$  and hopefully some outcomes

NOTE Confidence: 0.922864263181818

 $00{:}01{:}53.684 \dashrightarrow 00{:}01{:}55.989$  researchers out there as well.

NOTE Confidence: 0.922864263181818

 $00:01:55.990 \longrightarrow 00:01:58.530$  So that's my topic.

NOTE Confidence: 0.922864263181818

 $00:01:58.530 \longrightarrow 00:02:00.435$  It's been discussed.

NOTE Confidence: 0.922864263181818

 $00:02:00.440 \longrightarrow 00:02:02.366$  Just make sure this is working.

 $00:02:13.520 \longrightarrow 00:02:16.152$  OK, so I have no I have

NOTE Confidence: 0.930024702

00:02:16.152 --> 00:02:17.280 no financial disclosures,

NOTE Confidence: 0.930024702

 $00:02:17.280 \longrightarrow 00:02:19.464$  so I couldn't do a head and neck

NOTE Confidence: 0.930024702

00:02:19.464 --> 00:02:21.557 research talk without mentioning 2

NOTE Confidence: 0.930024702

00:02:21.557 --> 00:02:23.529 important studies recently published,

NOTE Confidence: 0.930024702

00:02:23.530 --> 00:02:25.200 ECOG 3311 and keynote O48,

NOTE Confidence: 0.930024702

 $00:02:25.200 \longrightarrow 00:02:26.920$  of which Yale specifically Doctor

NOTE Confidence: 0.930024702

 $00:02:26.920 \longrightarrow 00:02:29.344$  Burtness was lead author on both of

NOTE Confidence: 0.930024702

 $00:02:29.344 \longrightarrow 00:02:31.288$  these very different types of studies.

NOTE Confidence: 0.930024702

 $00{:}02{:}31.290 \dashrightarrow 00{:}02{:}33.455$  But these are practice changing

NOTE Confidence: 0.930024702

 $00:02:33.455 \longrightarrow 00:02:34.754$  studies recently published.

NOTE Confidence: 0.930024702

 $00{:}02{:}34.760 \dashrightarrow 00{:}02{:}38.312$  Um ECOG 3311 looked at T1 and T2

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 $00{:}02{:}38.312 \dashrightarrow 00{:}02{:}40.928$  resectable HPV positive oropharynx

NOTE Confidence: 0.930024702

 $00{:}02{:}40.928 \dashrightarrow 00{:}02{:}43.718$  squamous cell carcinoma and

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 $00:02:43.718 \longrightarrow 00:02:45.458$  keynote O48 looked at locally

 $00:02:45.458 \longrightarrow 00:02:47.770$  the opposite end of the spectrum,

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 $00:02:47.770 \longrightarrow 00:02:50.240$  locally incurable recurrent or metastatic

NOTE Confidence: 0.930024702

 $00{:}02{:}50.240 \dashrightarrow 00{:}02{:}52.178$ head neck squamous cell carcinoma.

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00:02:52.178 --> 00:02:53.758 What I've put up here,

NOTE Confidence: 0.930024702

00:02:53.760 --> 00:02:56.184 I'm not going into details of these studies,

NOTE Confidence: 0.930024702

 $00:02:56.190 \longrightarrow 00:02:58.696$  but what I've put up here are

NOTE Confidence: 0.930024702

 $00{:}02{:}58.696 \dashrightarrow 00{:}03{:}00.640$  survival curves from these huge.

NOTE Confidence: 0.930024702

00:03:00.640 --> 00:03:02.760 Hugely important recent practice

NOTE Confidence: 0.930024702

00:03:02.760 --> 00:03:04.156 changing studies, OK,

NOTE Confidence: 0.930024702

 $00:03:04.156 \longrightarrow 00:03:06.508$  I'm not going to get into details

NOTE Confidence: 0.930024702

 $00:03:06.508 \longrightarrow 00:03:08.420$  about these over the next 45 minutes.

NOTE Confidence: 0.930024702

 $00:03:08.420 \longrightarrow 00:03:10.308$  What I really want to do though is

NOTE Confidence: 0.930024702

 $00:03:10.308 \longrightarrow 00:03:12.165$  convince you of two things and I think

NOTE Confidence: 0.930024702

00:03:12.165 --> 00:03:14.295 I may have already done the first one

NOTE Confidence: 0.930024702

00:03:14.295 --> 00:03:16.077 because it doesn't take much convincing.

NOTE Confidence: 0.930024702

 $00:03:16.080 \longrightarrow 00:03:17.992$  Large scale multi institutional

 $00{:}03{:}17.992 \to 00{:}03{:}20.382$  randomized control trials are important

NOTE Confidence: 0.930024702

 $00{:}03{:}20.382 \dashrightarrow 00{:}03{:}23.140$  and they can lead to practice changing

NOTE Confidence: 0.930024702

 $00:03:23.140 \longrightarrow 00:03:25.900$  innovations in the care of cancer patients.

NOTE Confidence: 0.930024702

00:03:25.900 --> 00:03:29.410 Any cancer, I'm going to put a

NOTE Confidence: 0.930024702

 $00:03:29.410 \longrightarrow 00:03:30.820$  check mark beside that already.

NOTE Confidence: 0.930024702

 $00:03:30.820 \longrightarrow 00:03:32.254$  Based on that first slide and

NOTE Confidence: 0.930024702

00:03:32.254 --> 00:03:33.470 which you probably already know,

NOTE Confidence: 0.930024702

 $00:03:33.470 \longrightarrow 00:03:35.059$  but really what I want to do

NOTE Confidence: 0.930024702

 $00:03:35.059 \longrightarrow 00:03:36.769$  is tell you that the quality,

NOTE Confidence: 0.930024702

00:03:36.770 --> 00:03:38.860 that quality of care research

NOTE Confidence: 0.930024702

 $00:03:38.860 \longrightarrow 00:03:41.470$  or call it what you will,

NOTE Confidence: 0.930024702

 $00:03:41.470 \longrightarrow 00:03:44.010$  patient reported outcomes reaches

NOTE Confidence: 0.930024702

 $00{:}03{:}44.010 \dashrightarrow 00{:}03{:}46.550$  patient centered outcomes research.

NOTE Confidence: 0.930024702

 $00{:}03{:}46.550 {\:{\mbox{--}}}{\:{\mbox{--}}} 00{:}03{:}48.206$  Comparative effectiveness research goes

NOTE Confidence: 0.930024702

 $00:03:48.206 \longrightarrow 00:03:50.690$  by different names at different times.

 $00:03:50.690 \longrightarrow 00:03:52.776$  But when you can take this from

NOTE Confidence: 0.930024702

 $00:03:52.776 \longrightarrow 00:03:54.549$  the bench to the bedside,

NOTE Confidence: 0.930024702

00:03:54.550 --> 00:03:57.118 we can have a remarkable impact

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00:03:57.118 --> 00:03:58.402 on patient outcomes.

NOTE Confidence: 0.930024702

 $00:03:58.410 \longrightarrow 00:04:00.111$  And not only that but this type

NOTE Confidence: 0.930024702

 $00{:}04{:}00.111 \dashrightarrow 00{:}04{:}01.910$  of research is actually necessary.

NOTE Confidence: 0.930024702

 $00{:}04{:}01.910 \dashrightarrow 00{:}04{:}04.283$  For I'll put in quotes the real

NOTE Confidence: 0.930024702

 $00:04:04.283 \longrightarrow 00:04:06.030$  science to mean anything.

NOTE Confidence: 0.930024702

 $00{:}04{:}06.030 \dashrightarrow 00{:}04{:}08.218$  That's the basic scientist,

NOTE Confidence: 0.930024702

 $00:04:08.218 \longrightarrow 00:04:09.859$  the clinical trials.

NOTE Confidence: 0.930024702

00:04:09.860 --> 00:04:11.300 That's what I want to convince you of.

NOTE Confidence: 0.930024702

 $00:04:11.300 \longrightarrow 00:04:12.620$  By the end of this talk,

NOTE Confidence: 0.930024702

 $00:04:12.620 \longrightarrow 00:04:14.524$  I'm going to start with a case.

NOTE Confidence: 0.930024702

 $00:04:14.530 \longrightarrow 00:04:16.364$  This is a 52 year old man.

NOTE Confidence: 0.930024702

 $00:04:16.370 \longrightarrow 00:04:19.510$  This is actually very recent.

NOTE Confidence: 0.930024702

00:04:19.510 --> 00:04:20.982 And within our system,

 $00:04:20.982 \longrightarrow 00:04:22.942$  OK, the very recent case,

NOTE Confidence: 0.930024702

 $00:04:22.942 \longrightarrow 00:04:25.736$  52 year old man never smoker 2.9

NOTE Confidence: 0.930024702

 $00{:}04{:}25.736 \dashrightarrow 00{:}04{:}28.172$  centimeter right neck mass and a

NOTE Confidence: 0.930024702

00:04:28.172 --> 00:04:30.530 right tonsil mass was seen in our

NOTE Confidence: 0.930024702

 $00{:}04{:}30.530 \dashrightarrow 00{:}04{:}32.630$  system and had a right tonsil mass.

NOTE Confidence: 0.930024702

 $00:04:32.630 \longrightarrow 00:04:34.794$  Biopsy showed poorly differentiated

NOTE Confidence: 0.930024702

 $00:04:34.794 \longrightarrow 00:04:38.040$  squamous cell carcinoma and the P-16

NOTE Confidence: 0.930024702

 $00:04:38.121 \longrightarrow 00:04:41.277$  stain was strongly and diffusely positive.

NOTE Confidence: 0.930024702

 $00:04:41.280 \longrightarrow 00:04:44.620$  The patient went for surgery.

NOTE Confidence: 0.930024702

 $00:04:44.620 \longrightarrow 00:04:47.032$  And what the pathology identified with

NOTE Confidence: 0.930024702

 $00:04:47.032 \longrightarrow 00:04:49.458$  the tonsillectomy and a neck mass

NOTE Confidence: 0.930024702

 $00:04:49.458 \longrightarrow 00:04:51.696$  excision was a P-16 positive cancer,

NOTE Confidence: 0.930024702

 $00{:}04{:}51.700 \dashrightarrow 00{:}04{:}53.940$  3 centimeters extending to the

NOTE Confidence: 0.930024702

 $00{:}04{:}53.940 \dashrightarrow 00{:}04{:}56.908$  margins of resection and a 2.7

NOTE Confidence: 0.930024702

 $00:04:56.908 \longrightarrow 00:05:00.548$  centimeter node with no ENE.

 $00:05:00.550 \longrightarrow 00:05:02.524$  And a few other nodes also that

NOTE Confidence: 0.930024702

 $00:05:02.524 \longrightarrow 00:05:04.229$  that came with the specimen.

NOTE Confidence: 0.930024702

 $00:05:04.230 \longrightarrow 00:05:06.174$  So this patient was then referred

NOTE Confidence: 0.930024702

 $00:05:06.174 \longrightarrow 00:05:07.470$  for radiation and chemotherapy.

NOTE Confidence: 0.930024702

 $00:05:07.470 \longrightarrow 00:05:09.574$  There's a positive margin.

NOTE Confidence: 0.930024702

 $00:05:09.574 \longrightarrow 00:05:11.678$  The guidelines say radiation

NOTE Confidence: 0.930024702

 $00:05:11.678 \longrightarrow 00:05:15.460$  chemotherapy was then re referred

NOTE Confidence: 0.930024702

 $00:05:15.460 \longrightarrow 00:05:18.310$  to but by care center physician

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 $00:05:18.310 \longrightarrow 00:05:20.298$  to the head neck disease team at

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 $00:05:20.298 \longrightarrow 00:05:22.170$  the at at the Big House.

NOTE Confidence: 0.930024702

 $00{:}05{:}22.170 \dashrightarrow 00{:}05{:}23.610$  And this was interesting because

NOTE Confidence: 0.930024702

 $00:05:23.610 \longrightarrow 00:05:25.700$  a few things first of all was

NOTE Confidence: 0.930024702

 $00:05:25.700 \longrightarrow 00:05:27.170$  staging completed prior to treatment

NOTE Confidence: 0.930024702

 $00:05:27.170 \longrightarrow 00:05:28.052$  was one of

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 $00:05:28.108 \longrightarrow 00:05:29.653$  the questions that came up

NOTE Confidence: 0.869758474137931

00:05:29.653 --> 00:05:30.889 when they were discussed.

 $00:05:30.890 \longrightarrow 00:05:32.210$  And the answer was no.

NOTE Confidence: 0.869758474137931

 $00:05:32.210 \longrightarrow 00:05:34.844$  And then more important was the

NOTE Confidence: 0.869758474137931

 $00:05:34.844 \longrightarrow 00:05:37.610$  latest science applied to this patient

NOTE Confidence: 0.869758474137931

 $00:05:37.610 \longrightarrow 00:05:38.846 \text{ ECOG } 3311 \text{ had already come out.}$ 

NOTE Confidence: 0.869758474137931

 $00:05:38.850 \longrightarrow 00:05:41.636$  I told you this is a very

NOTE Confidence: 0.869758474137931

 $00:05:41.636 \longrightarrow 00:05:43.090$  recent case and preoperatively

NOTE Confidence: 0.869758474137931

00:05:43.090 --> 00:05:44.390 pre surgery this patient will

NOTE Confidence: 0.869758474137931

 $00:05:44.390 \longrightarrow 00:05:46.198$  be in the low risk category of

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 $00:05:48.470 \longrightarrow 00:05:51.794$  T1N1 cancer where we

NOTE Confidence: 0.903695358571429

 $00:05:51.794 \longrightarrow 00:05:54.287$  could potentially operate.

NOTE Confidence: 0.903695358571429

 $00:05:54.290 \longrightarrow 00:05:56.408$  And go to observation, no radiation,

NOTE Confidence: 0.903695358571429

 $00:05:56.410 \longrightarrow 00:05:58.210$  no chemotherapy and this patient

NOTE Confidence: 0.903695358571429

 $00{:}05{:}58.210 \dashrightarrow 00{:}06{:}00.382$  have a 94% progression free survival

NOTE Confidence: 0.903695358571429

 $00:06:00.382 \longrightarrow 00:06:02.962$  based on the data from ECOG 3311.

NOTE Confidence: 0.903695358571429

 $00:06:02.962 \longrightarrow 00:06:06.010$  But now this patient has a positive margin.

00:06:06.010 --> 00:06:08.152 Now he's in the high risk category

NOTE Confidence: 0.903695358571429

 $00{:}06{:}08.152 \dashrightarrow 00{:}06{:}10.547$  and now he technically should go

NOTE Confidence: 0.903695358571429

 $00:06:10.547 \longrightarrow 00:06:12.887$  on to chemotherapy and radiation.

NOTE Confidence: 0.903695358571429

00:06:12.890 --> 00:06:14.500 Nothing about this tumor change,

NOTE Confidence: 0.903695358571429

00:06:14.500 --> 00:06:15.790 nothing about the patient changed,

NOTE Confidence: 0.903695358571429

00:06:15.790 --> 00:06:17.962 about the biology changed,

NOTE Confidence: 0.903695358571429

 $00:06:17.962 \longrightarrow 00:06:20.677$  but now the treatment recommendation

NOTE Confidence: 0.903695358571429

 $00:06:20.677 \longrightarrow 00:06:22.330$  could be different.

NOTE Confidence: 0.903695358571429

 $00:06:22.330 \longrightarrow 00:06:24.697$  So we had a long discussion in tumor board.

NOTE Confidence: 0.903695358571429

 $00:06:24.700 \longrightarrow 00:06:27.248$  And what we decided to do after

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 $00{:}06{:}27.248 \dashrightarrow 00{:}06{:}29.209$  multidisciplinary team care was complete,

NOTE Confidence: 0.903695358571429

 $00:06:29.210 \longrightarrow 00:06:31.585$  the staging taken for transoral

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 $00:06:31.585 \longrightarrow 00:06:34.475$  robotic surgery to clear that margin

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 $00:06:34.475 \longrightarrow 00:06:37.079$  and do a formal neck dissection.

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00:06:37.080 --> 00:06:37.386 Unfortunately,

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 $00:06:37.386 \longrightarrow 00:06:39.222$  this patient did have to escalate

 $00:06:39.222 \longrightarrow 00:06:40.140$  after a discussion,

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 $00:06:40.140 \longrightarrow 00:06:42.905$  we did decide to escalate his therapy

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 $00:06:42.905 \longrightarrow 00:06:45.360$  to radiation because of the original

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 $00:06:45.360 \longrightarrow 00:06:47.435$  positive margin and discussing the

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 $00:06:47.435 \longrightarrow 00:06:49.860$  risks and benefits with the patient.

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00:06:49.860 --> 00:06:50.301 Controversial,

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 $00:06:50.301 \longrightarrow 00:06:53.388$  but that's what we decided to do.

NOTE Confidence: 0.903695358571429

 $00:06:53.390 \longrightarrow 00:06:55.070$  OK. So that's my case.

NOTE Confidence: 0.903695358571429

00:06:55.070 --> 00:06:56.494 Some kind of frames,

NOTE Confidence: 0.903695358571429

 $00:06:56.494 \longrightarrow 00:06:57.206$  this discussion,

NOTE Confidence: 0.903695358571429

 $00:06:57.210 \longrightarrow 00:06:59.190$  so some background and definitions.

NOTE Confidence: 0.903695358571429

 $00:06:59.190 \longrightarrow 00:07:01.428$  What is quality in cancer care?

NOTE Confidence: 0.903695358571429

 $00{:}07{:}01.430 \dashrightarrow 00{:}07{:}03.250$  I'm not going to read all these,

NOTE Confidence: 0.903695358571429

 $00:07:03.250 \longrightarrow 00:07:06.004$  but if you look at some of the literature

NOTE Confidence: 0.903695358571429

 $00:07:06.004 \longrightarrow 00:07:08.829$  on quality and cancer care nationally,

 $00:07:08.830 \longrightarrow 00:07:10.666$  they have all these fancy definitions.

NOTE Confidence: 0.903695358571429

 $00:07:10.670 \longrightarrow 00:07:12.526$  But this is what I think is just,

NOTE Confidence: 0.903695358571429

 $00:07:12.530 \longrightarrow 00:07:13.169$  it's so simple,

NOTE Confidence: 0.903695358571429

 $00:07:13.169 \longrightarrow 00:07:15.070$  so simple and you all know this already,

NOTE Confidence: 0.903695358571429

00:07:15.070 --> 00:07:17.261 I know, but it's just getting the

NOTE Confidence: 0.903695358571429

00:07:17.261 --> 00:07:19.550 right care to the right patient at

NOTE Confidence: 0.903695358571429

 $00:07:19.550 \longrightarrow 00:07:22.269$  the right time and doing it every time.

NOTE Confidence: 0.903695358571429

00:07:22.270 --> 00:07:24.142 That's it, that's quality.

NOTE Confidence: 0.903695358571429

 $00:07:24.142 \longrightarrow 00:07:25.078$  In healthcare,

NOTE Confidence: 0.903695358571429

 $00:07:25.080 \longrightarrow 00:07:26.244$  especially cancer care.

NOTE Confidence: 0.903695358571429

00:07:26.244 --> 00:07:28.960 So what went wrong with this patient?

NOTE Confidence: 0.903695358571429

 $00:07:28.960 \longrightarrow 00:07:29.989$  This patient is going to do fine.

NOTE Confidence: 0.903695358571429

 $00:07:29.990 \longrightarrow 00:07:32.562$  The survival rate still 90% plus,

NOTE Confidence: 0.903695358571429

00:07:32.562 --> 00:07:33.386 you know,

NOTE Confidence: 0.903695358571429

 $00:07:33.386 \longrightarrow 00:07:35.488$  it wasn't technically harmed other

NOTE Confidence: 0.903695358571429

 $00:07:35.488 \longrightarrow 00:07:37.192$  than treatment and functionally

 $00{:}07{:}37.192 \dashrightarrow 00{:}07{:}39.310$  and maybe some side effects,

NOTE Confidence: 0.903695358571429

 $00:07:39.310 \longrightarrow 00:07:40.410$  but he's going to live,

NOTE Confidence: 0.903695358571429

 $00:07:40.410 \longrightarrow 00:07:41.565$  he's going to have a good outcome.

NOTE Confidence: 0.903695358571429

00:07:41.570 --> 00:07:41.959 But,

NOTE Confidence: 0.903695358571429

00:07:41.959 --> 00:07:44.682 but I would argue this wasn't the

NOTE Confidence: 0.903695358571429

00:07:44.682 --> 00:07:47.144 highest quality of care and it

NOTE Confidence: 0.903695358571429

00:07:47.144 --> 00:07:49.149 wasn't applying the latest science.

NOTE Confidence: 0.903695358571429

00:07:49.150 --> 00:07:51.442 So if anyone here has been

NOTE Confidence: 0.903695358571429

00:07:51.442 --> 00:07:52.588 to Business School,

NOTE Confidence: 0.903695358571429

00:07:52.590 --> 00:07:55.146 you would have read a lot

NOTE Confidence: 0.903695358571429

00:07:55.146 --> 00:07:56.850 about Edward Edwards Deming,

NOTE Confidence: 0.903695358571429

 $00:07:56.850 \longrightarrow 00:07:59.610$  who created basically the Toyota,

NOTE Confidence: 0.903695358571429

 $00{:}07{:}59.610 \dashrightarrow 00{:}08{:}01.266$  Toyota Quality Improvement

NOTE Confidence: 0.903695358571429

00:08:01.266 --> 00:08:04.026 process and brought you know,

NOTE Confidence: 0.903695358571429

 $00:08:04.030 \longrightarrow 00:08:05.490$  car production to the

 $00:08:05.490 \longrightarrow 00:08:06.950$  highest quality in Japan.

NOTE Confidence: 0.903695358571429

 $00:08:06.950 \longrightarrow 00:08:09.326$  And I think he said it best and

NOTE Confidence: 0.903695358571429

 $00:08:09.326 \longrightarrow 00:08:11.668$  it really applies to cancer care.

NOTE Confidence: 0.903695358571429

 $00:08:11.670 \longrightarrow 00:08:14.148$  What the fault in the interpretation

NOTE Confidence: 0.903695358571429

 $00:08:14.148 \longrightarrow 00:08:15.800$  of observations seen everywhere

NOTE Confidence: 0.903695358571429

 $00:08:15.864 \longrightarrow 00:08:17.868$  is just suppose that every event,

NOTE Confidence: 0.903695358571429

 $00:08:17.870 \longrightarrow 00:08:20.310$  any defective mistake and accident

NOTE Confidence: 0.903695358571429

 $00:08:20.310 \longrightarrow 00:08:22.262$  is attributable to someone,

NOTE Confidence: 0.903695358571429

 $00:08:22.270 \longrightarrow 00:08:25.414$  usually whoever's closest at hand or

NOTE Confidence: 0.903695358571429

 $00:08:25.414 \longrightarrow 00:08:27.510$  some special extraordinary event.

NOTE Confidence: 0.903695358571429

00:08:27.510 --> 00:08:28.430 But the fact is,

NOTE Confidence: 0.903695358571429

 $00:08:28.430 \longrightarrow 00:08:30.430$  it's not the people that are the issues,

NOTE Confidence: 0.903695358571429

 $00:08:30.430 \longrightarrow 00:08:32.470$  it's the system that doesn't work

NOTE Confidence: 0.903695358571429

 $00:08:32.470 \longrightarrow 00:08:34.430$  when there's errors and mistakes.

NOTE Confidence: 0.903695358571429

00:08:34.430 --> 00:08:35.938 The Institute of Medicine,

NOTE Confidence: 0.903695358571429

 $00:08:35.938 \longrightarrow 00:08:38.690$  in their crossing the Quality Chasm report,

 $00:08:38.690 \longrightarrow 00:08:41.266$  said it well that poor quality care

NOTE Confidence: 0.903695358571429

 $00{:}08{:}41.266 \dashrightarrow 00{:}08{:}43.809$  occurs not because of a failure of

NOTE Confidence: 0.903695358571429

00:08:43.809 --> 00:08:46.610 goodwill or knowledge or effort or resources,

NOTE Confidence: 0.903695358571429

 $00:08:46.610 \longrightarrow 00:08:48.405$  but because of fundamental shortcomings

NOTE Confidence: 0.903695358571429

 $00{:}08{:}48.405 \dashrightarrow 00{:}08{:}51.020$  in the way cancer care is organized.

NOTE Confidence: 0.903695358571429

 $00:08:51.020 \longrightarrow 00:08:52.670$  There's no there's no bad doctor,

NOTE Confidence: 0.903695358571429

 $00:08:52.670 \longrightarrow 00:08:54.623$  there's no one who wants to harm a patient.

NOTE Confidence: 0.903695358571429

 $00:08:54.630 \longrightarrow 00:08:56.808$  That I know of at least.

NOTE Confidence: 0.871056475714286

 $00:08:56.810 \longrightarrow 00:09:00.527$  But the system can be the problem.

NOTE Confidence: 0.871056475714286

 $00:09:00.530 \longrightarrow 00:09:01.970$  So how do we measure quality?

NOTE Confidence: 0.871056475714286

 $00:09:01.970 \longrightarrow 00:09:04.382$  There's really three ways what a

NOTE Confidence: 0.871056475714286

 $00:09:04.382 \longrightarrow 00:09:07.218$  lot of us do, and what was done

NOTE Confidence: 0.871056475714286

 $00:09:07.218 \longrightarrow 00:09:09.904$  all the time, many years ago,

NOTE Confidence: 0.871056475714286

 $00{:}09{:}09{.}904 \dashrightarrow 00{:}09{:}12.844$  was implicit or expert review.

NOTE Confidence: 0.871056475714286

 $00:09:12.850 \longrightarrow 00:09:13.970$  I'm in an ivory tower.

 $00:09:13.970 \longrightarrow 00:09:15.410$  I say it's high quality.

NOTE Confidence: 0.871056475714286

00:09:15.410 --> 00:09:16.136 I'm. I'm great.

NOTE Confidence: 0.871056475714286

00:09:16.136 --> 00:09:17.854 And so it is. That's it.

NOTE Confidence: 0.871056475714286

 $00:09:17.854 \longrightarrow 00:09:19.342$  But there are scientific

NOTE Confidence: 0.871056475714286

 $00:09:19.342 \longrightarrow 00:09:20.830$  ways to measure quality,

NOTE Confidence: 0.871056475714286

 $00:09:20.830 \longrightarrow 00:09:26.200$  specifically structure and process metrics.

NOTE Confidence: 0.871056475714286

 $00:09:26.200 \longrightarrow 00:09:28.948$  So why is structure so important?

NOTE Confidence: 0.871056475714286

 $00{:}09{:}28.950 \dashrightarrow 00{:}09{:}30.637$  Take a moment to talk about this.

NOTE Confidence: 0.871056475714286

 $00:09:30.640 \longrightarrow 00:09:31.528$  So right now,

NOTE Confidence: 0.871056475714286

00:09:31.528 --> 00:09:33.600 I'm sure you can all recognize the

NOTE Confidence: 0.871056475714286

 $00{:}09{:}33.665 \dashrightarrow 00{:}09{:}36.313$  organization of cancer care most of the US,

NOTE Confidence: 0.871056475714286

00:09:36.320 --> 00:09:38.798 the patient at least in the middle,

NOTE Confidence: 0.871056475714286

 $00{:}09{:}38.800 \dashrightarrow 00{:}09{:}40.654$  and then doctors all around them

NOTE Confidence: 0.871056475714286

 $00:09:40.654 \longrightarrow 00:09:42.220$  and communication can be very,

NOTE Confidence: 0.871056475714286

 $00:09:42.220 \longrightarrow 00:09:42.700$  very challenging.

NOTE Confidence: 0.871056475714286

 $00:09:42.700 \longrightarrow 00:09:44.380$  This happens to be from a publication.

00:09:44.380 --> 00:09:46.180 And regarding thyroid cancer cares,

NOTE Confidence: 0.871056475714286

00:09:46.180 --> 00:09:47.900 we've got nuclear medicine specialists,

NOTE Confidence: 0.871056475714286

 $00:09:47.900 \longrightarrow 00:09:49.118$  we've got radiologists,

NOTE Confidence: 0.871056475714286

00:09:49.118 --> 00:09:50.336 we've got endocrinologist,

NOTE Confidence: 0.871056475714286

 $00:09:50.340 \longrightarrow 00:09:53.610$  medical oncologists and the patients.

NOTE Confidence: 0.871056475714286

 $00:09:53.610 \longrightarrow 00:09:58.335$  Left in the middle and can be quite confused.

NOTE Confidence: 0.871056475714286

 $00:09:58.340 \longrightarrow 00:10:00.170$  This is the structure of hospital

NOTE Confidence: 0.871056475714286

00:10:00.170 --> 00:10:01.860 care in the United States.

NOTE Confidence: 0.871056475714286

00:10:01.860 --> 00:10:03.840 There's about 6000 hospitals

NOTE Confidence: 0.871056475714286

 $00{:}10{:}03.840 \dashrightarrow 00{:}10{:}06.315$  registered in the United States.

NOTE Confidence: 0.871056475714286

 $00:10:06.320 \longrightarrow 00:10:09.435$  About 1500 of them are registered by

NOTE Confidence: 0.871056475714286

 $00{:}10{:}09.435 \dashrightarrow 00{:}10{:}12.702$  the ACS Commission on Cancer and about

NOTE Confidence: 0.871056475714286

 $00{:}10{:}12.702 \dashrightarrow 00{:}10{:}16.068$ 71% are treated at ACS Commission

NOTE Confidence: 0.871056475714286

 $00:10:16.068 \longrightarrow 00:10:19.530$  on cancer accredited hospitals.

NOTE Confidence: 0.871056475714286

00:10:19.530 --> 00:10:21.287 And I'm sure you've heard of SEER,

 $00:10:21.290 \longrightarrow 00:10:24.050$  which is a representative national database

NOTE Confidence: 0.871056475714286

 $00:10:24.050 \longrightarrow 00:10:27.354$  and that captures about 14% of cancer cases,

NOTE Confidence: 0.871056475714286

 $00:10:27.354 \longrightarrow 00:10:30.010$  but is supposed to be and probably

NOTE Confidence: 0.871056475714286

00:10:30.010 --> 00:10:31.930 is representative of cancer care

NOTE Confidence: 0.871056475714286

 $00:10:31.994 \longrightarrow 00:10:33.209$  within the country.

NOTE Confidence: 0.871056475714286

00:10:33.210 --> 00:10:35.010 So you can get incidence rates from Seer,

NOTE Confidence: 0.871056475714286

00:10:35.010 --> 00:10:36.879 where you can't get that from NCDB,

NOTE Confidence: 0.871056475714286 $00:10:36.880 \longrightarrow 00:10:38.293$  which is a, NOTE Confidence: 0.871056475714286

 $00:10:38.293 \longrightarrow 00:10:42.070$  which is the Commission on cancer data set.

NOTE Confidence: 0.871056475714286

 $00:10:42.070 \longrightarrow 00:10:43.438$  There's a number of

NOTE Confidence: 0.871056475714286

 $00{:}10{:}43.438 \mathrel{--}{>} 00{:}10{:}44.464$  comprehensive cancer centers,

NOTE Confidence: 0.871056475714286

 $00:10:44.470 \longrightarrow 00:10:45.523$  there's cancer centers,

NOTE Confidence: 0.871056475714286

00:10:45.523 --> 00:10:46.927 there's community cancer centers,

NOTE Confidence: 0.871056475714286

 $00:10:46.930 \longrightarrow 00:10:49.080$  all designated by the NCI.

NOTE Confidence: 0.871056475714286

00:10:49.080 --> 00:10:51.312 And I tried to find how many surgeons

NOTE Confidence: 0.871056475714286

 $00{:}10{:}51.312 \dashrightarrow 00{:}10{:}52.802$  or medical oncologist radiation

 $00{:}10{:}52.802 \dashrightarrow 00{:}10{:}55.418$  on cologists treat head and neck cancer.

NOTE Confidence: 0.871056475714286

00:10:55.420 --> 00:10:56.836 As you could guess,

NOTE Confidence: 0.871056475714286

 $00:10:56.836 \longrightarrow 00:10:59.350$  it's pretty much impossible to find that.

NOTE Confidence: 0.871056475714286

 $00:10:59.350 \longrightarrow 00:11:01.666$  So the organization of US cancer

NOTE Confidence: 0.871056475714286

 $00:11:01.666 \longrightarrow 00:11:03.638$  cases so diffuse diverse that

NOTE Confidence: 0.871056475714286

00:11:03.638 --> 00:11:06.130 providers have not you as a provider,

NOTE Confidence: 0.871056475714286

 $00:11:06.130 \longrightarrow 00:11:07.130$  if you are a doctor,

NOTE Confidence: 0.871056475714286

 $00:11:07.130 \longrightarrow 00:11:10.232$  have not had to provide accountability

NOTE Confidence: 0.871056475714286

 $00:11:10.232 \longrightarrow 00:11:13.358$  for specific processes or outcomes for

NOTE Confidence: 0.871056475714286

 $00{:}11{:}13.358 \dashrightarrow 00{:}11{:}16.268$  you specifically or at your center.

NOTE Confidence: 0.871056475714286

00:11:16.270 --> 00:11:18.438 OK, so now let's get into some research,

NOTE Confidence: 0.871056475714286

00:11:18.440 --> 00:11:19.792 research and cancer quality

NOTE Confidence: 0.871056475714286

00:11:19.792 --> 00:11:21.144 that that's my background.

NOTE Confidence: 0.871056475714286

 $00{:}11{:}21.150 \dashrightarrow 00{:}11{:}24.900$  So my research journey at Yale

NOTE Confidence: 0.871056475714286

 $00:11:24.900 \longrightarrow 00:11:27.690$  really is about quality of care,

00:11:27.690 --> 00:11:30.090 patient centers, out centered outcomes.

NOTE Confidence: 0.871056475714286

00:11:30.090 --> 00:11:32.730 And what I'm trying to do now is

NOTE Confidence: 0.871056475714286

 $00:11:32.730 \longrightarrow 00:11:35.008$  my version of bench to bedside.

NOTE Confidence: 0.871056475714286

 $00:11:35.010 \longrightarrow 00:11:37.917$  So how do we take the science in outcomes

NOTE Confidence: 0.871056475714286

00:11:37.917 --> 00:11:39.927 research and apply it to patients?

NOTE Confidence: 0.871056475714286

00:11:39.930 --> 00:11:41.410 It's really not just fluff.

NOTE Confidence: 0.871056475714286

 $00:11:41.410 \longrightarrow 00:11:43.660$  I know there's real quote real

NOTE Confidence: 0.871056475714286

 $00:11:43.660 \longrightarrow 00:11:46.186$  scientists out there, basic scientists.

NOTE Confidence: 0.871056475714286

 $00{:}11{:}46.186 \dashrightarrow 00{:}11{:}48.516$  Huge randomized control types

NOTE Confidence: 0.871056475714286

 $00:11:48.516 \longrightarrow 00:11:49.696$  of signs is out there.

NOTE Confidence: 0.871056475714286

 $00{:}11{:}49.700 \dashrightarrow 00{:}11{:}51.744$  I think this is real and going

NOTE Confidence: 0.871056475714286

00:11:51.744 --> 00:11:54.200 to try and convince you of that.

NOTE Confidence: 0.871056475714286

 $00:11:54.200 \longrightarrow 00:11:56.258$  So my foray into patient centered

NOTE Confidence: 0.871056475714286

 $00:11:56.258 \longrightarrow 00:11:58.025$  outcomes research started in fellowship

NOTE Confidence: 0.871056475714286

 $00:11:58.025 \longrightarrow 00:12:00.017$  and these republished in my first

NOTE Confidence: 0.871056475714286

 $00{:}12{:}00.017 \dashrightarrow 00{:}12{:}02.005$  year being here some pretty large

00:12:02.005 --> 00:12:03.865 reviews on thyroid cancer care and

NOTE Confidence: 0.871056475714286

 $00{:}12{:}03.865 \dashrightarrow 00{:}12{:}06.394$  how can we measure and improve thy roid

NOTE Confidence: 0.871056475714286

00:12:06.394 --> 00:12:08.460 cancer care across the country.

NOTE Confidence: 0.871056475714286

 $00:12:08.460 \longrightarrow 00:12:10.518$  And I reviewed all the databases

NOTE Confidence: 0.871056475714286

 $00:12:10.518 \longrightarrow 00:12:11.890$  for thyroid cancer and

NOTE Confidence: 0.82588611625

00:12:11.958 --> 00:12:13.673 published these in thyroid with

NOTE Confidence: 0.82588611625

 $00:12:13.673 \longrightarrow 00:12:16.172$  a nice team of colleagues.

NOTE Confidence: 0.82588611625

00:12:16.172 --> 00:12:18.250 Um, kind of around the country

NOTE Confidence: 0.82588611625

 $00:12:18.250 \longrightarrow 00:12:19.482$  and thyroid cancer care.

NOTE Confidence: 0.82588611625

 $00:12:19.490 \longrightarrow 00:12:20.862$  When I got to Yale, I saw,

NOTE Confidence: 0.82588611625

 $00{:}12{:}20.862 \to 00{:}12{:}21.963$  Oh my God, there's actually a

NOTE Confidence: 0.82588611625

00:12:21.963 --> 00:12:23.169 lot of people doing this stuff.

NOTE Confidence: 0.82588611625

00:12:23.170 --> 00:12:25.879 People like Dan BofA and Ben Judson,

NOTE Confidence: 0.82588611625

 $00{:}12{:}25.880 --> 00{:}12{:}27.590$  who and and Kerry Gross,

NOTE Confidence: 0.82588611625

 $00:12:27.590 \longrightarrow 00:12:29.865$  who were really nationally known

00:12:29.865 --> 00:12:32.380 in quality of cancer care research,

NOTE Confidence: 0.82588611625

 $00{:}12{:}32.380 \rightarrow 00{:}12{:}34.450$  two of them being surgeons through

NOTE Confidence: 0.82588611625

 $00{:}12{:}34.450 \dashrightarrow 00{:}12{:}36.547$  basic and head and neck surgeons.

NOTE Confidence: 0.82588611625

00:12:36.550 --> 00:12:38.046 So what I wanted to do first was,

NOTE Confidence: 0.82588611625

 $00:12:38.050 \longrightarrow 00:12:40.096$  well, how are we doing it, Yale?

NOTE Confidence: 0.82588611625

00:12:40.096 --> 00:12:42.532 I mean, are we delivering quality

NOTE Confidence: 0.82588611625

 $00:12:42.532 \longrightarrow 00:12:44.758$  care at Yale? I had no idea.

NOTE Confidence: 0.82588611625

00:12:44.758 --> 00:12:45.988 Nobody had any idea. Yes.

NOTE Confidence: 0.82588611625

00:12:45.988 --> 00:12:47.732 Many of these are even Dan and Ben.

NOTE Confidence: 0.82588611625

 $00:12:47.740 \longrightarrow 00:12:48.700$  And you asked them,

NOTE Confidence: 0.82588611625

00:12:48.700 --> 00:12:49.900 hey, how's your quality,

NOTE Confidence: 0.82588611625

00:12:49.900 --> 00:12:51.180 how's your divisions quality,

NOTE Confidence: 0.82588611625

 $00:12:51.180 \longrightarrow 00:12:52.848$  what's your margin rate,

NOTE Confidence: 0.82588611625

 $00:12:52.848 \longrightarrow 00:12:54.933$  survival rates for different cancers,

NOTE Confidence: 0.82588611625

 $00:12:54.940 \longrightarrow 00:12:56.504$  nobody had any idea.

NOTE Confidence: 0.82588611625

00:12:56.504 --> 00:12:57.677 So I tried,

 $00:12:57.680 \longrightarrow 00:12:59.416$  I tried to figure this out and I

NOTE Confidence: 0.82588611625

 $00:12:59.416 \longrightarrow 00:13:01.107$  created a head neck scorecard using

NOTE Confidence: 0.82588611625

 $00:13:01.107 \longrightarrow 00:13:03.430$  some of the science and outcomes research.

NOTE Confidence: 0.82588611625

 $00:13:03.430 \longrightarrow 00:13:04.782$  We had structural metrics.

NOTE Confidence: 0.82588611625

 $00:13:04.782 \longrightarrow 00:13:06.500$  We had process metrics, pretreatment,

NOTE Confidence: 0.82588611625

 $00:13:06.500 \longrightarrow 00:13:08.300$  treatment post treatment and then

NOTE Confidence: 0.82588611625

00:13:08.300 --> 00:13:09.888 of course outcomes, oncologic,

NOTE Confidence: 0.82588611625

00:13:09.888 --> 00:13:11.920 functional and patient reported

NOTE Confidence: 0.82588611625

 $00:13:11.920 \longrightarrow 00:13:12.936$  outcome metrics.

NOTE Confidence: 0.82588611625

 $00:13:12.940 \longrightarrow 00:13:14.380$  We created this big scorecard,

NOTE Confidence: 0.82588611625

 $00{:}13{:}14.380 \dashrightarrow 00{:}13{:}16.246$  reviewed all the registry data over.

NOTE Confidence: 0.82588611625

00:13:16.250 --> 00:13:19.160 A few years divided things into

NOTE Confidence: 0.82588611625

 $00:13:19.160 \longrightarrow 00:13:20.714$  surgical outcomes, medical outcomes.

NOTE Confidence: 0.82588611625

00:13:20.714 --> 00:13:23.050 I'm not going into the details of this,

NOTE Confidence: 0.82588611625

 $00:13:23.050 \longrightarrow 00:13:26.442$  and what I found was that it was

 $00:13:26.442 \longrightarrow 00:13:29.650$  actually hard to get the data.

NOTE Confidence: 0.82588611625

00:13:29.650 --> 00:13:30.556 And 2nd,

NOTE Confidence: 0.82588611625

 $00:13:30.556 \longrightarrow 00:13:32.170$  we didn't really have national

NOTE Confidence: 0.82588611625

 $00:13:32.170 \longrightarrow 00:13:34.534$  benchmarks upon which to compare our

NOTE Confidence: 0.82588611625

 $00:13:34.534 \longrightarrow 00:13:36.929$  data with the country as a whole.

NOTE Confidence: 0.82588611625

00:13:36.930 --> 00:13:39.837 We were sort of in the realm of expert

NOTE Confidence: 0.82588611625

00:13:39.837 --> 00:13:41.998 opinion to say how we were doing.

NOTE Confidence: 0.864245848636363

 $00:13:44.500 \longrightarrow 00:13:47.191$  So it was under that idea that I began

NOTE Confidence: 0.864245848636363

 $00:13:47.191 \longrightarrow 00:13:50.013$  the first stage of research in measuring

NOTE Confidence: 0.864245848636363

 $00:13:50.013 \longrightarrow 00:13:52.569$  quality and head and neck cancer.

NOTE Confidence: 0.864245848636363

 $00:13:52.570 \longrightarrow 00:13:54.934$  So these were some of the

NOTE Confidence: 0.864245848636363

 $00:13:54.934 \longrightarrow 00:13:57.089$  areas of interest that I had.

NOTE Confidence: 0.864245848636363

 $00:13:57.090 \longrightarrow 00:13:59.554$  I started first with volumes and outcomes,

NOTE Confidence: 0.864245848636363

 $00{:}13{:}59.560 \dashrightarrow 00{:}14{:}02.452$ a structural metric. I didn't spend

NOTE Confidence: 0.864245848636363

 $00:14:02.452 \longrightarrow 00:14:05.630$  much too much time here because.

NOTE Confidence: 0.864245848636363

 $00:14:05.630 \longrightarrow 00:14:07.085$  It's been published and researched

 $00{:}14{:}07.085 --> 00{:}14{:}08.910$  and sort of known to death.

NOTE Confidence: 0.864245848636363

 $00:14:08.910 \longrightarrow 00:14:12.270$  Higher volumes lead to better outcomes.

NOTE Confidence: 0.864245848636363

00:14:12.270 --> 00:14:15.390 It's been known for years and every aspect,

NOTE Confidence: 0.864245848636363

00:14:15.390 --> 00:14:17.870 probably of medicine definitely surges,

NOTE Confidence: 0.864245848636363

 $00:14:17.870 \longrightarrow 00:14:19.094$  definitely surgery.

NOTE Confidence: 0.864245848636363

00:14:19.094 --> 00:14:22.644 Here's a few studies published 2009, 2010.

NOTE Confidence: 0.864245848636363

 $00:14:22.644 \longrightarrow 00:14:24.338$  And I was surprised to see even

NOTE Confidence: 0.864245848636363

 $00:14:24.338 \longrightarrow 00:14:26.044$  in this last studies, 2022,

NOTE Confidence: 0.864245848636363

 $00{:}14{:}26.044 \dashrightarrow 00{:}14{:}28.314$  people are still publishing the

NOTE Confidence: 0.864245848636363

 $00:14:28.314 \longrightarrow 00:14:30.130$  volume outcomes relationship studies.

NOTE Confidence: 0.864245848636363

 $00{:}14{:}30.130 \dashrightarrow 00{:}14{:}31.470$  That was pretty well known,

NOTE Confidence: 0.864245848636363

 $00{:}14{:}31.470 \dashrightarrow 00{:}14{:}33.510$  but I didn't want to be left in the lurch.

NOTE Confidence: 0.864245848636363

 $00:14:33.510 \longrightarrow 00:14:34.945$  So I looked at this as well.

NOTE Confidence: 0.864245848636363

 $00:14:34.950 \longrightarrow 00:14:36.060$  I said well, how about.

NOTE Confidence: 0.864245848636363

 $00:14:36.060 \longrightarrow 00:14:37.596$  I tried to look at Connecticut.

00:14:37.600 --> 00:14:38.958 Turns out the NCDB won't give you

NOTE Confidence: 0.864245848636363

 $00:14:38.958 \longrightarrow 00:14:40.133$  the data for Connecticut because

NOTE Confidence: 0.864245848636363

 $00:14:40.133 \longrightarrow 00:14:41.503$  there's not that many hospitals

NOTE Confidence: 0.864245848636363

00:14:41.503 --> 00:14:42.853 and you could probably identify

NOTE Confidence: 0.864245848636363

 $00:14:42.853 \longrightarrow 00:14:44.533$  which hospital is which one of you

NOTE Confidence: 0.864245848636363

 $00:14:44.533 \longrightarrow 00:14:46.700$  were trying to do the research.

NOTE Confidence: 0.864245848636363

00:14:46.700 --> 00:14:47.302 For example,

NOTE Confidence: 0.864245848636363

00:14:47.302 --> 00:14:49.108 I don't think there's too many

NOTE Confidence: 0.864245848636363

 $00:14:49.108 \longrightarrow 00:14:51.060$  hospitals in Connecticut that do 200.

NOTE Confidence: 0.864245848636363

00:14:51.060 --> 00:14:53.856 Analytic head and neck cancer cases,

NOTE Confidence: 0.864245848636363

 $00{:}14{:}53.860 \dashrightarrow 00{:}14{:}56.434$  but I was able to get New England data

NOTE Confidence: 0.864245848636363

 $00:14:56.434 \longrightarrow 00:14:59.558$  and so we looked at data for upper

NOTE Confidence: 0.864245848636363

 $00{:}14{:}59.558 \dashrightarrow 00{:}15{:}01.560$  aerodigestive tract cancers and we

NOTE Confidence: 0.864245848636363

00:15:01.560 --> 00:15:04.157 looked at average case volume by hospital,

NOTE Confidence: 0.864245848636363

 $00:15:04.160 \longrightarrow 00:15:08.602$  which was about 26 cases per year with a

NOTE Confidence: 0.864245848636363

 $00{:}15{:}08.602 \dashrightarrow 00{:}15{:}11.920$  range of 1 case to 213 cases per year.

 $00:15:11.920 \longrightarrow 00:15:14.260$  And we did our standard multivariate

NOTE Confidence: 0.864245848636363

00:15:14.337 --> 00:15:16.357 analysis controlling for age,

NOTE Confidence: 0.864245848636363

 $00:15:16.360 \longrightarrow 00:15:17.266$  stage grade,

NOTE Confidence: 0.864245848636363

00:15:17.266 --> 00:15:17.719 comorbidity,

NOTE Confidence: 0.864245848636363

 $00:15:17.719 \longrightarrow 00:15:20.437$  insurance status and we found that

NOTE Confidence: 0.864245848636363

 $00:15:20.437 \longrightarrow 00:15:22.958$  worse survival was associated with.

NOTE Confidence: 0.864245848636363

 $00:15:22.960 \longrightarrow 00:15:24.500$  Treatments at a facility seeing

NOTE Confidence: 0.864245848636363

00:15:24.500 --> 00:15:26.738 less than 50 cases per year compared

NOTE Confidence: 0.864245848636363

 $00:15:26.738 \longrightarrow 00:15:28.328$  to greater than 50 cases,

NOTE Confidence: 0.864245848636363

 $00:15:28.330 \longrightarrow 00:15:31.588$  a pretty pretty impressive hazard ratio.

NOTE Confidence: 0.864245848636363

00:15:31.590 --> 00:15:35.109 Not new, not novel. But I wanted to know.

NOTE Confidence: 0.864245848636363

 $00{:}15{:}35.110 \dashrightarrow 00{:}15{:}36.406$  I'm Canadian. I'm in New England.

NOTE Confidence: 0.864245848636363

 $00:15:36.410 \longrightarrow 00:15:37.718$  How are we doing?

NOTE Confidence: 0.864245848636363

 $00:15:37.718 \longrightarrow 00:15:40.600$  And that that gave me the the answer.

NOTE Confidence: 0.864245848636363

 $00:15:40.600 \longrightarrow 00:15:42.550$  So then I went on to a series of studies

 $00:15:42.608 \longrightarrow 00:15:44.420$  looking at timeliness in cancer care.

NOTE Confidence: 0.864245848636363

 $00:15:44.420 \longrightarrow 00:15:46.400$  So why is timeliness important?

NOTE Confidence: 0.864245848636363 00:15:46.400 --> 00:15:46.899 Well,

NOTE Confidence: 0.864245848636363

00:15:46.899 --> 00:15:49.394 timely diagnosis and treatment is

NOTE Confidence: 0.864245848636363

 $00:15:49.394 \longrightarrow 00:15:51.869$  associated with improved perceived quality

NOTE Confidence: 0.864245848636363

00:15:51.869 --> 00:15:54.299 of care and lower patient anxiety.

NOTE Confidence: 0.864245848636363

 $00:15:54.300 \longrightarrow 00:15:55.488$  So that's important.

NOTE Confidence: 0.864245848636363

 $00:15:55.488 \longrightarrow 00:15:57.864$  And then one could say that

NOTE Confidence: 0.864245848636363

 $00{:}15{:}57.864 \dashrightarrow 00{:}15{:}59.851$  assuming the disease progresses

NOTE Confidence: 0.864245848636363

 $00:15:59.851 \longrightarrow 00:16:01.875$  while waiting for treatment,

NOTE Confidence: 0.864245848636363

00:16:01.880 --> 00:16:04.466 delays may result in more extensive

NOTE Confidence: 0.864245848636363

 $00:16:04.466 \longrightarrow 00:16:06.640$  treatment and possibly increased costs.

NOTE Confidence: 0.864245848636363 00:16:06.640 --> 00:16:07.378 And 3rd, NOTE Confidence: 0.864245848636363

 $00:16:07.378 \longrightarrow 00:16:08.854$  the impact of treatment

NOTE Confidence: 0.864245848636363

 $00:16:08.854 \longrightarrow 00:16:10.720$  timeliness for cancer on true.

NOTE Confidence: 0.864245848636363

 $00:16:10.720 \longrightarrow 00:16:12.832$  Health outcomes like patient

00:16:12.832 --> 00:16:13.888 reported outcomes,

NOTE Confidence: 0.864245848636363

 $00:16:13.890 \longrightarrow 00:16:14.534$  functional outcomes,

NOTE Confidence: 0.864245848636363

 $00{:}16{:}14.534 \dashrightarrow 00{:}16{:}16.788$ even survival a little bit less clear

NOTE Confidence: 0.864245848636363

00:16:16.788 --> 00:16:19.083 and this is going back you know 10 or 15,

NOTE Confidence: 0.864245848636363

 $00:16:19.090 \longrightarrow 00:16:20.818$  about 10 years when I was

NOTE Confidence: 0.864245848636363

 $00:16:20.818 \longrightarrow 00:16:21.970$  doing this research originally.

NOTE Confidence: 0.864245848636363

 $00:16:21.970 \longrightarrow 00:16:24.266$  So we started a number of studies.

NOTE Confidence: 0.864245848636363

 $00{:}16{:}24.270 \dashrightarrow 00{:}16{:}25.910$  First we looked at treatment

NOTE Confidence: 0.864245848636363

00:16:25.910 --> 00:16:27.222 delays in oral cavity,

NOTE Confidence: 0.864245848636363

 $00:16:27.230 \longrightarrow 00:16:30.008$  squamous cell cancer across the country.

NOTE Confidence: 0.864245848636363

 $00:16:30.010 \longrightarrow 00:16:31.672$  We had three objectives in this

NOTE Confidence: 0.864245848636363

 $00:16:31.672 \longrightarrow 00:16:33.455$  study and this study was presented

NOTE Confidence: 0.864245848636363

 $00:16:33.455 \longrightarrow 00:16:35.309$  at the American Head Neck Society

NOTE Confidence: 0.864245848636363

00:16:35.309 --> 00:16:37.153 meeting as one of the best papers

NOTE Confidence: 0.864245848636363

00:16:37.153 --> 00:16:39.090 at the meeting and we looked at

 $00:16:39.090 \longrightarrow 00:16:40.990$  national trends in treatment time.

NOTE Confidence: 0.864245848636363

 $00{:}16{:}40.990 \dashrightarrow 00{:}16{:}43.447$  Tables in patients with oral cavity cancer.

NOTE Confidence: 0.881441882

00:16:43.450 --> 00:16:45.270 So just get some benchmarks.

NOTE Confidence: 0.881441882

 $00:16:45.270 \longrightarrow 00:16:46.710$  How is the country doing?

NOTE Confidence: 0.881441882

00:16:46.710 --> 00:16:48.326 How can we know how we're doing at

NOTE Confidence: 0.881441882

00:16:48.326 --> 00:16:50.228 Yale or you're doing wherever you are?

NOTE Confidence: 0.881441882

 $00:16:50.230 \longrightarrow 00:16:52.886$  If we don't know what a benchmark is,

NOTE Confidence: 0.881441882

 $00:16:52.890 \longrightarrow 00:16:55.218$  then we wanted to identify factors

NOTE Confidence: 0.881441882

 $00:16:55.218 \longrightarrow 00:16:56.770$  associated with extended treatment

NOTE Confidence: 0.881441882

 $00:16:56.826 \longrightarrow 00:16:58.812$  time intervals and then to determine

NOTE Confidence: 0.881441882

 $00:16:58.812 \longrightarrow 00:17:00.650$  if delays in treatment intervals

NOTE Confidence: 0.881441882

 $00:17:00.650 \longrightarrow 00:17:02.446$  were associated with survival.

NOTE Confidence: 0.881441882

 $00:17:02.450 \longrightarrow 00:17:04.487$  These last two were more secondary outcomes.

NOTE Confidence: 0.881441882

 $00:17:04.490 \longrightarrow 00:17:06.373$  Really my main purpose of this was

NOTE Confidence: 0.881441882

 $00:17:06.373 \longrightarrow 00:17:08.710$  just to see how is the country doing.

NOTE Confidence: 0.881441882

 $00{:}17{:}08.710 \dashrightarrow 00{:}17{:}10.840$  So we went through our standard.

 $00{:}17{:}10.840 \dashrightarrow 00{:}17{:}12.576$  Inclusion exclusion criteria of

NOTE Confidence: 0.881441882

00:17:12.576 --> 00:17:14.746 oral cavity squamous cell carcinoma

NOTE Confidence: 0.881441882

00:17:14.746 --> 00:17:17.181 treated over a 14 year period using

NOTE Confidence: 0.881441882

00:17:17.181 --> 00:17:18.848 the National Cancer database and

NOTE Confidence: 0.881441882

 $00:17:18.848 \longrightarrow 00:17:21.032$  ended with about 6000 patients in the

NOTE Confidence: 0.881441882

 $00:17:21.032 \longrightarrow 00:17:23.340$  final cohort with oral cavity cancer.

NOTE Confidence: 0.881441882

 $00:17:23.340 \longrightarrow 00:17:25.860$  These are the time intervals that

NOTE Confidence: 0.881441882

 $00:17:25.935 \longrightarrow 00:17:29.019$  we measured diagnosis to surgery was

NOTE Confidence: 0.881441882

 $00:17:29.019 \longrightarrow 00:17:31.075$  diagnosis to treatment initiation.

NOTE Confidence: 0.881441882

 $00:17:31.080 \longrightarrow 00:17:33.496$  Surgery to RT start was what it says

NOTE Confidence: 0.881441882

 $00:17:33.496 \longrightarrow 00:17:35.877$  and then RT start to RT radiation

NOTE Confidence: 0.881441882

 $00{:}17{:}35.877 \dashrightarrow 00{:}17{:}38.153$  start to radiation end was was at

NOTE Confidence: 0.881441882

 $00{:}17{:}38.153 \dashrightarrow 00{:}17{:}40.444$  its was as it says and then we had

NOTE Confidence: 0.881441882

00:17:40.444 --> 00:17:41.964 total treatment package which is

NOTE Confidence: 0.881441882

 $00:17:41.964 \longrightarrow 00:17:43.944$  from when you started treatment to

 $00:17:43.944 \longrightarrow 00:17:45.704$  ending treatment and then diagnosis

NOTE Confidence: 0.881441882

 $00:17:45.704 \longrightarrow 00:17:46.760$  to treatment ends.

NOTE Confidence: 0.881441882

 $00:17:46.760 \longrightarrow 00:17:49.120$  So these are these are the intervals

NOTE Confidence: 0.881441882

 $00:17:49.120 \longrightarrow 00:17:52.840$  that we used and this is what we found.

NOTE Confidence: 0.881441882

00:17:52.840 --> 00:17:55.087 These are box plots you can hear

NOTE Confidence: 0.881441882

 $00{:}17{:}55.087 \dashrightarrow 00{:}17{:}57.341$  you see huge variation across the

NOTE Confidence: 0.881441882

00:17:57.341 --> 00:17:59.777 country in every single one of

NOTE Confidence: 0.881441882

00:17:59.777 --> 00:18:01.689 these treatment intervals.

NOTE Confidence: 0.881441882

00:18:01.690 --> 00:18:02.730 As a quality researcher,

NOTE Confidence: 0.881441882

 $00:18:02.730 \longrightarrow 00:18:04.290$  if you are when you'll know,

NOTE Confidence: 0.881441882

00:18:04.290 --> 00:18:06.048 or any researcher really would know,

NOTE Confidence: 0.881441882

 $00:18:06.050 \longrightarrow 00:18:08.510$  that the wider these box plots,

NOTE Confidence: 0.881441882

 $00:18:08.510 \longrightarrow 00:18:11.456$  the greater variation and a huge

NOTE Confidence: 0.881441882

 $00:18:11.456 \longrightarrow 00:18:13.420$  opportunity for quality improvement

NOTE Confidence: 0.881441882

 $00:18:13.495 \longrightarrow 00:18:15.589$  is to shrink these box plots.

NOTE Confidence: 0.881441882

 $00:18:15.590 \longrightarrow 00:18:18.430$  We looked at survival.

00:18:18.430 --> 00:18:19.666 Again, secondary outcome,

NOTE Confidence: 0.881441882

 $00{:}18{:}19.666 \dashrightarrow 00{:}18{:}21.726$  probably not the best database

NOTE Confidence: 0.881441882

 $00:18:21.726 \longrightarrow 00:18:23.389$  to look at survival.

NOTE Confidence: 0.881441882

 $00:18:23.390 \longrightarrow 00:18:25.766$  Plus we only had overall survival.

NOTE Confidence: 0.881441882

 $00:18:25.770 \longrightarrow 00:18:27.756$  What we found was that radiation

NOTE Confidence: 0.881441882

 $00{:}18{:}27.756 \dashrightarrow 00{:}18{:}30.079$  duration if you were in the median

NOTE Confidence: 0.881441882

00:18:30.079 --> 00:18:32.263 or below versus the 4th quartile was

NOTE Confidence: 0.881441882

00:18:32.329 --> 00:18:35.139 significantly associated with worse survival,

NOTE Confidence: 0.881441882

 $00{:}18{:}35.140 \dashrightarrow 00{:}18{:}36.950$  meaning treatment breaks during radiation.

NOTE Confidence: 0.881441882

00:18:36.950 --> 00:18:37.614 Not new,

NOTE Confidence: 0.881441882

 $00:18:37.614 \longrightarrow 00:18:40.270$  not novel but but that's what we found.

NOTE Confidence: 0.881441882

 $00{:}18{:}40.270 \dashrightarrow 00{:}18{:}41.656$  And look at this survival curve.

NOTE Confidence: 0.881441882

 $00{:}18{:}41.660 {\: --> \:} 00{:}18{:}43.516$  This is RT duration.

NOTE Confidence: 0.881441882

00:18:43.516 --> 00:18:46.574 You compare this to the ECOG 3311

NOTE Confidence: 0.881441882

 $00:18:46.574 \longrightarrow 00:18:48.776$  and the keynote O48 survival curves,

 $00:18:48.780 \longrightarrow 00:18:50.120$  which I flashed up there.

NOTE Confidence: 0.881441882

 $00:18:50.120 \dashrightarrow 00:18:53.369$  I think this is a little bit more impressive.

NOTE Confidence: 0.881441882

00:18:53.370 --> 00:18:55.926 Not as great a study but so many

NOTE Confidence: 0.881441882

 $00:18:55.926 \longrightarrow 00:18:58.750$  more problems with it but I just do

NOTE Confidence: 0.881441882

 $00:18:58.832 \longrightarrow 00:19:01.296$  that for a visualization and these

NOTE Confidence: 0.881441882

00:19:01.296 --> 00:19:03.432 were this is what I thought was more

NOTE Confidence: 0.881441882

 $00:19:03.432 \longrightarrow 00:19:06.036$  more interesting though was the now

NOTE Confidence: 0.881441882

 $00:19:06.036 \longrightarrow 00:19:08.460$  finally we had time intervals across

NOTE Confidence: 0.881441882

 $00{:}19{:}08.460 \dashrightarrow 00{:}19{:}10.901$  the country at NCNC DBCC accredited

NOTE Confidence: 0.881441882

 $00:19:10.901 \longrightarrow 00:19:13.589$  hospitals for for median times to

NOTE Confidence: 0.881441882

 $00:19:13.589 \longrightarrow 00:19:16.990$  treatment and and this is what we're at.

NOTE Confidence: 0.881441882

 $00:19:16.990 \longrightarrow 00:19:18.646$  We did this a lot and we did

NOTE Confidence: 0.881441882

 $00:19:18.646 \longrightarrow 00:19:19.830$  it for oral cavity.

NOTE Confidence: 0.881441882

00:19:19.830 --> 00:19:22.098 We did it for oral pharynx

NOTE Confidence: 0.881441882

 $00:19:22.098 \longrightarrow 00:19:23.232$  treated with surgery.

NOTE Confidence: 0.881441882

 $00:19:23.240 \longrightarrow 00:19:26.800$  We did it with oropharynx

 $00:19:26.800 \longrightarrow 00:19:28.224$  treated nonsurgically.

NOTE Confidence: 0.881441882

 $00:19:28.230 \longrightarrow 00:19:30.696$  We did it for hypopharynx cancer.

NOTE Confidence: 0.881441882

 $00:19:30.700 \longrightarrow 00:19:33.550$  Did it for salivary cancer and

NOTE Confidence: 0.881441882

 $00:19:33.550 \longrightarrow 00:19:34.975$  we established benchmarks.

NOTE Confidence: 0.881441882

 $00:19:34.980 \dashrightarrow 00:19:37.356$  We we had box plots for all of these.

NOTE Confidence: 0.881441882

 $00:19:37.360 \longrightarrow 00:19:38.575$  We looked at survival outcomes

NOTE Confidence: 0.881441882

 $00:19:38.575 \longrightarrow 00:19:39.547$  for all of these.

NOTE Confidence: 0.881441882

00:19:39.550 --> 00:19:41.574 So I told you about oral cavity already.

NOTE Confidence: 0.881441882

00:19:41.580 --> 00:19:42.600 Here's oral pharynx,

NOTE Confidence: 0.881441882

 $00:19:42.600 \longrightarrow 00:19:44.980$  look at the the wide variety in

NOTE Confidence: 0.762733559545455

 $00:19:45.051 \longrightarrow 00:19:47.886$  the whole huge variation in treatment for

NOTE Confidence: 0.762733559545455

 $00:19:47.886 \longrightarrow 00:19:50.420$  oral fairness cancer treated surgically.

NOTE Confidence: 0.762733559545455

00:19:50.420 --> 00:19:52.164 Here's a survival curve.

NOTE Confidence: 0.762733559545455

 $00:19:52.164 \longrightarrow 00:19:54.448$  This was diagnosis to treatment end.

NOTE Confidence: 0.762733559545455

 $00:19:54.448 \longrightarrow 00:19:56.916$  We're seeing big differences if you were

 $00:19:56.916 \longrightarrow 00:19:58.988$  delayed versus not delayed and this was

NOTE Confidence: 0.762733559545455

 $00:19:58.988 \longrightarrow 00:20:01.430$  the same for oral pharynx cancer treated.

NOTE Confidence: 0.762733559545455

00:20:01.430 --> 00:20:02.969 Nonsurgically multivariate analysis

NOTE Confidence: 0.762733559545455

 $00:20:02.969 \longrightarrow 00:20:06.047$  controlling for all the standard factors

NOTE Confidence: 0.762733559545455

 $00:20:06.047 \longrightarrow 00:20:08.788$  that we always control for hypopharynx,

NOTE Confidence: 0.762733559545455

 $00{:}20{:}08.790 \dashrightarrow 00{:}20{:}11.346$  cancer, salivary cancer, it goes on.

NOTE Confidence: 0.762733559545455

 $00:20:11.350 \longrightarrow 00:20:14.302$  So my point here is that analysis of

NOTE Confidence: 0.762733559545455

 $00:20:14.302 \longrightarrow 00:20:17.170$  variation in treatment time intervals really

NOTE Confidence: 0.762733559545455

 $00:20:17.170 \longrightarrow 00:20:20.930$  can identify opportunities for us to improve.

NOTE Confidence: 0.762733559545455

 $00:20:20.930 \longrightarrow 00:20:22.694$  2nd, we found that there's a number

NOTE Confidence: 0.762733559545455

 $00{:}20{:}22.694 \dashrightarrow 00{:}20{:}24.029$  of factors associated with delays.

NOTE Confidence: 0.762733559545455

00:20:24.030 --> 00:20:27.292 I didn't show you that that data here,

NOTE Confidence: 0.762733559545455

 $00{:}20{:}27.292 \dashrightarrow 00{:}20{:}30.580$  but these can also are are often related

NOTE Confidence: 0.762733559545455

 $00:20:30.666 \longrightarrow 00:20:33.486$  to access and coordination of care.

NOTE Confidence: 0.762733559545455

 $00:20:33.490 \longrightarrow 00:20:35.810$  And so the third finding here was that

NOTE Confidence: 0.762733559545455

 $00:20:35.810 \longrightarrow 00:20:38.384$  every effort should be made to prevent

00:20:38.384 --> 00:20:39.928 prevent radiation treatment breaks,

NOTE Confidence: 0.762733559545455

 $00:20:39.930 \longrightarrow 00:20:41.778$  because in every single one of those

NOTE Confidence: 0.762733559545455

 $00{:}20{:}41.778 \dashrightarrow 00{:}20{:}43.647$  there was a significant association

NOTE Confidence: 0.762733559545455

 $00:20:43.647 \longrightarrow 00:20:45.168$  with overall survival,

NOTE Confidence: 0.762733559545455

00:20:45.170 --> 00:20:47.600 meaning worse if you had treatment

NOTE Confidence: 0.762733559545455

 $00:20:47.600 \longrightarrow 00:20:49.220$  breaks or extended radiation.

NOTE Confidence: 0.762733559545455

 $00:20:49.220 \longrightarrow 00:20:50.813$  And this matters to patients, too.

NOTE Confidence: 0.762733559545455

00:20:50.813 --> 00:20:54.117 Here's a patient with an oral cavity cancer

NOTE Confidence: 0.762733559545455

 $00{:}20{:}54.117 \dashrightarrow 00{:}20{:}56.678$  diagnosed elsewhere delayed getting in,

NOTE Confidence: 0.762733559545455

00:20:56.680 --> 00:20:58.498 starting with an oral cavity cancer,

NOTE Confidence: 0.762733559545455

 $00:20:58.500 \longrightarrow 00:20:59.316$  but eventually,

NOTE Confidence: 0.762733559545455

 $00:20:59.316 \longrightarrow 00:21:01.356$  when he came to treatment,

NOTE Confidence: 0.762733559545455

00:21:01.360 --> 00:21:03.868 extending through his skin,

NOTE Confidence: 0.762733559545455

 $00:21:03.868 \longrightarrow 00:21:05.749$  through the mandible.

NOTE Confidence: 0.762733559545455

 $00:21:05.750 \longrightarrow 00:21:07.037$  Original CT scan,

00:21:07.037 --> 00:21:10.040 no mandible invasion and here we are

NOTE Confidence: 0.762733559545455

00:21:10.120 --> 00:21:12.980 taking this cancer out mandibulectomy

NOTE Confidence: 0.762733559545455

00:21:12.980 --> 00:21:15.840 composite SO4 mouth mandible skin,

NOTE Confidence: 0.762733559545455

00:21:15.840 --> 00:21:17.985 using the fibula to reconstruct

NOTE Confidence: 0.762733559545455

 $00:21:17.985 \longrightarrow 00:21:21.051$  with a plate and using the skin

NOTE Confidence: 0.762733559545455

 $00:21:21.051 \longrightarrow 00:21:23.553$  on the outside to reconstruct so.

NOTE Confidence: 0.762733559545455

 $00:21:23.560 \longrightarrow 00:21:26.248$  Cancer is out, but at what cost?

NOTE Confidence: 0.762733559545455

00:21:26.250 --> 00:21:28.520 Because of delay in diagnosis,

NOTE Confidence: 0.762733559545455

 $00:21:28.520 \longrightarrow 00:21:29.450$  delay in treatment,

NOTE Confidence: 0.762733559545455

 $00:21:29.450 \longrightarrow 00:21:31.310$  delay in diagnosis is a whole

NOTE Confidence: 0.762733559545455

 $00:21:31.310 \longrightarrow 00:21:32.300$  other discussion,

NOTE Confidence: 0.762733559545455

 $00:21:32.300 \longrightarrow 00:21:34.496$  which I don't talk about and

NOTE Confidence: 0.762733559545455

 $00:21:34.500 \longrightarrow 00:21:35.328$  I don't really study.

NOTE Confidence: 0.896226884545455

 $00:21:38.650 \longrightarrow 00:21:40.815$  The Commission on cancer has

NOTE Confidence: 0.896226884545455

00:21:40.815 --> 00:21:43.500 just in March of this year,

NOTE Confidence: 0.896226884545455

 $00{:}21{:}43.500 \dashrightarrow 00{:}21{:}45.456$  very recently finally put in their

00:21:45.456 --> 00:21:47.553 first head and neck oncology quality

NOTE Confidence: 0.896226884545455

00:21:47.553 --> 00:21:50.094 metric that's going to be measured at

NOTE Confidence: 0.896226884545455

00:21:50.094 --> 00:21:52.090 every single ACS accredited hospital

NOTE Confidence: 0.896226884545455

 $00:21:52.090 \longrightarrow 00:21:54.935$  across the country and that's time to

NOTE Confidence: 0.896226884545455

 $00:21:54.935 \longrightarrow 00:21:57.360$  initiation of post operative radiation.

NOTE Confidence: 0.896226884545455

 $00:21:57.360 \longrightarrow 00:21:58.995$  This my study didn't really

NOTE Confidence: 0.896226884545455

 $00:21:58.995 \longrightarrow 00:22:00.630$  show much of an association.

NOTE Confidence: 0.896226884545455

 $00{:}22{:}00.630 \dashrightarrow 00{:}22{:}02.592$  There's tons of studies focused using

NOTE Confidence: 0.896226884545455

 $00{:}22{:}02.592 \dashrightarrow 00{:}22{:}04.577$  that as their primary outcome that

NOTE Confidence: 0.896226884545455

 $00:22:04.577 \longrightarrow 00:22:06.602$  have shown that 42 weeks, 42 days.

NOTE Confidence: 0.896226884545455

00:22:06.602 --> 00:22:10.064 Is a big cut off to affect survival to start

NOTE Confidence: 0.896226884545455

 $00:22:10.064 \longrightarrow 00:22:13.340$  radiation after head and neck cancer surgery.

NOTE Confidence: 0.896226884545455

 $00{:}22{:}13.340 \longrightarrow 00{:}22{:}14.761$  So this is a new quality metric

NOTE Confidence: 0.896226884545455

00:22:14.761 --> 00:22:16.210 that we're all being measured on,

NOTE Confidence: 0.896226884545455

 $00:22:16.210 \longrightarrow 00:22:18.973$  just so you know. OK.

00:22:18.973 --> 00:22:21.652 So then did volume outcomes,

NOTE Confidence: 0.896226884545455

 $00:22:21.652 \longrightarrow 00:22:22.540$  did timeliness.

NOTE Confidence: 0.896226884545455

00:22:22.540 --> 00:22:24.916 So then I wanted to look at surgical quality.

NOTE Confidence: 0.896226884545455

 $00:22:24.920 \longrightarrow 00:22:25.740$  How do we measure that?

NOTE Confidence: 0.896226884545455

00:22:25.740 --> 00:22:26.840 How do we benchmark this?

NOTE Confidence: 0.896226884545455

00:22:26.840 --> 00:22:29.440 How do I know if I'm doing a good job?

NOTE Confidence: 0.896226884545455

 $00:22:29.440 \longrightarrow 00:22:30.560$  And so we started looking

NOTE Confidence: 0.896226884545455

 $00:22:30.560 \longrightarrow 00:22:31.680$  at a number of things.

NOTE Confidence: 0.896226884545455

 $00:22:31.680 \longrightarrow 00:22:32.825$  So this was Ben Judson

NOTE Confidence: 0.896226884545455

 $00:22:32.825 \longrightarrow 00:22:34.300$  was a lead author on this,

NOTE Confidence: 0.896226884545455

 $00{:}22{:}34.300 \longrightarrow 00{:}22{:}35.602$  but our whole team was involved

NOTE Confidence: 0.896226884545455

 $00:22:35.602 \longrightarrow 00:22:38.501$  where we look, tried to identify.

NOTE Confidence: 0.896226884545455

 $00:22:38.501 \longrightarrow 00:22:42.236$  Thresholds for lymph node yields.

NOTE Confidence: 0.896226884545455

 $00:22:42.240 \longrightarrow 00:22:43.444$  For oral cavity cancer,

NOTE Confidence: 0.896226884545455

 $00:22:43.444 \longrightarrow 00:22:45.969$  so our objective in this study was to

NOTE Confidence: 0.896226884545455

 $00:22:45.969 \longrightarrow 00:22:47.614$  determine lymph node yield threshold

00:22:47.614 --> 00:22:49.424 and oral cavity squamous cell

NOTE Confidence: 0.896226884545455

 $00:22:49.424 \longrightarrow 00:22:51.334$  cancer that might impact survival.

NOTE Confidence: 0.896226884545455

 $00:22:51.340 \longrightarrow 00:22:54.553$  This was a very interesting study because

NOTE Confidence: 0.896226884545455

 $00:22:54.553 \longrightarrow 00:22:57.934$  we used the NCDB to establish those

NOTE Confidence: 0.896226884545455

 $00:22:57.934 \longrightarrow 00:23:01.320$  yields and then validated it in SEER.

NOTE Confidence: 0.896226884545455

 $00:23:01.320 \longrightarrow 00:23:01.834$  And.

NOTE Confidence: 0.896226884545455

 $00:23:01.834 \longrightarrow 00:23:03.890$  To find the threshold,

NOTE Confidence: 0.896226884545455

 $00:23:03.890 \longrightarrow 00:23:07.298$  we looked at the clinically end zero oral

NOTE Confidence: 0.896226884545455

00:23:07.298 --> 00:23:09.800 cavity cancers versus the clinically

NOTE Confidence: 0.896226884545455

 $00:23:09.800 \longrightarrow 00:23:12.415$  and positive oral cavity cancers.

NOTE Confidence: 0.896226884545455

 $00:23:12.420 \longrightarrow 00:23:14.650$  And.

NOTE Confidence: 0.896226884545455

 $00:23:14.650 \longrightarrow 00:23:17.638$  Looked at different.

NOTE Confidence: 0.896226884545455

00:23:17.640 --> 00:23:20.232 Hazard ratios based on number of

NOTE Confidence: 0.896226884545455

 $00{:}23{:}20.232 \dashrightarrow 00{:}23{:}23.274$  the lymph node yield basically and

NOTE Confidence: 0.896226884545455

 $00:23:23.274 \longrightarrow 00:23:25.288$  after regressive statistical models,

 $00:23:25.288 \longrightarrow 00:23:26.864$  we basically eventually found

NOTE Confidence: 0.896226884545455

 $00:23:26.864 \longrightarrow 00:23:29.078$  that there was a difference at

NOTE Confidence: 0.896226884545455

 $00:23:29.078 \longrightarrow 00:23:31.073$  16 lymph nodes for N0 neck N,

NOTE Confidence: 0.896226884545455

 $00:23:31.080 \longrightarrow 00:23:33.786$  0 lymph node yields and 26

NOTE Confidence: 0.896226884545455

 $00:23:33.786 \longrightarrow 00:23:36.240$  for and positive lymph nodes.

NOTE Confidence: 0.896226884545455

00:23:36.240 --> 00:23:39.096 And after adjusting for all sorts of factors,

NOTE Confidence: 0.896226884545455

 $00:23:39.100 \longrightarrow 00:23:40.500$  we found a survival benefit,

NOTE Confidence: 0.896226884545455

 $00:23:40.500 \longrightarrow 00:23:42.400$  overall survival and cause specific

NOTE Confidence: 0.896226884545455

 $00{:}23{:}42.400 \dashrightarrow 00{:}23{:}44.780$  survival based on lymph node yields.

NOTE Confidence: 0.896226884545455

 $00:23:44.780 \longrightarrow 00:23:46.448$  This is using SEER data so

NOTE Confidence: 0.896226884545455

00:23:46.448 --> 00:23:47.560 we finally had disease.

NOTE Confidence: 0.896226884545455

00:23:47.560 --> 00:23:48.192 Specific survival,

NOTE Confidence: 0.896226884545455

00:23:48.192 --> 00:23:50.088 which we don't have in NCDB.

NOTE Confidence: 0.896226884545455 00:23:50.090 --> 00:23:50.676 So again, NOTE Confidence: 0.896226884545455

00:23:50.676 --> 00:23:52.727 if you look at these survival curves,

NOTE Confidence: 0.896226884545455

 $00:23:52.730 \longrightarrow 00:23:55.970$  I think they're quite.

 $00:23:55.970 \longrightarrow 00:23:58.430$  Not provoking.

NOTE Confidence: 0.896226884545455

 $00:23:58.430 \longrightarrow 00:24:00.460$  This study came out at the exact

NOTE Confidence: 0.896226884545455

 $00{:}24{:}00.460 \dashrightarrow 00{:}24{:}02.285$  same may be like a three months

NOTE Confidence: 0.896226884545455

 $00:24:02.285 \longrightarrow 00:24:04.061$  after our study and this looked

NOTE Confidence: 0.896226884545455

 $00:24:04.061 \longrightarrow 00:24:06.329$  at all of head neck cancer and it

NOTE Confidence: 0.896226884545455

 $00:24:06.329 \longrightarrow 00:24:07.990$  looked at used 18 lymph nodes,

NOTE Confidence: 0.896226884545455

00:24:07.990 --> 00:24:10.400 so kind of an arbitrary number they picked.

NOTE Confidence: 0.896226884545455

 $00:24:10.400 \longrightarrow 00:24:12.360$  To be honest based on some other

NOTE Confidence: 0.896226884545455

 $00:24:12.360 \longrightarrow 00:24:13.507$  single institution studies they

NOTE Confidence: 0.896226884545455

 $00{:}24{:}13.507 \dashrightarrow 00{:}24{:}14.787$  didn't use the same statistical

NOTE Confidence: 0.896226884545455

 $00:24:14.787 \longrightarrow 00:24:16.518$  rigor that we use in oral cavity

NOTE Confidence: 0.896226884545455

 $00:24:16.518 \longrightarrow 00:24:18.044$  but it applied to all head neck

NOTE Confidence: 0.896226884545455

 $00{:}24{:}18.050 \dashrightarrow 00{:}24{:}20.094$  cancer and so it was more applicable

NOTE Confidence: 0.896226884545455

00:24:20.094 --> 00:24:22.390 in 18 has become the big number

NOTE Confidence: 0.896226884545455

 $00:24:22.390 \longrightarrow 00:24:24.412$  for head and neck cancer partly

 $00:24:24.480 \longrightarrow 00:24:26.388$  based on this study but again.

NOTE Confidence: 0.896226884545455

 $00{:}24{:}26.390 \dashrightarrow 00{:}24{:}28.566$  Think what you will just have a #18

NOTE Confidence: 0.896226884545455

 $00:24:28.566 \longrightarrow 00:24:32.329$  lymph nodes. Big survival difference.

NOTE Confidence: 0.896226884545455

 $00:24:32.330 \longrightarrow 00:24:33.320$  So that's lymph node yield.

NOTE Confidence: 0.896226884545455

 $00:24:33.320 \longrightarrow 00:24:35.091$  Then we wanted to look at positive

NOTE Confidence: 0.896226884545455

 $00:24:35.091 \longrightarrow 00:24:36.636$  margin rates and this is another

NOTE Confidence: 0.896226884545455

 $00:24:36.636 \longrightarrow 00:24:38.094$  study that we did trying to

NOTE Confidence: 0.896226884545455

00:24:38.094 --> 00:24:39.526 again figure out positive margin

NOTE Confidence: 0.896226884545455

 $00:24:39.526 \longrightarrow 00:24:41.224$  rates in this country for oral

NOTE Confidence: 0.89442036625

00:24:41.230 --> 00:24:42.902 cavity, squamous cell cancer,

NOTE Confidence: 0.89442036625

 $00:24:42.902 \longrightarrow 00:24:44.574$  what is the baseline?

NOTE Confidence: 0.89442036625

 $00:24:44.580 \longrightarrow 00:24:46.776$  And again we found incidence of

NOTE Confidence: 0.89442036625

00:24:46.776 --> 00:24:48.934 positive margins based on this study

NOTE Confidence: 0.89442036625

 $00:24:48.934 \longrightarrow 00:24:51.446$  and we did look at the volume outcomes

NOTE Confidence: 0.89442036625

 $00:24:51.519 \longrightarrow 00:24:53.959$  relationship and the facility setting.

NOTE Confidence: 0.89442036625

 $00{:}24{:}53.960 \dashrightarrow 00{:}24{:}55.290$  And if you were to a cademic center,

00:24:55.290 --> 00:24:57.245 your risk of having positive

NOTE Confidence: 0.89442036625

 $00{:}24{:}57.245 \dashrightarrow 00{:}24{:}58.809$  margins was significantly less.

NOTE Confidence: 0.89442036625

 $00:24:58.810 \longrightarrow 00:25:01.170$  20 cases seem to be a good threshold,

NOTE Confidence: 0.89442036625

 $00:25:01.170 \longrightarrow 00:25:02.778$  but again you see a lot of variety.

NOTE Confidence: 0.89442036625

 $00:25:02.780 \longrightarrow 00:25:04.956$  Variation across the country.

NOTE Confidence: 0.89442036625

 $00:25:04.956 \longrightarrow 00:25:08.980$  We also looked at transoral robotic surgery.

NOTE Confidence: 0.89442036625

 $00:25:08.980 \longrightarrow 00:25:12.018$  So the transoral robotic surgery is FDA

NOTE Confidence: 0.89442036625

 $00:25:12.018 \longrightarrow 00:25:14.276$  approved for T1T2 oropharynx cancers.

NOTE Confidence: 0.89442036625

00:25:14.276 --> 00:25:18.119 And what I wanted to know was well

NOTE Confidence: 0.89442036625

 $00{:}25{:}18.119 \dashrightarrow 00{:}25{:}21.203$  what is the positive margin rate

NOTE Confidence: 0.89442036625

 $00:25:21.203 \longrightarrow 00:25:23.250$  nationally and then what factors are

NOTE Confidence: 0.89442036625

 $00:25:23.250 \longrightarrow 00:25:24.474$  associated with positive margin.

NOTE Confidence: 0.89442036625

 $00:25:24.480 \longrightarrow 00:25:26.250$  So we did our standard inclusion

NOTE Confidence: 0.89442036625

 $00:25:26.250 \longrightarrow 00:25:26.840$  exclusion criteria.

NOTE Confidence: 0.89442036625

 $00:25:26.840 \longrightarrow 00:25:29.060$  We found about 2600 patients who

 $00:25:29.060 \longrightarrow 00:25:31.436$  had a transoral robotic surgery for

NOTE Confidence: 0.89442036625

 $00{:}25{:}31.436 \dashrightarrow 00{:}25{:}33.076$ oropharynx squamous cell carcinoma

NOTE Confidence: 0.89442036625

 $00:25:33.076 \longrightarrow 00:25:35.649$  and what did we find overall.

NOTE Confidence: 0.89442036625

00:25:35.650 --> 00:25:38.121 A 17% positive margin rate in this

NOTE Confidence: 0.89442036625

 $00:25:38.121 \longrightarrow 00:25:40.478$  country and it varied by T stage

NOTE Confidence: 0.86582888

 $00:25:42.950 \longrightarrow 00:25:44.539$  T1T2T3T4. You can see that all here.

NOTE Confidence: 0.82068897

 $00:25:46.700 \longrightarrow 00:25:47.980$  We also found factors

NOTE Confidence: 0.82068897

00:25:47.980 --> 00:25:49.260 associated with positive margin,

NOTE Confidence: 0.82068897

 $00{:}25{:}49.260 {\:{\mbox{--}}}{>}\ 00{:}25{:}50.886$  specifically Lymphovascular invasion,

NOTE Confidence: 0.82068897

00:25:50.886 --> 00:25:53.596 T classification and again facility

NOTE Confidence: 0.82068897

 $00{:}25{:}53.596 \dashrightarrow 00{:}25{:}56.285$  volume of patients treated at high

NOTE Confidence: 0.82068897

 $00:25:56.285 \longrightarrow 00:25:58.990$  volume centers were less likely to have.

NOTE Confidence: 0.82068897

00:25:58.990 --> 00:25:59.940 Positive margin,

NOTE Confidence: 0.82068897

 $00:25:59.940 \longrightarrow 00:26:02.790$  you can see academic centers versus

NOTE Confidence: 0.82068897

 $00:26:02.790 \longrightarrow 00:26:05.970$  non academic and high volume versus

NOTE Confidence: 0.82068897

 $00{:}26{:}05.970 \dashrightarrow 00{:}26{:}08.050$  high volume versus low volume.

 $00:26:08.050 \longrightarrow 00:26:10.922$  So in the, this is interesting because

NOTE Confidence: 0.82068897

 $00{:}26{:}10.922 \dashrightarrow 00{:}26{:}13.190$  in the year since FDA approval,

NOTE Confidence: 0.82068897

 $00:26:13.190 \longrightarrow 00:26:14.870$  what we found is that the positive

NOTE Confidence: 0.82068897

 $00:26:14.870 \longrightarrow 00:26:16.478$  margin rate for towards the 17%.

NOTE Confidence: 0.82068897

00:26:16.478 --> 00:26:19.845 But if you look at the ECOG 3311 trial,

NOTE Confidence: 0.82068897

 $00:26:19.845 \longrightarrow 00:26:22.370$  the positive margin rate of

NOTE Confidence: 0.82068897

 $00:26:22.370 \longrightarrow 00:26:24.805$  credentials academic surgeons was 3.3%.

NOTE Confidence: 0.82068897

 $00{:}26{:}24.805 \longrightarrow 00{:}26{:}27.710$  And if you look at pooled data

NOTE Confidence: 0.82068897

00:26:27.710 --> 00:26:30.788 from 3 clinical trials looking at

NOTE Confidence: 0.82068897

 $00{:}26{:}30.788 \rightarrow 00{:}26{:}32.184$  academic single institution studies

NOTE Confidence: 0.82068897

00:26:32.184 --> 00:26:34.050 or even a systematic reviews,

NOTE Confidence: 0.82068897

 $00:26:34.050 \longrightarrow 00:26:35.978$  we're looking at significantly

NOTE Confidence: 0.82068897

 $00{:}26{:}35.978 \dashrightarrow 00{:}26{:}38.388$  less than the real world.

NOTE Confidence: 0.82068897

00:26:38.390 --> 00:26:39.479 Positive margin rate,

NOTE Confidence: 0.82068897

 $00:26:39.479 \longrightarrow 00:26:42.020$  so there is and then this study

00:26:42.092 --> 00:26:44.532 also showed a linear association

NOTE Confidence: 0.82068897

 $00{:}26{:}44.532 \dashrightarrow 00{:}26{:}46.976$  between positive margins with T32

NOTE Confidence: 0.82068897

 $00:26:46.976 \longrightarrow 00:26:49.738$  and T4 tumors greater than 28%.

NOTE Confidence: 0.82068897

 $00{:}26{:}49.738 \dashrightarrow 00{:}26{:}51.964$  So these patients are the ones that

NOTE Confidence: 0.82068897

 $00:26:51.964 \longrightarrow 00:26:54.200$  are going on to chemotherapy and

NOTE Confidence: 0.82068897

00:26:54.200 --> 00:26:56.492 radiation and probably had no benefit

NOTE Confidence: 0.82068897

 $00{:}26{:}56.562 \dashrightarrow 00{:}26{:}58.917$  from transoral robotic surgery based

NOTE Confidence: 0.82068897

 $00:26:58.917 \longrightarrow 00:27:01.272$  on their current treatment paradigms.

NOTE Confidence: 0.82068897

 $00{:}27{:}01.280 \dashrightarrow 00{:}27{:}02.756$  We did this for parotid cancer,

NOTE Confidence: 0.82068897

 $00:27:02.760 \longrightarrow 00:27:04.836$  I won't get into those details.

NOTE Confidence: 0.82068897

 $00{:}27{:}04.840 \dashrightarrow 00{:}27{:}07.282$  And then this is a interesting

NOTE Confidence: 0.82068897

 $00:27:07.282 \longrightarrow 00:27:09.413$  study that combined margin rates

NOTE Confidence: 0.82068897

 $00:27:09.413 \longrightarrow 00:27:11.945$  nationally and lymph node yields and

NOTE Confidence: 0.82068897

 $00:27:11.945 \longrightarrow 00:27:14.856$  what they looked at was treatment at

NOTE Confidence: 0.82068897

 $00:27:14.856 \longrightarrow 00:27:17.214$  the try identify that the treatment

NOTE Confidence: 0.82068897

 $00{:}27{:}17.220 \dashrightarrow 00{:}27{:}19.140$  at hospitals that attain a high

 $00:27:19.140 \longrightarrow 00:27:20.420$  rate of negative margins.

NOTE Confidence: 0.82068897

00:27:20.420 --> 00:27:22.204 So if you're if you have if you're

NOTE Confidence: 0.82068897

 $00:27:22.204 \longrightarrow 00:27:23.858$  a hospital that's that's high rate

NOTE Confidence: 0.82068897

 $00:27:23.858 \longrightarrow 00:27:25.298$  of negative margins and lymph

NOTE Confidence: 0.82068897

 $00:27:25.298 \longrightarrow 00:27:26.777$  node yields of more than 18.

NOTE Confidence: 0.82068897

 $00:27:26.780 \longrightarrow 00:27:28.682$  They found that there is a

NOTE Confidence: 0.82068897

00:27:28.682 --> 00:27:29.633 significant association with

NOTE Confidence: 0.82068897

 $00{:}27{:}29.633 \longrightarrow 00{:}27{:}30.999$  improved survival if you did.

NOTE Confidence: 0.82068897

 $00{:}27{:}31.000 \dashrightarrow 00{:}27{:}33.262$  Both of those and these predicted

NOTE Confidence: 0.82068897

 $00:27:33.262 \longrightarrow 00:27:35.429$  outcomes independent of those generally

NOTE Confidence: 0.82068897

 $00{:}27{:}35.429 \dashrightarrow 00{:}27{:}37.223$  modifiable characteristics including

NOTE Confidence: 0.82068897

 $00:27:37.223 \longrightarrow 00:27:39.615$  the volume outcomes relationship.

NOTE Confidence: 0.82068897

 $00{:}27{:}39.620 \dashrightarrow 00{:}27{:}42.608$  These were independents of volume of

NOTE Confidence: 0.82068897

 $00:27:42.608 \longrightarrow 00:27:45.655$  the hospital but only 105 hospitals

NOTE Confidence: 0.82068897

 $00:27:45.655 \longrightarrow 00:27:50.095$  out of 1000 in in the country achieve

 $00:27:50.095 \longrightarrow 00:27:56.650$  negative margins in 90% or more patients and.

NOTE Confidence: 0.82068897

 $00{:}27{:}56.650 \dashrightarrow 00{:}27{:}58.379$  If you look at lymph node yields

NOTE Confidence: 0.82068897

 $00:27:58.379 \longrightarrow 00:27:59.330$  of greater than 18,

NOTE Confidence: 0.82068897

00:27:59.330 --> 00:28:04.632 only 199 hospitals out of 1000 consistently

NOTE Confidence: 0.82068897

00:28:04.632 --> 00:28:07.688 achieved lymph node yields of 18 or more,

NOTE Confidence: 0.82068897

 $00:28:07.690 \longrightarrow 00:28:09.730$  meaning in an 80% or more of that's the case.

NOTE Confidence: 0.82068897

 $00:28:09.730 \longrightarrow 00:28:11.210$  We're not looking for 100%,

NOTE Confidence: 0.82068897

00:28:11.210 --> 00:28:11.984 you know,

NOTE Confidence: 0.82068897

00:28:11.984 --> 00:28:15.670 80% of cases having 18 or more lymph nodes.

NOTE Confidence: 0.82068897

 $00:28:15.670 \longrightarrow 00:28:17.924$  So in contrast to the traditional emphasis

NOTE Confidence: 0.82068897

00:28:17.924 --> 00:28:20.219 on the volume outcomes relationship,

NOTE Confidence: 0.82068897

 $00{:}28{:}20.220 \dashrightarrow 00{:}28{:}21.930$  this showed that negative margins

NOTE Confidence: 0.82068897

 $00:28:21.930 \longrightarrow 00:28:24.120$  and lymph node yields can actually

NOTE Confidence: 0.82068897

 $00:28:24.120 \longrightarrow 00:28:26.610$  neutralize the effect of hospital volume.

NOTE Confidence: 0.8307440352

 $00{:}28{:}28.650 \dashrightarrow 00{:}28{:}31.010$  OK. So then another area that I want

NOTE Confidence: 0.8307440352

 $00{:}28{:}31.010 \dashrightarrow 00{:}28{:}33.167$  to look into was guideline adherence

00:28:33.167 --> 00:28:36.412 and this it came up because of a study

NOTE Confidence: 0.8307440352

 $00:28:36.412 \longrightarrow 00:28:39.130$  published in 2009 from MD Anderson.

NOTE Confidence: 0.8307440352

00:28:39.130 --> 00:28:42.014 They looked at 107 patients who came

NOTE Confidence: 0.8307440352

 $00:28:42.014 \longrightarrow 00:28:43.970$  to them for second opinions with

NOTE Confidence: 0.8307440352

 $00:28:44.035 \longrightarrow 00:28:45.967$  persistent or recurrent disease.

NOTE Confidence: 0.8307440352

 $00:28:45.970 \longrightarrow 00:28:47.430$  So they've been treated elsewhere.

NOTE Confidence: 0.8307440352

 $00:28:47.430 \longrightarrow 00:28:50.076$  They had persistent or recurrent disease and

NOTE Confidence: 0.8307440352

 $00:28:50.080 \longrightarrow 00:28:51.583$  they wanted to look at well what's going on.

NOTE Confidence: 0.8307440352

 $00:28:51.590 \longrightarrow 00:28:53.942$  What they found was that 43% of

NOTE Confidence: 0.8307440352

 $00{:}28{:}53.942 \dashrightarrow 00{:}28{:}56.022$  patients had NCCN guideline non

NOTE Confidence: 0.8307440352

 $00:28:56.022 \longrightarrow 00:28:58.840$  compliance is the term that they used.

NOTE Confidence: 0.8307440352

 $00:28:58.840 \longrightarrow 00:29:00.448$  And they try to find some

NOTE Confidence: 0.8307440352

 $00{:}29{:}00.448 \mathrel{--}{>} 00{:}29{:}01.520$  factor associated with it,

NOTE Confidence: 0.8307440352

00:29:01.520 --> 00:29:03.960 even the specific referring physician,

NOTE Confidence: 0.8307440352

 $00:29:03.960 \longrightarrow 00:29:04.948$  the type of physician,

 $00:29:04.948 \longrightarrow 00:29:05.936$  the subset of disease,

NOTE Confidence: 0.8307440352

 $00{:}29{:}05.940 --> 00{:}29{:}07.496$  insurance status, age, sex.

NOTE Confidence: 0.8307440352

 $00:29:07.496 \longrightarrow 00:29:09.830$  And there was nothing that was

NOTE Confidence: 0.8307440352

 $00:29:09.904 \longrightarrow 00:29:12.479$  significantly associated with why someone

NOTE Confidence: 0.8307440352

 $00:29:12.479 \longrightarrow 00:29:15.058$  would get NCCN noncompliant treatment.

NOTE Confidence: 0.8307440352

00:29:15.058 --> 00:29:18.166 So I'm in the same vein.

NOTE Confidence: 0.8307440352

 $00:29:18.170 \longrightarrow 00:29:19.570$  As you can see my theme here is,

NOTE Confidence: 0.8307440352

00:29:19.570 --> 00:29:21.310 well, how's the country doing?

NOTE Confidence: 0.8307440352

 $00{:}29{:}21.310 \dashrightarrow 00{:}29{:}22.752$  You know we know how single institutions

NOTE Confidence: 0.8307440352

00:29:22.752 --> 00:29:24.150 are doing, but how about the country?

NOTE Confidence: 0.8307440352

 $00:29:24.150 \longrightarrow 00:29:25.215$  What's the benchmark?

NOTE Confidence: 0.8307440352

 $00:29:25.215 \longrightarrow 00:29:26.990$  What are we aiming for?

NOTE Confidence: 0.8307440352

 $00:29:26.990 \longrightarrow 00:29:29.832$  So we undertook a study to look

NOTE Confidence: 0.8307440352

00:29:29.832 --> 00:29:31.990 at national NCCN guideline,

NOTE Confidence: 0.8307440352

 $00:29:31.990 \longrightarrow 00:29:33.350$  not non adherence rates.

NOTE Confidence: 0.8307440352

 $00:29:33.350 \longrightarrow 00:29:35.050$  That was the main objective.

 $00:29:35.050 \longrightarrow 00:29:37.731$  We also wanted to look at associations

NOTE Confidence: 0.8307440352

 $00{:}29{:}37.731 \dashrightarrow 00{:}29{:}39.779$  between non adherence and survival.

NOTE Confidence: 0.8307440352

 $00:29:39.780 \longrightarrow 00:29:40.936$  In head neck cancer,

NOTE Confidence: 0.8307440352

 $00:29:40.936 \longrightarrow 00:29:42.670$  we wanted to look at reasons,

NOTE Confidence: 0.8307440352

 $00:29:42.670 \longrightarrow 00:29:44.840$  reasons for non non adherence

NOTE Confidence: 0.8307440352

 $00:29:44.840 \longrightarrow 00:29:47.010$  and then factors associated with

NOTE Confidence: 0.8307440352

 $00:29:47.080 \longrightarrow 00:29:49.320$  non adherence as secondary aims.

NOTE Confidence: 0.8307440352

 $00:29:49.320 \longrightarrow 00:29:53.670$  So this is our we started with 375,000

NOTE Confidence: 0.8307440352

 $00:29:53.670 \longrightarrow 00:29:58.440$  patients treated from 2004 to 2013.

NOTE Confidence: 0.8307440352

 $00:29:58.440 \longrightarrow 00:30:00.400$  And we tried to figure out which ones

NOTE Confidence: 0.8307440352

 $00:30:00.400 \longrightarrow 00:30:02.230$  were not adhering and which ones

NOTE Confidence: 0.8307440352

 $00:30:02.230 \longrightarrow 00:30:03.830$  were adherent to NCCN guidelines

NOTE Confidence: 0.8307440352

 $00:30:03.830 \longrightarrow 00:30:05.648$  and not going into the details.

NOTE Confidence: 0.8307440352

 $00:30:05.650 \longrightarrow 00:30:09.025$  This is how we define non adherence by site.

NOTE Confidence: 0.8307440352

 $00:30:09.030 \longrightarrow 00:30:11.165$  It's just look at the NCCN guidelines.

00:30:11.170 --> 00:30:13.582 It's actually pretty easy and they

NOTE Confidence: 0.8307440352

 $00{:}30{:}13.582 \dashrightarrow 00{:}30{:}15.190$  were surprisingly consistent in

NOTE Confidence: 0.8307440352

00:30:15.255 --> 00:30:16.990 all these areas throughout the

NOTE Confidence: 0.8307440352

 $00:30:16.990 \longrightarrow 00:30:18.725$  entire years of the study.

NOTE Confidence: 0.8307440352

 $00:30:18.730 \longrightarrow 00:30:21.642$  We've got the guidelines going back to when

NOTE Confidence: 0.8307440352

 $00:30:21.642 \longrightarrow 00:30:24.536$  this study started actually from the NCCN.

NOTE Confidence: 0.8307440352

 $00:30:24.540 \longrightarrow 00:30:26.100$  And these are the numbers.

NOTE Confidence: 0.8307440352

 $00:30:26.100 \longrightarrow 00:30:28.264$  So if you go to 2004 non adherence

NOTE Confidence: 0.8307440352

 $00{:}30{:}28.264 \to 00{:}30{:}29.576$  rates throughout this country,

NOTE Confidence: 0.8307440352

 $00{:}30{:}29.580 --> 00{:}30{:}32.114$  it was 30% for head and neck

NOTE Confidence: 0.8307440352

00:30:32.114 --> 00:30:34.068 squamous cell carcinoma by 2013,

NOTE Confidence: 0.8307440352

 $00:30:34.068 \longrightarrow 00:30:36.238$  we're still looking at almost

NOTE Confidence: 0.8307440352

 $00:30:36.238 \longrightarrow 00:30:39.077 1/4$  of patients are getting non

NOTE Confidence: 0.8307440352

00:30:39.077 --> 00:30:41.222 adherent guideline non adherent

NOTE Confidence: 0.8307440352

 $00:30:41.222 \longrightarrow 00:30:43.438$  care within this country.

NOTE Confidence: 0.8307440352

 $00:30:43.440 \longrightarrow 00:30:45.701$  We looked at his by sub site

 $00:30:45.701 \longrightarrow 00:30:47.260$  for oral cavity cancer,

NOTE Confidence: 0.8307440352

 $00:30:47.260 \longrightarrow 00:30:49.744$  46% of patients are getting non

NOTE Confidence: 0.8307440352

 $00:30:49.744 \longrightarrow 00:30:52.100$  adherent care and oral pharynx,

NOTE Confidence: 0.8307440352

00:30:52.100 --> 00:30:54.200 much lower hypopharynx,

NOTE Confidence: 0.8307440352

 $00:30:54.200 \longrightarrow 00:30:57.000$  larynx and sinuses here.

NOTE Confidence: 0.8307440352

 $00:30:57.000 \longrightarrow 00:30:58.620$  And then we looked at survival.

NOTE Confidence: 0.8307440352

 $00:30:58.620 \longrightarrow 00:31:01.224$  So if you have non adherent care

NOTE Confidence: 0.8307440352

 $00:31:01.224 \longrightarrow 00:31:03.184$  versus adherent care to NCCN

NOTE Confidence: 0.8307440352

 $00{:}31{:}03.184 \dashrightarrow 00{:}31{:}05.294$  guidelines we found a significant

NOTE Confidence: 0.8307440352

 $00{:}31{:}05.294 \dashrightarrow 00{:}31{:}07.200$  association with overall survival.

NOTE Confidence: 0.8307440352

 $00{:}31{:}07.200 \dashrightarrow 00{:}31{:}09.516$  Again a multivariate analysis

NOTE Confidence: 0.8307440352

 $00:31:09.516 \longrightarrow 00:31:12.990$  controlling for all the typical factors.

NOTE Confidence: 0.8307440352

 $00:31:12.990 \longrightarrow 00:31:15.223$  And then we looked at factors associated

NOTE Confidence: 0.8307440352

 $00:31:15.223 \longrightarrow 00:31:16.780$  with guideline not adherence,

NOTE Confidence: 0.8307440352

00:31:16.780 --> 00:31:18.920 black race, age over 65,

00:31:18.920 --> 00:31:20.940 comorbidity, non private insurance,

NOTE Confidence: 0.8307440352

 $00{:}31{:}20.940 \dashrightarrow 00{:}31{:}23.970$  higher T stage and then being

NOTE Confidence: 0.8307440352

 $00:31:24.055 \longrightarrow 00:31:26.700$  treated and non academic facility.

NOTE Confidence: 0.8307440352

 $00{:}31{:}26.700 \dashrightarrow 00{:}31{:}29.710$  So I like this quote because it

NOTE Confidence: 0.8307440352

00:31:29.710 --> 00:31:31.662 really talks about highlights why

NOTE Confidence: 0.8307440352

 $00:31:31.662 \longrightarrow 00:31:33.648$  this is so important when clinicians,

NOTE Confidence: 0.8307440352

 $00:31:33.650 \longrightarrow 00:31:35.675$  clinicians already know the information

NOTE Confidence: 0.8307440352

 $00:31:35.675 \longrightarrow 00:31:37.700$  contained in guidelines and this

NOTE Confidence: 0.8307440352

 $00:31:37.761 \longrightarrow 00:31:39.540$  was years ago, this was 1999,

NOTE Confidence: 0.8307440352

 $00:31:39.540 \longrightarrow 00:31:40.860$  now they're so accessible.

NOTE Confidence: 0.752328720909091

 $00{:}31{:}40.860 \dashrightarrow 00{:}31{:}42.127$  So I'm going to extend this to

NOTE Confidence: 0.752328720909091

 $00:31:42.127 \longrightarrow 00:31:43.130$  say when physical clinicians.

NOTE Confidence: 0.752328720909091

 $00:31:43.130 \longrightarrow 00:31:45.212$  Know how to get the guidelines

NOTE Confidence: 0.752328720909091

 $00:31:45.212 \longrightarrow 00:31:47.380$  within minutes at their fingertips.

NOTE Confidence: 0.752328720909091

 $00:31:47.380 \longrightarrow 00:31:49.732$  Those clinicians who want to improve

NOTE Confidence: 0.752328720909091

00:31:49.732 --> 00:31:51.788 quality need to redirect their

 $00:31:51.788 \longrightarrow 00:31:53.878$  efforts to identify the barriers.

NOTE Confidence: 0.752328720909091

 $00:31:53.880 \longrightarrow 00:31:55.420$  It's not knowledge that stand

NOTE Confidence: 0.752328720909091

 $00:31:55.420 \longrightarrow 00:31:57.440$  in the way of behavior change.

NOTE Confidence: 0.752328720909091

 $00:31:57.440 \longrightarrow 00:32:00.410$  So by addressing the barriers that

NOTE Confidence: 0.752328720909091

 $00:32:00.410 \longrightarrow 00:32:03.300$  prevent adherence to NCCN guidelines

NOTE Confidence: 0.752328720909091

 $00:32:03.300 \longrightarrow 00:32:04.816$  and their treatment protocols,

NOTE Confidence: 0.752328720909091

 $00:32:04.816 \longrightarrow 00:32:07.615$  I think there is a great opportunity

NOTE Confidence: 0.752328720909091

00:32:07.615 --> 00:32:09.855 for us to improve survival.

NOTE Confidence: 0.752328720909091

00:32:09.860 --> 00:32:12.308 I would even say a responsibility.

NOTE Confidence: 0.752328720909091

 $00{:}32{:}12.310 \dashrightarrow 00{:}32{:}14.694$  Final area of research I wanted to look

NOTE Confidence: 0.752328720909091

00:32:14.694 --> 00:32:17.428 at and I haven't done much in this yet.

NOTE Confidence: 0.752328720909091

 $00{:}32{:}17.430 \dashrightarrow 00{:}32{:}20.134$  So I'm going to quote a a different

NOTE Confidence: 0.752328720909091

 $00{:}32{:}20.134 \dashrightarrow 00{:}32{:}22.678$  study by Bevin you who's the chair

NOTE Confidence: 0.752328720909091

 $00:32:22.678 \dashrightarrow 00:32:24.688$  at Minnesota University of Minnesota

NOTE Confidence: 0.752328720909091

 $00:32:24.688 \longrightarrow 00:32:27.599$  and he was actually a Robert Wood

00:32:27.599 --> 00:32:30.058 Johnson scholar here at Yale and very

NOTE Confidence: 0.752328720909091

 $00{:}32{:}30.058 \to 00{:}32{:}31.628$  well known and outcomes research.

NOTE Confidence: 0.752328720909091

00:32:31.630 --> 00:32:33.640 And that cancer he just wanted,

NOTE Confidence: 0.752328720909091

 $00:32:33.640 \longrightarrow 00:32:35.472$  this was a spoke to him about his

NOTE Confidence: 0.752328720909091

00:32:35.472 --> 00:32:36.695 very controversial study when he

NOTE Confidence: 0.752328720909091

 $00:32:36.695 \longrightarrow 00:32:38.123$  published this because it was within

NOTE Confidence: 0.752328720909091

00:32:38.123 --> 00:32:39.579 his own network of patients that

NOTE Confidence: 0.752328720909091

 $00:32:39.579 \longrightarrow 00:32:41.080$  he was seeing looking at patients

NOTE Confidence: 0.752328720909091

 $00:32:41.080 \longrightarrow 00:32:42.730$  who were treated with radiation.

NOTE Confidence: 0.752328720909091

 $00:32:42.730 \longrightarrow 00:32:44.692$  Therapy at the academic center versus

NOTE Confidence: 0.752328720909091

 $00:32:44.692 \longrightarrow 00:32:46.746$  the non academic center and found

NOTE Confidence: 0.752328720909091

 $00:32:46.746 \longrightarrow 00:32:48.118$  significant differences in five

NOTE Confidence: 0.752328720909091

 $00:32:48.118 \longrightarrow 00:32:50.319$  year survival on there were similar

NOTE Confidence: 0.752328720909091

 $00:32:50.319 \longrightarrow 00:32:51.855$  rates of treatment completion,

NOTE Confidence: 0.752328720909091

00:32:51.860 --> 00:32:54.100 similar rates of treatment breaks,

NOTE Confidence: 0.752328720909091

 $00:32:54.100 \longrightarrow 00:32:56.760$  more advanced cancers at the academic center.

00:32:56.760 --> 00:32:59.300 Multivariate analysis really you

NOTE Confidence: 0.752328720909091

00:32:59.300 --> 00:33:01.840 know statistically rigorous study

NOTE Confidence: 0.752328720909091

 $00:33:01.840 \longrightarrow 00:33:05.476$  couldn't say why but there was.

NOTE Confidence: 0.752328720909091

 $00:33:05.480 \longrightarrow 00:33:05.770$  OK.

NOTE Confidence: 0.752328720909091

 $00{:}33{:}05.770 \dashrightarrow 00{:}33{:}08.090$  So the last thing I want to talk

NOTE Confidence: 0.752328720909091

 $00:33:08.090 \longrightarrow 00:33:10.523$  about is really this concept of bench

NOTE Confidence: 0.752328720909091

 $00:33:10.523 \longrightarrow 00:33:12.919$  to be dside for the patient centered

NOTE Confidence: 0.752328720909091

 $00{:}33{:}12.919 \dashrightarrow 00{:}33{:}15.269$  outcomes researcher and that's what

NOTE Confidence: 0.752328720909091

 $00{:}33{:}15.269 \dashrightarrow 00{:}33{:}18.558$  I've been doing over the last year or so.

NOTE Confidence: 0.752328720909091

 $00{:}33{:}18.560 \dashrightarrow 00{:}33{:}20.594$  What I wanted to do now is take all

NOTE Confidence: 0.752328720909091

 $00:33:20.594 \longrightarrow 00:33:22.638$  this national benchmark data we had.

NOTE Confidence: 0.752328720909091

 $00:33:22.640 \longrightarrow 00:33:24.180$  We knew what good quality was or

NOTE Confidence: 0.752328720909091

 $00{:}33{:}24.180 \dashrightarrow 00{:}33{:}25.944$  at least what the standard of care

NOTE Confidence: 0.752328720909091

 $00:33:25.944 \longrightarrow 00:33:26.996$  was across the country.

NOTE Confidence: 0.752328720909091

 $00:33:27.000 \longrightarrow 00:33:28.244 \text{ I said, hey, how,}$ 

00:33:28.244 --> 00:33:31.060 how is Yale New Haven Health system doing?

NOTE Confidence: 0.752328720909091

 $00{:}33{:}31.060 \dashrightarrow 00{:}33{:}35.552$  And so this is what we did, we looked.

NOTE Confidence: 0.752328720909091

00:33:35.552 --> 00:33:38.708 At tumor registry data from Yale,

NOTE Confidence: 0.752328720909091

00:33:38.710 --> 00:33:40.550 New Haven Hospital, Bridgeport Hospital,

NOTE Confidence: 0.752328720909091

00:33:40.550 --> 00:33:42.570 Greenwich Hospital, L&M and Westerly.

NOTE Confidence: 0.752328720909091

00:33:42.570 --> 00:33:44.747 So our entire network and we got

NOTE Confidence: 0.752328720909091

 $00:33:44.747 \longrightarrow 00:33:46.798$  all the analytic oral cavity cases

NOTE Confidence: 0.752328720909091

 $00:33:46.798 \longrightarrow 00:33:47.915$  from 2012 to 2018.

NOTE Confidence: 0.752328720909091

 $00:33:47.915 \longrightarrow 00:33:49.700$  And we looked at a number of

NOTE Confidence: 0.752328720909091

00:33:49.762 --> 00:33:52.054 these quality metrics for which we

NOTE Confidence: 0.752328720909091

 $00:33:52.054 \longrightarrow 00:33:53.582$  now had national benchmarks.

NOTE Confidence: 0.752328720909091

 $00:33:53.590 \longrightarrow 00:33:55.414$  And we looked at the positive margin rate.

NOTE Confidence: 0.752328720909091

 $00:33:55.420 \longrightarrow 00:33:57.526$  We looked at lymph node yields

NOTE Confidence: 0.752328720909091

 $00:33:57.526 \longrightarrow 00:34:00.058$  greater than or equal to 16 adherence

NOTE Confidence: 0.752328720909091

 $00:34:00.058 \longrightarrow 00:34:02.515$  rates to NCCN guidelines and time to

NOTE Confidence: 0.752328720909091

 $00{:}34{:}02.590 \dashrightarrow 00{:}34{:}04.890$  adjuvant the rapy within six weeks.

 $00:34:04.890 \longrightarrow 00:34:06.630$  So we started with 500 patients

NOTE Confidence: 0.752328720909091

 $00:34:06.630 \longrightarrow 00:34:08.991$  and these were the three groups of

NOTE Confidence: 0.752328720909091

 $00:34:08.991 \longrightarrow 00:34:10.881$  patients that were treated academical

NOTE Confidence: 0.752328720909091

 $00:34:10.881 \longrightarrow 00:34:13.048$  surgery and radiation or all their

NOTE Confidence: 0.752328720909091

 $00:34:13.048 \longrightarrow 00:34:14.704$  treatment if there was no radiation

NOTE Confidence: 0.752328720909091

 $00:34:14.704 \longrightarrow 00:34:16.399$  at the academic only center,

NOTE Confidence: 0.752328720909091

00:34:16.400 --> 00:34:17.895 Community Center being the opposite

NOTE Confidence: 0.752328720909091

 $00:34:17.895 \longrightarrow 00:34:19.740$  end and then the combined group.

NOTE Confidence: 0.752328720909091

 $00:34:19.740 \longrightarrow 00:34:21.938$  So they had in this combined group,

NOTE Confidence: 0.752328720909091

 $00:34:21.940 \longrightarrow 00:34:23.501$  it was always surgery at the main

NOTE Confidence: 0.752328720909091

 $00:34:23.501 \longrightarrow 00:34:24.630$  center and radiation elsewhere.

NOTE Confidence: 0.752328720909091

 $00:34:24.630 \longrightarrow 00:34:28.338$  For some reason it didn't go the other way.

NOTE Confidence: 0.752328720909091

 $00{:}34{:}28.340 \dashrightarrow 00{:}34{:}30.806$  And these were our key findings.

NOTE Confidence: 0.752328720909091

 $00:34:30.810 \longrightarrow 00:34:33.717$  There was a higher positive surgical

NOTE Confidence: 0.752328720909091

 $00:34:33.717 \longrightarrow 00:34:35.752$  margin rate within our health

00:34:35.752 --> 00:34:38.110 system at the Community hospitals,

NOTE Confidence: 0.833967161111111

 $00:34:38.110 \longrightarrow 00:34:39.136$  12% versus 2.5%.

NOTE Confidence: 0.833967161111111

 $00:34:39.136 \longrightarrow 00:34:41.188$  There was a lower likelihood to

NOTE Confidence: 0.833967161111111

 $00:34:41.188 \longrightarrow 00:34:43.412$  meet that bottom lymph node yield

NOTE Confidence: 0.833967161111111

 $00:34:43.412 \longrightarrow 00:34:46.008$  threshold of 16 lymph nodes and a

NOTE Confidence: 0.833967161111111

00:34:46.008 --> 00:34:47.808 neck dissection at the community,

NOTE Confidence: 0.833967161111111

 $00:34:47.810 \longrightarrow 00:34:48.887$  59% versus 90%.

NOTE Confidence: 0.833967161111111

 $00{:}34{:}48.887 \dashrightarrow 00{:}34{:}50.682$  There were decreased rates of

NOTE Confidence: 0.8339671611111111

 $00{:}34{:}50.682 \dashrightarrow 00{:}34{:}53.035$  adherence to NCC and guidelines in

NOTE Confidence: 0.833967161111111

00:34:53.035 --> 00:34:54.995 other hospitals within our Network,

NOTE Confidence: 0.833967161111111

 $00{:}34{:}55.000 \dashrightarrow 00{:}34{:}57.778$ 76 versus 86% and adjuvant radiation

NOTE Confidence: 0.833967161111111

 $00:34:57.778 \longrightarrow 00:35:00.930$  therapy within six weeks it was the same.

NOTE Confidence: 0.833967161111111

 $00:35:00.930 \longrightarrow 00:35:03.314$  If you were all academic or all community,

NOTE Confidence: 0.8339671611111111

00:35:03.320 --> 00:35:05.060 but if you fragmented your care,

NOTE Confidence: 0.833967161111111

 $00:35:05.060 \longrightarrow 00:35:06.852$  it was significantly less.

NOTE Confidence: 0.833967161111111

 $00:35:06.852 \longrightarrow 00:35:09.640$  22% of patients, when fragmenting their care,

 $00:35:09.640 \longrightarrow 00:35:13.786$  received radiation therapy within six weeks.

NOTE Confidence: 0.833967161111111

00:35:13.790 --> 00:35:15.490 So it sounded negative originally,

NOTE Confidence: 0.833967161111111

 $00:35:15.490 \longrightarrow 00:35:16.406$  but then we said, hey, well,

NOTE Confidence: 0.833967161111111

 $00:35:16.406 \longrightarrow 00:35:17.510$  we have national benchmarks.

NOTE Confidence: 0.833967161111111

 $00:35:17.510 \longrightarrow 00:35:18.286$  How are we doing?

NOTE Confidence: 0.833967161111111

 $00:35:18.286 \longrightarrow 00:35:19.450$  It turns out that we're actually

NOTE Confidence: 0.833967161111111

 $00:35:19.491 \longrightarrow 00:35:20.889$  doing pretty good within the system.

NOTE Confidence: 0.833967161111111

 $00:35:20.890 \longrightarrow 00:35:23.446$  The, our numbers are on par with the nation.

NOTE Confidence: 0.833967161111111

 $00{:}35{:}23.450 \dashrightarrow 00{:}35{:}25.564$  We're not any worse than the national

NOTE Confidence: 0.833967161111111

 $00:35:25.564 \longrightarrow 00:35:27.630$  benchmarks in our community hospitals.

NOTE Confidence: 0.833967161111111

 $00:35:27.630 \longrightarrow 00:35:29.254$  If you look at the national positive

NOTE Confidence: 0.833967161111111

00:35:29.254 --> 00:35:30.629 margin rates based on our studies,

NOTE Confidence: 0.833967161111111

 $00:35:30.630 \longrightarrow 00:35:33.436$  oral cavity cancer is almost 13%.

NOTE Confidence: 0.833967161111111

 $00:35:33.436 \longrightarrow 00:35:36.866$  Our community partners are 12%.

NOTE Confidence: 0.833967161111111

 $00:35:36.870 \longrightarrow 00:35:39.033$  I mean our academic center is 2.5%.

00:35:39.033 --> 00:35:40.448 So that's a significant difference,

NOTE Confidence: 0.833967161111111

 $00:35:40.450 \longrightarrow 00:35:43.946$  but but the system is.

NOTE Confidence: 0.833967161111111

 $00:35:43.946 \longrightarrow 00:35:45.518$  Not doing horrible.

NOTE Confidence: 0.833967161111111

 $00:35:45.520 \longrightarrow 00:35:47.728$  There's a lot of reasons that there could,

NOTE Confidence: 0.833967161111111

 $00:35:47.730 \longrightarrow 00:35:50.016$  you know, there could be differences.

NOTE Confidence: 0.833967161111111

 $00:35:50.020 \longrightarrow 00:35:52.378$  For example, availability of frozen section,

NOTE Confidence: 0.833967161111111

 $00:35:52.380 \longrightarrow 00:35:54.380$  access to advanced reconstructive surgery,

NOTE Confidence: 0.833967161111111

 $00:35:54.380 \longrightarrow 00:35:57.996$  we can get more aggressive on the resection,

NOTE Confidence: 0.8339671611111111

 $00:35:58.000 \dashrightarrow 00:35:59.458$  constant communication between

NOTE Confidence: 0.833967161111111

 $00:35:59.458 \longrightarrow 00:36:00.916$  pathologists and surgeons,

NOTE Confidence: 0.833967161111111

 $00{:}36{:}00.920 --> 00{:}36{:}02.300 \ \mathrm{presence} \ \mathrm{of} \ \mathrm{trainees},$ 

NOTE Confidence: 0.833967161111111

00:36:02.300 --> 00:36:04.140 perhaps higher case volumes,

NOTE Confidence: 0.833967161111111

 $00:36:04.140 \longrightarrow 00:36:06.359$  how margins are taken by surgeons or

NOTE Confidence: 0.8339671611111111

 $00:36:06.359 \longrightarrow 00:36:08.259$  how they're assessed by pathologists.

NOTE Confidence: 0.833967161111111

 $00:36:08.260 \longrightarrow 00:36:10.540$  Countless reasons this for this,

NOTE Confidence: 0.833967161111111

 $00:36:10.540 \longrightarrow 00:36:12.805$  all theoretical.

 $00:36:12.805 \longrightarrow 00:36:15.415$  The other point about positive margins

NOTE Confidence: 0.833967161111111

 $00:36:15.415 \longrightarrow 00:36:17.509$  other than affecting survival is

NOTE Confidence: 0.833967161111111

00:36:17.509 --> 00:36:20.043 that it can often lead to unnecessary

NOTE Confidence: 0.833967161111111

 $00:36:20.043 \longrightarrow 00:36:22.134$  escalation of cares like that oropharynx

NOTE Confidence: 0.833967161111111

 $00:36:22.134 \longrightarrow 00:36:24.132$  cancer case that I showed you.

NOTE Confidence: 0.833967161111111

 $00:36:24.132 \longrightarrow 00:36:26.124$  But in this cohort of patients

NOTE Confidence: 0.833967161111111

 $00:36:26.124 \longrightarrow 00:36:27.120$  within our system,

NOTE Confidence: 0.833967161111111

 $00:36:27.120 \longrightarrow 00:36:29.790$  two patients in the Community only

NOTE Confidence: 0.833967161111111

 $00:36:29.790 \dashrightarrow 00:36:31.570$  group received adjuvant chemotherapy

NOTE Confidence: 0.833967161111111

 $00{:}36{:}31.641 \dashrightarrow 00{:}36{:}34.089$  plus radiation for early stage disease.

NOTE Confidence: 0.8339671611111111

 $00:36:34.090 \longrightarrow 00:36:36.028$  So stage 1/2 cancer positive margin

NOTE Confidence: 0.833967161111111

 $00:36:36.028 \longrightarrow 00:36:38.150$  went on to chemotherapy and radiation.

NOTE Confidence: 0.833967161111111

 $00{:}36{:}38.150 \dashrightarrow 00{:}36{:}41.398$  There's no LINOP and I in those cases.

NOTE Confidence: 0.833967161111111

 $00:36:41.400 \longrightarrow 00:36:43.968$  And when you look at non adherence rates.

NOTE Confidence: 0.8339671611111111

00:36:43.970 --> 00:36:46.508 Again nationally for all of cancer,

 $00:36:46.510 \longrightarrow 00:36:48.418$  26% of patients for head neck

NOTE Confidence: 0.833967161111111

00:36:48.418 --> 00:36:50.161 cancer nationally are non adherence

NOTE Confidence: 0.833967161111111

 $00:36:50.161 \longrightarrow 00:36:52.186$  with guidelines for oral cancer.

NOTE Confidence: 0.833967161111111

 $00:36:52.190 \longrightarrow 00:36:54.212$  If you'll recall based on our

NOTE Confidence: 0.833967161111111

00:36:54.212 --> 00:36:54.886 previous studies,

NOTE Confidence: 0.833967161111111

 $00:36:54.890 \longrightarrow 00:36:57.362$  46% of patients are non adherent

NOTE Confidence: 0.833967161111111

 $00:36:57.362 \longrightarrow 00:36:58.598$  in our community.

NOTE Confidence: 0.833967161111111

00:36:58.600 --> 00:37:00.182 Yale New Haven Health System is doing

NOTE Confidence: 0.8339671611111111

 $00:37:00.182 \longrightarrow 00:37:01.987$  pretty good when you look at national data,

NOTE Confidence: 0.833967161111111

 $00:37:01.990 \longrightarrow 00:37:03.680$  much better than than the

NOTE Confidence: 0.8339671611111111

 $00{:}37{:}03.680 \dashrightarrow 00{:}37{:}05.370$  country for oral cavity cancer.

NOTE Confidence: 0.833967161111111

00:37:05.370 --> 00:37:07.466 But if you look at the academic center,

NOTE Confidence: 0.833967161111111

 $00{:}37{:}07.470 \dashrightarrow 00{:}37{:}09.165$  we see a significant difference

NOTE Confidence: 0.8339671611111111

 $00:37:09.165 \longrightarrow 00:37:11.110$  and again no one looking for

NOTE Confidence: 0.833967161111111

 $00:37:11.110 \longrightarrow 00:37:12.558$  100% adherence to guidelines,

NOTE Confidence: 0.833967161111111

 $00:37:12.558 \longrightarrow 00:37:14.570$  that's not possible, a lot of reasons,

 $00:37:14.570 \longrightarrow 00:37:15.260$  sometimes you can't.

NOTE Confidence: 0.833967161111111

00:37:15.260 --> 00:37:16.604 Adherence to guidelines,

NOTE Confidence: 0.833967161111111

 $00:37:16.604 \longrightarrow 00:37:19.292$  but we're looking to benchmark against

NOTE Confidence: 0.833967161111111

 $00:37:19.292 \longrightarrow 00:37:21.889$  the country and against each other.

NOTE Confidence: 0.833967161111111

 $00:37:21.890 \longrightarrow 00:37:22.134$  So.

NOTE Confidence: 0.833967161111111

 $00:37:22.134 \longrightarrow 00:37:23.598$  We looked at lymph node yields

NOTE Confidence: 0.833967161111111

 $00:37:23.598 \longrightarrow 00:37:25.638$  and this is where things got a

NOTE Confidence: 0.833967161111111

00:37:25.638 --> 00:37:26.886 little bit more interesting.

NOTE Confidence: 0.833967161111111 00:37:26.890 --> 00:37:27.255 Nationally, NOTE Confidence: 0.833967161111111

 $00:37:27.255 \longrightarrow 00:37:30.175$  greater than or equal to 16 lymph nodes,

NOTE Confidence: 0.8339671611111111

 $00:37:30.180 \longrightarrow 00:37:31.620$  70, we used 18.

NOTE Confidence: 0.833967161111111

 $00:37:31.620 \longrightarrow 00:37:34.230$  That's what we have for national data.

NOTE Confidence: 0.833967161111111

00:37:34.230 --> 00:37:36.386 70% of patients have more than 18

NOTE Confidence: 0.833967161111111

 $00:37:36.386 \longrightarrow 00:37:38.850$  lymph nodes in their neck dissections.

NOTE Confidence: 0.833967161111111

 $00:37:38.850 \longrightarrow 00:37:39.882$  In our community,

 $00:37:39.882 \longrightarrow 00:37:41.946$  59% and in the academic center,

NOTE Confidence: 0.8500174075

 $00:37:41.950 \longrightarrow 00:37:44.883$  90%. And you can see the huge

NOTE Confidence: 0.8500174075

 $00:37:44.883 \longrightarrow 00:37:47.840$  variation as well everywhere really.

NOTE Confidence: 0.8500174075

 $00:37:47.840 \longrightarrow 00:37:49.286$  Again, there's multiple reasons for this.

NOTE Confidence: 0.8500174075

00:37:49.290 --> 00:37:50.662 How pathologists count limp,

NOTE Confidence: 0.8500174075

 $00:37:50.662 \longrightarrow 00:37:52.377$  it's not all surgical related,

NOTE Confidence: 0.8500174075

 $00{:}37{:}52.380 \dashrightarrow 00{:}37{:}54.400$  how pathologists count lymph nodes,

NOTE Confidence: 0.8500174075

 $00:37:54.400 \longrightarrow 00:37:56.409$  but maybe also the quality of the

NOTE Confidence: 0.8500174075

00:37:56.409 --> 00:37:57.777 neck dissection and this these

NOTE Confidence: 0.8500174075

 $00:37:57.777 \longrightarrow 00:37:59.553$  can sell a lot of these can be

NOTE Confidence: 0.8500174075

 $00{:}37{:}59.615 \dashrightarrow 00{:}38{:}01.190$  modifiable treatment factors.

NOTE Confidence: 0.8500174075

 $00:38:01.190 \longrightarrow 00:38:02.230$  So in this study,

NOTE Confidence: 0.8500174075

 $00{:}38{:}02.230 \dashrightarrow 00{:}38{:}03.790$  we found that treatment of oral

NOTE Confidence: 0.8500174075

 $00:38:03.849 \longrightarrow 00:38:05.654$  cavity cancer at Community facilities

NOTE Confidence: 0.8500174075

 $00:38:05.654 \longrightarrow 00:38:07.891$  within our system may increase the

NOTE Confidence: 0.8500174075

 $00:38:07.891 \longrightarrow 00:38:09.379$  likelihood of positive margins,

 $00:38:09.380 \longrightarrow 00:38:10.810$  lower likelihood of adequate lymph

NOTE Confidence: 0.8500174075

 $00{:}38{:}10.810 \dashrightarrow 00{:}38{:}12.240$  node yields and decrease adherence.

NOTE Confidence: 0.8500174075

 $00:38:12.240 \longrightarrow 00:38:13.068$  NCCN guidelines.

NOTE Confidence: 0.8500174075

00:38:13.068 --> 00:38:16.326 Not only that, but if you fragment your care,

NOTE Confidence: 0.8500174075

 $00{:}38{:}16.330 \dashrightarrow 00{:}38{:}18.922$ you can have a lower likelihood

NOTE Confidence: 0.8500174075

 $00:38:18.922 \longrightarrow 00:38:20.650$  of achieving radiation initiation

NOTE Confidence: 0.8500174075

 $00:38:20.719 \longrightarrow 00:38:21.850$  within six weeks.

NOTE Confidence: 0.8500174075

 $00:38:21.850 \longrightarrow 00:38:24.328$  A lot of problems with this study.

NOTE Confidence: 0.8500174075

00:38:24.330 --> 00:38:26.022 I think it's still very informative

NOTE Confidence: 0.8500174075

 $00:38:26.022 \longrightarrow 00:38:27.989$  and very useful to make us better,

NOTE Confidence: 0.8500174075

00:38:27.990 --> 00:38:29.553 but you know,

NOTE Confidence: 0.8500174075

 $00:38:29.553 \longrightarrow 00:38:31.637$  data were collected retrospectively.

NOTE Confidence: 0.8500174075

 $00{:}38{:}31.640 \dashrightarrow 00{:}38{:}34.424$  We found a lot of differences in process

NOTE Confidence: 0.8500174075

 $00:38:34.424 \longrightarrow 00:38:36.463$  related metrics and other studies

NOTE Confidence: 0.8500174075

 $00:38:36.463 \longrightarrow 00:38:38.598$  have shown association with survival.

 $00:38:38.600 \longrightarrow 00:38:39.842$  This study in and of itself

NOTE Confidence: 0.8500174075

 $00:38:39.842 \longrightarrow 00:38:41.283$  did not show that there was

NOTE Confidence: 0.8500174075

 $00:38:41.283 \longrightarrow 00:38:42.415$  any difference in survival,

NOTE Confidence: 0.8500174075

 $00:38:42.420 \longrightarrow 00:38:43.730$  definitely not powered for this.

NOTE Confidence: 0.8500174075

 $00:38:43.730 \longrightarrow 00:38:45.704$  It was not the main outcome and

NOTE Confidence: 0.8500174075

00:38:45.704 --> 00:38:47.220 of course there are socio.

NOTE Confidence: 0.8500174075

 $00{:}38{:}47.220 \dashrightarrow 00{:}38{:}49.392$  I recognize there are socioeconomic and

NOTE Confidence: 0.8500174075

 $00{:}38{:}49.392 \dashrightarrow 00{:}38{:}51.691$  other factors that can impact patient

NOTE Confidence: 0.8500174075

 $00:38:51.691 \dashrightarrow 00:38:54.055$  care delivery and confound the results.

NOTE Confidence: 0.8500174075

 $00:38:54.060 \longrightarrow 00:38:54.624$  For example,

NOTE Confidence: 0.8500174075

 $00{:}38{:}54.624 \dashrightarrow 00{:}38{:}56.034$  patients who are willing to

NOTE Confidence: 0.8500174075

 $00:38:56.034 \longrightarrow 00:38:57.988$  travel to the academic centers may

NOTE Confidence: 0.8500174075

 $00:38:57.988 \longrightarrow 00:38:59.388$  differ systematically from those

NOTE Confidence: 0.8500174075

 $00:38:59.388 \longrightarrow 00:39:01.278$  who seek care closer to home.

NOTE Confidence: 0.781975840526316

 $00:39:03.770 \longrightarrow 00:39:05.810$  Since then, I'm not going to read all

NOTE Confidence: 0.781975840526316

 $00{:}39{:}05.810 \dashrightarrow 00{:}39{:}07.738$  this and tell you this is historic

 $00:39:07.738 \longrightarrow 00:39:10.762$  data going back to 2012 to 2018.

NOTE Confidence: 0.781975840526316

00:39:10.762 --> 00:39:13.448 Smilo has, I think, been aware of this.

NOTE Confidence: 0.781975840526316

 $00:39:13.450 \longrightarrow 00:39:14.974$  The leadership has been aware of

NOTE Confidence: 0.781975840526316

 $00:39:14.974 \longrightarrow 00:39:16.781$  this and there's been a lot of

NOTE Confidence: 0.781975840526316

00:39:16.781 --> 00:39:18.251 things that have changed to improve

NOTE Confidence: 0.781975840526316

 $00:39:18.251 \longrightarrow 00:39:19.868$  quality even in the last five years.

NOTE Confidence: 0.781975840526316

 $00:39:19.870 \longrightarrow 00:39:21.499$  And I'd love to do this study and I

NOTE Confidence: 0.781975840526316

 $00:39:21.499 \longrightarrow 00:39:23.221$  will do the study a few years from now

NOTE Confidence: 0.781975840526316

 $00:39:23.221 \longrightarrow 00:39:25.048$  as well and see how much better we are.

NOTE Confidence: 0.781975840526316

 $00:39:25.050 \longrightarrow 00:39:27.110$  For example, oncology care pathways

NOTE Confidence: 0.781975840526316

 $00:39:27.110 \longrightarrow 00:39:28.346$  have been initiated.

NOTE Confidence: 0.781975840526316

 $00:39:28.350 \longrightarrow 00:39:30.885$  Community hospitals and disease teams

NOTE Confidence: 0.781975840526316

 $00:39:30.885 \dashrightarrow 00:39:34.020$  have been better integrated at SMILOW.

NOTE Confidence: 0.781975840526316

 $00:39:34.020 \longrightarrow 00:39:36.300$  We are creating local disease teams,

NOTE Confidence: 0.781975840526316

00:39:36.300 --> 00:39:38.560 experts at community hospitals primarily

 $00:39:38.560 \longrightarrow 00:39:41.700$  dedicated to head and neck cancer care.

NOTE Confidence: 0.781975840526316

 $00:39{:}41.700 \dashrightarrow 00{:}39{:}44.526$  Physicians at the academic Center have

NOTE Confidence: 0.781975840526316

 $00:39:44.526 \longrightarrow 00:39:46.410$  established clinics in surrounding

NOTE Confidence: 0.781975840526316 00:39:46.480 --> 00:39:47.320 care centers. NOTE Confidence: 0.781975840526316

 $00:39:47.320 \longrightarrow 00:39:49.636$  We're trying to bring culture from

NOTE Confidence: 0.781975840526316

 $00:39:49.636 \longrightarrow 00:39:52.562$  one place to another as well and

NOTE Confidence: 0.781975840526316

 $00:39:52.562 \longrightarrow 00:39:54.302$  better integrating and aligning

NOTE Confidence: 0.781975840526316

 $00{:}39{:}54.302 \dashrightarrow 00{:}39{:}56.600$  culture across our care centers.

NOTE Confidence: 0.781975840526316 00:39:56.600 --> 00:39:57.092 Of course, NOTE Confidence: 0.781975840526316

00:39:57.092 --> 00:39:58.814 advancement in ER has helped a lot.

NOTE Confidence: 0.781975840526316

 $00:39:58.820 \longrightarrow 00:40:01.196$  This is going back to 2012

NOTE Confidence: 0.781975840526316

 $00:40:01.196 \longrightarrow 00:40:03.450$  when the ER was first.

NOTE Confidence: 0.781975840526316

 $00:40:03.450 \longrightarrow 00:40:05.890$  Initiated in the health system,

NOTE Confidence: 0.781975840526316

 $00:40:05.890 \longrightarrow 00:40:07.720$  we have more clinical trials and

NOTE Confidence: 0.781975840526316

 $00:40:07.720 \longrightarrow 00:40:09.307$  they're offered at care centers

NOTE Confidence: 0.781975840526316

 $00:40:09.307 \longrightarrow 00:40:11.137$  and there's a lot of other

 $00:40:11.137 \longrightarrow 00:40:12.550$  improvements that are ongoing.

NOTE Confidence: 0.781975840526316

 $00:40:12.550 \longrightarrow 00:40:14.818$  And I think delivering high quality

NOTE Confidence: 0.781975840526316

00:40:14.818 --> 00:40:17.331 care across the system for head and

NOTE Confidence: 0.781975840526316

00:40:17.331 --> 00:40:19.515 neck cancer is an important part of

NOTE Confidence: 0.781975840526316

 $00:40:19.589 \longrightarrow 00:40:21.869$  our systems growth and integration.

NOTE Confidence: 0.887644101111111

00:40:23.980 --> 00:40:26.476 So really what I think is that integrated

NOTE Confidence: 0.887644101111111

 $00:40:26.476 \longrightarrow 00:40:28.451$  health systems can leverage the strength

NOTE Confidence: 0.887644101111111

 $00{:}40{:}28.451 \dashrightarrow 00{:}40{:}30.767$  of the academic center to figure out

NOTE Confidence: 0.887644101111111

00:40:30.767 --> 00:40:32.675 a way to disseminate best practices,

NOTE Confidence: 0.887644101111111

 $00{:}40{:}32.680 \dashrightarrow 00{:}40{:}34.540$  to break those structural barriers

NOTE Confidence: 0.8876441011111111

 $00:40:34.540 \longrightarrow 00:40:36.566$  within our network, to improve patient

NOTE Confidence: 0.887644101111111

 $00:40:36.566 \longrightarrow 00:40:38.378$  care and bring high quality care,

NOTE Confidence: 0.8876441011111111

 $00{:}40{:}38.380 \dashrightarrow 00{:}40{:}39.510$  whether it's closer to home

NOTE Confidence: 0.887644101111111

 $00:40:39.510 \longrightarrow 00:40:40.640$  or bring the patients here.

NOTE Confidence: 0.887644101111111

 $00:40:40.640 \longrightarrow 00:40:42.782$  But we can do this and dare I say

 $00:40:42.782 \longrightarrow 00:40:45.277$  we have a responsibility to do this,

NOTE Confidence: 0.887644101111111

 $00{:}40{:}45.280 {\:{\circ}{\circ}{\circ}}>00{:}40{:}48.052$  but how are we going to overcome

NOTE Confidence: 0.887644101111111

00:40:48.052 --> 00:40:49.240 these structural barriers?

NOTE Confidence: 0.887644101111111

 $00:40:49.240 \longrightarrow 00:40:51.907$  So bringing it back to the patient.

NOTE Confidence: 0.887644101111111

00:40:51.910 --> 00:40:52.876 You know, processing,

NOTE Confidence: 0.887644101111111

00:40:52.876 --> 00:40:54.164 quality care improves survival.

NOTE Confidence: 0.887644101111111

 $00:40:54.170 \longrightarrow 00:40:55.930$  I told you that.

NOTE Confidence: 0.887644101111111

00:40:55.930 --> 00:40:57.250 But quality care.

NOTE Confidence: 0.887644101111111

00:40:57.250 --> 00:40:59.728 It means more than just the

NOTE Confidence: 0.887644101111111

 $00:40:59.728 \longrightarrow 00:41:02.270$  process of care and survival.

NOTE Confidence: 0.887644101111111

 $00:41:02.270 \longrightarrow 00:41:06.550$  It means more than just being cancer free.

NOTE Confidence: 0.887644101111111

 $00:41:06.550 \longrightarrow 00:41:06.780$  Say

NOTE Confidence: 0.98688436

 $00:41:09.310 \longrightarrow 00:41:13.299$  1234512345. Left and right.

NOTE Confidence: 0.98688436

 $00:41:13.300 \longrightarrow 00:41:14.280$  Just to the outside.

NOTE Confidence: 0.879694466

00:41:17.130 --> 00:41:19.250 Hi, this is \*\*\*\* Morris.

NOTE Confidence: 0.879694466

 $00{:}41{:}19.250 \dashrightarrow 00{:}41{:}21.442$  You may have seen me on some of

 $00:41:21.442 \longrightarrow 00:41:23.209$  my Facebook or Internet posts.

NOTE Confidence: 0.879694466

 $00{:}41{:}23.210 \dashrightarrow 00{:}41{:}26.717$  I had tongue cancer and doctor Mayer.

NOTE Confidence: 0.879694466

 $00:41:26.720 \longrightarrow 00:41:29.275$  Doctor Mehra operated and after

NOTE Confidence: 0.879694466

 $00:41:29.275 \longrightarrow 00:41:33.039$  the portion of the tongue that was

NOTE Confidence: 0.879694466

 $00{:}41{:}33.039 \dashrightarrow 00{:}41{:}35.370$  cancerous was removed, he replaced

NOTE Confidence: 0.879694466

 $00:41:35.370 \longrightarrow 00:41:38.730$  it with a skin graft from my forearm.

NOTE Confidence: 0.879694466

 $00:41:38.730 \longrightarrow 00:41:41.376$  I'm now speaking to you 5 weeks to

NOTE Confidence: 0.879694466

 $00:41:41.376 \longrightarrow 00:41:44.328$  the day after surgery and I no longer

NOTE Confidence: 0.879694466

 $00:41:44.328 \longrightarrow 00:41:47.269$  feel like I have marbles in my mouth.

NOTE Confidence: 0.879694466

00:41:47.270 --> 00:41:49.680 I can speak clearly and

NOTE Confidence: 0.879694466

 $00:41:49.680 \longrightarrow 00:41:52.090$  it's entirely due to him.

NOTE Confidence: 0.879694466

00:41:52.090 --> 00:41:54.458 Yeah, Mike, partial Larry.

NOTE Confidence: 0.879694466

 $00{:}41{:}54.458 \dashrightarrow 00{:}42{:}00.215$  Mack Larnax, see perfect was four months ago.

NOTE Confidence: 0.879694466 00:42:00.215 --> 00:42:01.740 And. NOTE Confidence: 0.879694466

 $00:42:01.740 \longrightarrow 00:42:05.750$  I'm amazed that I have this voice.

 $00:42:05.750 \longrightarrow 00:42:06.240$  Go

NOTE Confidence: 0.9916736

 $00:42:10.050 \longrightarrow 00:42:12.828$  1234567. Do you have a feeding tube?

NOTE Confidence: 0.9916736

 $00:42:12.830 \longrightarrow 00:42:17.890$  No. Do you have a tracheotomy? No.

NOTE Confidence: 0.9916736

 $00:42:17.890 \longrightarrow 00:42:21.160$  Ohh, I had my surgery three months ago.

NOTE Confidence: 0.23097047

00:42:24.860 --> 00:42:26.400 Free \*\*\*\* pie,

NOTE Confidence: 0.821764675

00:42:27.350 --> 00:42:28.718 I had my surgery

NOTE Confidence: 0.764081355

 $00:42:28.730 \longrightarrow 00:42:31.148$  on May 2nd by Doctor Merritt.

NOTE Confidence: 0.764081355

 $00:42:31.150 \longrightarrow 00:42:33.439$  So you can see these are patients

NOTE Confidence: 0.764081355

 $00{:}42{:}33.439 \dashrightarrow 00{:}42{:}35.299$  who where function is important.

NOTE Confidence: 0.764081355

 $00:42:35.300 \longrightarrow 00:42:36.968$  It's not just that they're alive

NOTE Confidence: 0.764081355

 $00:42:36.968 \longrightarrow 00:42:38.768$  and they're cancer free and they

NOTE Confidence: 0.764081355

00:42:38.768 --> 00:42:40.028 had guideline compliant care,

NOTE Confidence: 0.764081355

00:42:40.030 --> 00:42:41.902 but you have a laryngectomy patient

NOTE Confidence: 0.764081355

 $00:42:41.902 \longrightarrow 00:42:43.859$  speaking hands free thanks to our

NOTE Confidence: 0.764081355

 $00:42:43.859 \longrightarrow 00:42:45.167$  speech and language pathologist.

NOTE Confidence: 0.764081355

00:42:45.170 --> 00:42:47.459 You've got patients who are in the

00:42:47.459 --> 00:42:49.374 public speaking after having significant

NOTE Confidence: 0.764081355

 $00{:}42{:}49.374 \dashrightarrow 00{:}42{:}51.544$  portions of their tongue removed,

NOTE Confidence: 0.764081355

 $00:42:51.550 \longrightarrow 00:42:53.862$  but high quality reconstructions.

NOTE Confidence: 0.764081355

 $00:42:53.862 \longrightarrow 00:42:56.174$  Partial laryngectomy is for

NOTE Confidence: 0.764081355

 $00:42:56.174 \longrightarrow 00:42:58.639$  salvage which are not done at,

NOTE Confidence: 0.764081355

00:42:58.640 --> 00:43:01.209 certainly not at in low volume places,

NOTE Confidence: 0.764081355

 $00:43:01.210 \longrightarrow 00:43:04.658$  saving saving the larynx.

NOTE Confidence: 0.764081355

 $00:43:04.660 \longrightarrow 00:43:06.812$  So I hope what I've done now is

NOTE Confidence: 0.764081355

 $00{:}43{:}06.812 \dashrightarrow 00{:}43{:}08.650$  you already knew that randomized

NOTE Confidence: 0.764081355

 $00:43:08.650 \longrightarrow 00:43:10.294$  control trials are great.

NOTE Confidence: 0.764081355

 $00:43:10.300 \longrightarrow 00:43:12.184$  They lead to practice changing innovations

NOTE Confidence: 0.764081355

 $00:43:12.184 \longrightarrow 00:43:14.380$  in the care of cancer patients.

NOTE Confidence: 0.764081355

 $00{:}43{:}14.380 \dashrightarrow 00{:}43{:}16.948$  But I hope you can have a better.

NOTE Confidence: 0.764081355

00:43:16.950 --> 00:43:18.694 Respect maybe for quality

NOTE Confidence: 0.764081355

 $00:43:18.694 \longrightarrow 00:43:20.874$  of care research as well.

 $00{:}43{:}20.880 \dashrightarrow 00{:}43{:}22.788$  We can have a remarkable impact

NOTE Confidence: 0.764081355

 $00{:}43{:}22.788 \dashrightarrow 00{:}43{:}24.720$  on patient outcomes and I think

NOTE Confidence: 0.764081355

 $00:43:24.720 \longrightarrow 00:43:26.520$  it's necessary for the quote real

NOTE Confidence: 0.764081355

 $00:43:26.520 \longrightarrow 00:43:28.690$  science to mean anything to patients.

NOTE Confidence: 0.764081355

 $00:43:28.690 \longrightarrow 00:43:31.090$  You have basic science researchers who

NOTE Confidence: 0.764081355

 $00:43:31.090 \longrightarrow 00:43:33.208$  feed the clinical researchers within

NOTE Confidence: 0.764081355

 $00:43:33.208 \longrightarrow 00:43:35.498$  clinical researchers feed the patient

NOTE Confidence: 0.764081355

 $00:43:35.498 \longrightarrow 00:43:37.742$  centered outcomes researchers and that's

NOTE Confidence: 0.764081355

 $00{:}43{:}37.742 \longrightarrow 00{:}43{:}39.806$  what leads to better patient care.

NOTE Confidence: 0.764081355

 $00:43:39.810 \longrightarrow 00:43:41.526$  So Healthcare is remember this is

NOTE Confidence: 0.764081355

 $00{:}43{:}41.526 \dashrightarrow 00{:}43{:}43.489$  getting the right care to the right

NOTE Confidence: 0.764081355

 $00{:}43{:}43.489 \dashrightarrow 00{:}43{:}45.274$  patient at the right time every time.

NOTE Confidence: 0.764081355

 $00:43:45.280 \longrightarrow 00:43:46.544$  That's quality cancer care.

NOTE Confidence: 0.764081355

 $00:43:46.544 \longrightarrow 00:43:47.176$  Thank you.

NOTE Confidence: 0.865140960714286

00:43:55.620 --> 00:43:57.692 Thank you so much for both for the

NOTE Confidence: 0.865140960714286

 $00:43:57.692 \longrightarrow 00:43:59.480$  wonderful talk and the wonderful work.

 $00:43:59.480 \longrightarrow 00:44:01.490$  Are there any questions either

NOTE Confidence: 0.865140960714286

 $00{:}44{:}01.490 \dashrightarrow 00{:}44{:}05.069$  here in the room or I know people

NOTE Confidence: 0.865140960714286

00:44:05.069 --> 00:44:07.045 are also potentially posting?

NOTE Confidence: 0.826873956666667

 $00:44:09.820 \longrightarrow 00:44:10.870$  Through the webinar.

NOTE Confidence: 0.84596603

 $00:44:14.420 \longrightarrow 00:44:15.090$  Yeah, Tommy.

NOTE Confidence: 0.47233906

 $00:44:17.630 \longrightarrow 00:44:17.960$  Open.

NOTE Confidence: 0.98297286

 $00:44:21.040 \longrightarrow 00:44:21.590$  COVID-19.

NOTE Confidence: 0.80118291125

00:44:26.690 --> 00:44:30.090 I don't know yet is a short answer.

NOTE Confidence: 0.80118291125

00:44:30.090 --> 00:44:32.097 I think that's it's an area of active study.

NOTE Confidence: 0.80118291125

00:44:32.100 --> 00:44:33.840 There are some small scale

NOTE Confidence: 0.80118291125

00:44:33.840 --> 00:44:34.884 publications on that,

NOTE Confidence: 0.80118291125

 $00:44:34.890 \longrightarrow 00:44:36.850$  but I think we're going to know.

NOTE Confidence: 0.80118291125

 $00{:}44{:}36.850 \dashrightarrow 00{:}44{:}38.810$  Pretty soon, I can tell you our experience,

NOTE Confidence: 0.80118291125

 $00:44:38.810 \longrightarrow 00:44:39.874$  but that's not based on the data.

NOTE Confidence: 0.80118291125

 $00:44:39.880 \longrightarrow 00:44:41.424$  Maybe Doctor Burtness has

00:44:41.424 --> 00:44:42.968 more information about that,

NOTE Confidence: 0.80118291125

 $00{:}44{:}42.970 --> 00{:}44{:}44.248$  but I think we're going to

NOTE Confidence: 0.80118291125

 $00:44:44.248 \longrightarrow 00:44:45.100$  know better soon enough.

NOTE Confidence: 0.82352231

00:44:47.660 --> 00:44:50.860 I mean I I think we saw a number of,

NOTE Confidence: 0.82352231

 $00:44:50.860 \longrightarrow 00:44:53.299 I$  don't know that we have stats on it,

NOTE Confidence: 0.82352231

 $00:44:53.300 \longrightarrow 00:44:56.884$  but we saw a number of patients with

NOTE Confidence: 0.82352231

 $00{:}44{:}56.884 \dashrightarrow 00{:}44{:}58.900$  considerable delays in diagnosis.

NOTE Confidence: 0.82352231

 $00:44:58.900 \longrightarrow 00:45:02.156$  So I have a I have a question.

NOTE Confidence: 0.82352231

00:45:02.160 --> 00:45:03.388 When we participate in,

NOTE Confidence: 0.82352231

 $00:45:03.388 \longrightarrow 00:45:05.230$  so dragging you back to the

NOTE Confidence: 0.82352231

 $00:45:05.292 \longrightarrow 00:45:07.278$  clinical trial side for a moment,

NOTE Confidence: 0.82352231

 $00:45:07.280 \longrightarrow 00:45:10.952$  but a really important consideration for

NOTE Confidence: 0.82352231

 $00:45:10.952 \longrightarrow 00:45:15.069$  surgically based trials is how do we set

NOTE Confidence: 0.82352231

 $00{:}45{:}15.069 \dashrightarrow 00{:}45{:}18.800$  what the benchmark is for the right surgery.

NOTE Confidence: 0.82352231

00:45:18.800 --> 00:45:21.332 And I know you're participating in

NOTE Confidence: 0.82352231

 $00:45:21.332 \longrightarrow 00:45:23.820$  the Sentinel lymph node trial now,

 $00:45:23.820 \longrightarrow 00:45:27.684$  sort of how does that credentialing process?

NOTE Confidence: 0.82352231

 $00{:}45{:}27.690 \dashrightarrow 00{:}45{:}31.757$  Sit with our own quality enhancement efforts.

NOTE Confidence: 0.83874719125

 $00:45:34.030 \longrightarrow 00:45:35.038$  It's a good question.

NOTE Confidence: 0.83874719125

00:45:35.038 --> 00:45:36.046 I think you're right.

NOTE Confidence: 0.83874719125

 $00:45:36.050 \longrightarrow 00:45:37.898$  It's just exciting now to have

NOTE Confidence: 0.83874719125

00:45:37.898 --> 00:45:39.130 surgeons involved in randomized

NOTE Confidence: 0.83874719125

00:45:39.185 --> 00:45:40.656 control trials like ECOG 3311,

NOTE Confidence: 0.83874719125

 $00:45:40.656 \longrightarrow 00:45:41.708$  the Sentinel node trial.

NOTE Confidence: 0.83874719125

 $00{:}45{:}41.710 \dashrightarrow 00{:}45{:}43.948$  It's actually great because it hasn't

NOTE Confidence: 0.83874719125

 $00{:}45{:}43.948 \rightarrow 00{:}45{:}46.670$  happened a lot in head neck cancer.

NOTE Confidence: 0.83874719125

00:45:46.670 --> 00:45:48.539 You know, I think that for clinical

NOTE Confidence: 0.83874719125

00:45:48.539 --> 00:45:50.280 trials it's different than patient these,

NOTE Confidence: 0.83874719125

 $00{:}45{:}50.280 \to 00{:}45{:}51.675$  these comparative effectiveness

NOTE Confidence: 0.83874719125

 $00:45:51.675 \longrightarrow 00:45:54.930$  researchers because you need to know if

NOTE Confidence: 0.83874719125

 $00:45:55.003 \longrightarrow 00:45:57.427$  the intervention is effective or not.

 $00:45:57.430 \longrightarrow 00:45:59.080$  You need high quality surgeons every

NOTE Confidence: 0.83874719125

 $00:45:59.080 \longrightarrow 00:46:00.931$  time they need to be credentialed

NOTE Confidence: 0.83874719125

 $00:46:00.931 \longrightarrow 00:46:02.666$  and the surgical quality metrics

NOTE Confidence: 0.83874719125

 $00:46:02.666 \longrightarrow 00:46:04.351$  are being monitored constantly and

NOTE Confidence: 0.83874719125

 $00:46:04.351 \longrightarrow 00:46:06.423$  I think you need that for clinical

NOTE Confidence: 0.83874719125

 $00{:}46{:}06.423 \dashrightarrow 00{:}46{:}08.150$  research and I'm glad it's there.

NOTE Confidence: 0.83874719125

 $00:46:08.150 \longrightarrow 00:46:10.117$  But how you apply that to the

NOTE Confidence: 0.83874719125

 $00:46:10.117 \longrightarrow 00:46:11.640$  real world I think is,

NOTE Confidence: 0.83874719125

 $00{:}46{:}11.640 \dashrightarrow 00{:}46{:}13.025$  you know at the second

NOTE Confidence: 0.83874719125

 $00:46:13.025 \longrightarrow 00:46:14.133$  area of research interest.

NOTE Confidence: 0.83874719125

00:46:14.140 --> 00:46:16.275 But I'm glad they're credentialed

NOTE Confidence: 0.83874719125

00:46:16.275 --> 00:46:17.983 high quality surgeons during

NOTE Confidence: 0.83874719125

 $00:46:17.983 \longrightarrow 00:46:19.509$  the clinical trials.

NOTE Confidence: 0.83874719125 00:46:19.510 --> 00:46:19.760 We NOTE Confidence: 0.858781919

 $00:46:19.770 \longrightarrow 00:46:22.446$  have a question from Doctor

NOTE Confidence: 0.858781919

 $00{:}46{:}22.446 \dashrightarrow 00{:}46{:}24.230$  Robinson in radiation on cology.

 $00:46:24.230 \longrightarrow 00:46:28.530$  How do you disseminate the

NOTE Confidence: 0.858781919

 $00:46:28.530 \longrightarrow 00:46:31.970$  these quality insights to?

NOTE Confidence: 0.858781919

 $00:46:31.970 \longrightarrow 00:46:35.127$  The lower volume centers and are there

NOTE Confidence: 0.858781919

 $00:46:35.127 \longrightarrow 00:46:37.461$  specific guidelines for which patients

NOTE Confidence: 0.858781919

00:46:37.461 --> 00:46:40.185 should be referred for high volume?

NOTE Confidence: 0.858781919

 $00:46:40.190 \longrightarrow 00:46:42.530$  Is it practical to refer everyone

NOTE Confidence: 0.858781919

 $00:46:42.530 \longrightarrow 00:46:44.830$  with less common cancers like head,

NOTE Confidence: 0.858781919

 $00:46:44.830 \longrightarrow 00:46:47.950$  neck cancer? And if not,

NOTE Confidence: 0.858781919

 $00:46:47.950 \longrightarrow 00:46:51.570$  how do you feed these?

NOTE Confidence: 0.858781919

00:46:51.570 --> 00:46:53.738 These care care approaches

NOTE Confidence: 0.858781919

 $00:46:53.738 \longrightarrow 00:46:56.448$  to the lower volume centers.

NOTE Confidence: 0.782602858888889

 $00:46:57.460 \longrightarrow 00:46:58.460$  That's a great question.

NOTE Confidence: 0.782602858888889

 $00:46:58.460 \longrightarrow 00:46:59.710$  I think it's \$1,000,000 question.

NOTE Confidence: 0.782602858888889

 $00{:}46{:}59.710 \dashrightarrow 00{:}47{:}01.859$  If we could do that honestly I

NOTE Confidence: 0.78260285888889

 $00:47:01.859 \longrightarrow 00:47:04.053$  think we could improve survival more

00:47:04.053 --> 00:47:06.192 than the next billion dollar drug

NOTE Confidence: 0.782602858888889

 $00{:}47{:}06.192 \dashrightarrow 00{:}47{:}08.390$  basically and I think that's that's our

NOTE Confidence: 0.782602858888889

 $00:47:08.450 \longrightarrow 00:47:10.368$  challenge that's what we need to do.

NOTE Confidence: 0.782602858888889

 $00:47:10.370 \longrightarrow 00:47:11.924$  I don't know I think every system

NOTE Confidence: 0.782602858888889

 $00:47:11.924 \longrightarrow 00:47:13.709$  has it has a different approach.

NOTE Confidence: 0.78260285888889

 $00:47:13.710 \longrightarrow 00:47:15.152$  I think Yale New Haven Health System

NOTE Confidence: 0.782602858888889

 $00:47:15.152 \longrightarrow 00:47:16.543$  is going to be different than

NOTE Confidence: 0.782602858888889

 $00:47:16.543 \longrightarrow 00:47:17.989$  memorial is going to be different

NOTE Confidence: 0.782602858888889

 $00{:}47{:}17.989 \dashrightarrow 00{:}47{:}19.588$  than pen is going to be different

NOTE Confidence: 0.782602858888889

 $00:47:19.588 \longrightarrow 00:47:20.776$  than any health system but.

NOTE Confidence: 0.782602858888889

 $00{:}47{:}20.776 \dashrightarrow 00{:}47{:}23.224$  I don't know what the right answer is,

NOTE Confidence: 0.782602858888889

 $00:47:23.230 \longrightarrow 00:47:24.469$  but we need to figure it out.

NOTE Confidence: 0.881876587142857

 $00{:}47{:}27.800 \dashrightarrow 00{:}47{:}30.688$  I guess I have a follow up question

NOTE Confidence: 0.881876587142857

 $00:47:30.688 \longrightarrow 00:47:33.825$  to that and that is some of

NOTE Confidence: 0.881876587142857

 $00:47:33.825 \longrightarrow 00:47:36.513$  the hypothesis you had about what

NOTE Confidence: 0.881876587142857

 $00:47:36.513 \longrightarrow 00:47:40.311$  controlled let's say the rate of

00:47:40.311 --> 00:47:44.948 margin positivity had to do with.

NOTE Confidence: 0.881876587142857

 $00:47:44.950 \longrightarrow 00:47:49.380$  Frozen margin evaluation communication.

NOTE Confidence: 0.871447651666667

 $00:47:52.010 \longrightarrow 00:47:54.523$  Are are there components of that that

NOTE Confidence: 0.871447651666667

 $00:47:54.523 \longrightarrow 00:47:56.730$  could be enabled by telemedicine?

NOTE Confidence: 0.871447651666667

 $00:47:56.730 \longrightarrow 00:47:58.886$  So you know you referred to digital

NOTE Confidence: 0.871447651666667

00:47:58.886 --> 00:48:00.978 pathology once or twice in your talk,

NOTE Confidence: 0.871447651666667

 $00:48:00.980 \longrightarrow 00:48:05.698$  but are there ways that expert disease

NOTE Confidence: 0.871447651666667

00:48:05.698 --> 00:48:09.568 focused let's say pathology evaluation?

NOTE Confidence: 0.871447651666667

00:48:09.570 --> 00:48:12.020 Could be extended through telemedicine.

NOTE Confidence: 0.900279335

00:48:14.150 --> 00:48:16.466 Yeah, I think that would be,

NOTE Confidence: 0.900279335

 $00{:}48{:}16.470 \dashrightarrow 00{:}48{:}19.585$  I think that's one way to bring expert

NOTE Confidence: 0.900279335

 $00{:}48{:}19.585 \dashrightarrow 00{:}48{:}22.315$  level care across the system with

NOTE Confidence: 0.900279335

00:48:22.315 --> 00:48:24.606 telemedicine and I think pathology

NOTE Confidence: 0.900279335

 $00:48:24.606 \longrightarrow 00:48:27.998$  would be a great way to start actually.