

WEBVTT

NOTE duration:"01:22:30"

NOTE recognizability:0.875

NOTE language:en-us

NOTE Confidence: 0.6803071

00:00:00.000 --> 00:00:01.970 To introduce Amy Marble from

NOTE Confidence: 0.8566743325

00:00:01.980 --> 00:00:03.900 the Melanoma Research Foundation,

NOTE Confidence: 0.803537727142857

00:00:04.010 --> 00:00:05.669 we'd like to thank Amy for Co.

NOTE Confidence: 0.803537727142857

00:00:05.670 --> 00:00:08.155 Sponsoring this event with us and I'm

NOTE Confidence: 0.803537727142857

00:00:08.155 --> 00:00:10.381 going to let me take the floor for

NOTE Confidence: 0.803537727142857

00:00:10.381 --> 00:00:11.788 a couple of minutes to talk about

NOTE Confidence: 0.803537727142857

00:00:11.790 --> 00:00:13.270 the Melanoma Research Foundation,

NOTE Confidence: 0.803537727142857

00:00:13.270 --> 00:00:15.120 which is something that's very

NOTE Confidence: 0.803537727142857

00:00:15.120 --> 00:00:16.669 dear to all of our hearts.

NOTE Confidence: 0.803537727142857

00:00:16.670 --> 00:00:18.790 They support a lot of the work that we do,

NOTE Confidence: 0.803537727142857

00:00:18.790 --> 00:00:20.506 and we love partnering with them.

NOTE Confidence: 0.803537727142857

00:00:20.510 --> 00:00:21.906 So thank you Amy,

NOTE Confidence: 0.803537727142857

00:00:21.906 --> 00:00:24.000 for being with us this evening.

NOTE Confidence: 0.803537727142857

00:00:24.000 --> 00:00:26.043 Thanks after Cougar and Doctor Small

NOTE Confidence: 0.803537727142857

00:00:26.043 --> 00:00:27.909 for hosting this event and for

NOTE Confidence: 0.803537727142857

00:00:27.909 --> 00:00:30.226 all of the physicians who will be

NOTE Confidence: 0.803537727142857

00:00:30.226 --> 00:00:32.286 presenting as Doctor Krueger said.

NOTE Confidence: 0.803537727142857

00:00:32.286 --> 00:00:33.466 My name is Amy Marva.

NOTE Confidence: 0.803537727142857

00:00:33.470 --> 00:00:35.630 I am the education officer here at

NOTE Confidence: 0.803537727142857

00:00:35.630 --> 00:00:36.966 the Melanoma Research Foundation,

NOTE Confidence: 0.803537727142857

00:00:36.966 --> 00:00:39.190 the Melanoma Research Foundation.

NOTE Confidence: 0.803537727142857

00:00:39.190 --> 00:00:40.922 We are celebrating our 25th

NOTE Confidence: 0.803537727142857

00:00:40.922 --> 00:00:42.218 anniversary this year.

NOTE Confidence: 0.803537727142857

00:00:42.218 --> 00:00:43.946 The foundation was started

NOTE Confidence: 0.803537727142857

00:00:43.946 --> 00:00:46.744 by a patient when in 1996,

NOTE Confidence: 0.803537727142857

00:00:46.744 --> 00:00:49.432 which seems not that long ago,

NOTE Confidence: 0.803537727142857

00:00:49.440 --> 00:00:52.526 but it's been 25 years and she was

NOTE Confidence: 0.803537727142857

00:00:52.526 --> 00:00:54.650 on her third recurrence of Melanoma.

NOTE Confidence: 0.803537727142857

00:00:54.650 --> 00:00:56.810 And was told she had no

NOTE Confidence: 0.803537727142857  
00:00:56.810 --> 00:00:58.660 additional treatment options.  
NOTE Confidence: 0.803537727142857  
00:00:58.660 --> 00:01:00.249 She did not like that answer and  
NOTE Confidence: 0.803537727142857  
00:01:00.249 --> 00:01:01.977 so she wanted to make a difference  
NOTE Confidence: 0.803537727142857  
00:01:01.980 --> 00:01:04.960 with her with her cancer journey and  
NOTE Confidence: 0.803537727142857  
00:01:04.960 --> 00:01:07.180 decided to start the foundation to  
NOTE Confidence: 0.803537727142857  
00:01:07.180 --> 00:01:09.884 provide research to opportunities.  
NOTE Confidence: 0.803537727142857  
00:01:09.884 --> 00:01:12.912 Funding to both researchers and  
NOTE Confidence: 0.803537727142857  
00:01:12.912 --> 00:01:14.340 clinicians to find new treatment  
NOTE Confidence: 0.803537727142857  
00:01:14.340 --> 00:01:15.798 options as well as to hopefully  
NOTE Confidence: 0.803537727142857  
00:01:15.798 --> 00:01:17.778 one day find a cure for Melanoma.  
NOTE Confidence: 0.803537727142857  
00:01:17.780 --> 00:01:18.870 Unfortunately,  
NOTE Confidence: 0.803537727142857  
00:01:18.880 --> 00:01:19.310 she passed  
NOTE Confidence: 0.767887795  
00:01:19.320 --> 00:01:21.860 away before the MRF was able to provide  
NOTE Confidence: 0.767887795  
00:01:21.860 --> 00:01:23.438 their first research grants, but  
NOTE Confidence: 0.851616413333333  
00:01:23.450 --> 00:01:25.628 obviously her legacy lives on because.  
NOTE Confidence: 0.851616413333333

00:01:25.630 --> 00:01:28.290 We are celebrating our 25th anniversary.  
NOTE Confidence: 0.8516164133333333

00:01:28.290 --> 00:01:30.050 Obviously, as the name implies,  
NOTE Confidence: 0.8516164133333333

00:01:30.050 --> 00:01:30.929 Melanoma Research Foundation.  
NOTE Confidence: 0.8516164133333333

00:01:30.929 --> 00:01:33.470 We focus a lot on research grants,  
NOTE Confidence: 0.8516164133333333

00:01:33.470 --> 00:01:36.014 but we also focus on two other areas,  
NOTE Confidence: 0.8516164133333333

00:01:36.020 --> 00:01:38.560 advocacy as well as education.  
NOTE Confidence: 0.8516164133333333

00:01:38.560 --> 00:01:40.100 We have a lot of educational opportunities  
NOTE Confidence: 0.8516164133333333

00:01:40.100 --> 00:01:41.693 such as these patients, symposia,  
NOTE Confidence: 0.8516164133333333

00:01:41.693 --> 00:01:45.510 events as well as education materials,  
NOTE Confidence: 0.8516164133333333

00:01:45.510 --> 00:01:47.980 webinars, animated patient videos  
NOTE Confidence: 0.872617532

00:01:47.990 --> 00:01:50.680 kind of helped to explain the Melanoma  
NOTE Confidence: 0.872617532

00:01:50.680 --> 00:01:51.868 diagnosis and treatment options  
NOTE Confidence: 0.81942171375

00:01:51.880 --> 00:01:54.088 a little bit clearer in a visual way.  
NOTE Confidence: 0.81942171375

00:01:54.090 --> 00:01:56.220 We have a lot of opportunities.  
NOTE Confidence: 0.81942171375

00:01:56.220 --> 00:01:57.504 And I really encourage you to  
NOTE Confidence: 0.81942171375

00:01:57.504 --> 00:01:59.928 visit our website at [melanoma.org](http://melanoma.org)

NOTE Confidence: 0.81942171375

00:01:59.930 --> 00:02:01.788 to learn more to find out, find

NOTE Confidence: 0.9458763

00:02:01.800 --> 00:02:03.688 more resources, more information,

NOTE Confidence: 0.926267192222222

00:02:04.260 --> 00:02:06.294 and to find the support that you might need.

NOTE Confidence: 0.926267192222222

00:02:06.300 --> 00:02:08.001 So again, I'm really happy to be

NOTE Confidence: 0.926267192222222

00:02:08.001 --> 00:02:09.855 here and to the MRF to help Co.

NOTE Confidence: 0.926267192222222

00:02:09.855 --> 00:02:11.710 Sponsor this event and Doctor Kluger.

NOTE Confidence: 0.926267192222222

00:02:11.710 --> 00:02:14.056 I'll turn it back over to you to to

NOTE Confidence: 0.926267192222222

00:02:14.056 --> 00:02:16.608 start to kick off the speakers right?

NOTE Confidence: 0.926267192222222

00:02:16.608 --> 00:02:18.148 Thank you so much Amy.

NOTE Confidence: 0.926267192222222

00:02:18.150 --> 00:02:19.787 We really appreciate everything that you

NOTE Confidence: 0.926267192222222

00:02:19.787 --> 00:02:22.449 do for us as a as a research community.

NOTE Confidence: 0.862434527142857

00:02:22.990 --> 00:02:25.583 So our first speaker this evening is Doctor

NOTE Confidence: 0.862434527142857

00:02:25.583 --> 00:02:27.718 Jonathan Leventhal. He is an assistant

NOTE Confidence: 0.858145257777778

00:02:27.730 --> 00:02:29.221 professor of dermatology.

NOTE Confidence: 0.858145257777778

00:02:29.221 --> 00:02:32.203 We call him live for short.

NOTE Confidence: 0.858145257777778

00:02:32.210 --> 00:02:34.004 He's going to talk to us  
NOTE Confidence: 0.858145257777778

00:02:34.004 --> 00:02:35.200 about diagnosis of Melanoma,  
NOTE Confidence: 0.858145257777778

00:02:35.200 --> 00:02:36.320 so take it away, John.  
NOTE Confidence: 0.922985388

00:02:37.690 --> 00:02:38.950 Thank you so much Harriet.  
NOTE Confidence: 0.922985388

00:02:38.950 --> 00:02:40.320 Let's just share my screen.  
NOTE Confidence: 0.922985388

00:02:40.320 --> 00:02:41.990 I'm John Leventhal on the  
NOTE Confidence: 0.922985388

00:02:41.990 --> 00:02:43.660 dermatologist in the Melanoma team  
NOTE Confidence: 0.922985388

00:02:43.720 --> 00:02:45.768 it's a pleasure to be here and today  
NOTE Confidence: 0.922985388

00:02:45.768 --> 00:02:47.510 I'm going to discuss diagnosis,  
NOTE Confidence: 0.922985388

00:02:47.510 --> 00:02:49.098 risk factors, prevention and  
NOTE Confidence: 0.922985388

00:02:49.098 --> 00:02:52.370 screening in Melanoma in advance.  
NOTE Confidence: 0.922985388

00:02:52.370 --> 00:02:54.258 So I wanted to start by going over  
NOTE Confidence: 0.922985388

00:02:54.258 --> 00:02:56.297 some key facts and that is that skin  
NOTE Confidence: 0.922985388

00:02:56.297 --> 00:02:58.254 cancer is the most common cancer in  
NOTE Confidence: 0.922985388

00:02:58.254 --> 00:03:00.326 the United States and there are three  
NOTE Confidence: 0.922985388

00:03:00.330 --> 00:03:01.890 main types that you may have heard of.

NOTE Confidence: 0.922985388

00:03:01.890 --> 00:03:02.696 Basal cell,

NOTE Confidence: 0.922985388

00:03:02.696 --> 00:03:04.308 squamous cell and Melanoma.

NOTE Confidence: 0.922985388

00:03:04.310 --> 00:03:06.310 And although Melanoma only accounts

NOTE Confidence: 0.922985388

00:03:06.310 --> 00:03:08.506 for approximately 1% of all skin cancers,

NOTE Confidence: 0.922985388

00:03:08.506 --> 00:03:10.356 it is the deadliest and is more

NOTE Confidence: 0.922985388

00:03:10.356 --> 00:03:11.841 than one million people living

NOTE Confidence: 0.922985388

00:03:11.841 --> 00:03:13.830 with Melanoma in the United States.

NOTE Confidence: 0.912710975

00:03:17.460 --> 00:03:19.063 And so I wanted to start by

NOTE Confidence: 0.912710975

00:03:19.063 --> 00:03:20.449 going over what is Melanoma?

NOTE Confidence: 0.912710975

00:03:20.450 --> 00:03:22.415 So Melanoma is a malignant

NOTE Confidence: 0.912710975

00:03:22.415 --> 00:03:23.594 tumor of melanocytes,

NOTE Confidence: 0.912710975

00:03:23.600 --> 00:03:25.196 so these are the cells that

NOTE Confidence: 0.912710975

00:03:25.196 --> 00:03:26.580 produce pigment in our body.

NOTE Confidence: 0.912710975

00:03:26.580 --> 00:03:28.940 Most of them are located on the skin.

NOTE Confidence: 0.912710975

00:03:28.940 --> 00:03:31.305 However, they can also be

NOTE Confidence: 0.912710975

00:03:31.305 --> 00:03:33.197 present in mucosal surfaces,  
NOTE Confidence: 0.912710975

00:03:33.200 --> 00:03:36.404 such as on the eyes or inside the map.  
NOTE Confidence: 0.912710975

00:03:36.410 --> 00:03:38.610 And many cases of Melanoma,  
NOTE Confidence: 0.912710975

00:03:38.610 --> 00:03:39.610 most I should say,  
NOTE Confidence: 0.912710975

00:03:39.610 --> 00:03:41.110 arises new lesions on the skin.  
NOTE Confidence: 0.912710975

00:03:41.110 --> 00:03:42.470 However, some can develop  
NOTE Confidence: 0.912710975

00:03:42.470 --> 00:03:44.170 from an atypical mole or  
NOTE Confidence: 0.912710975

00:03:44.170 --> 00:03:45.760 birthmark that then transforms.  
NOTE Confidence: 0.874088577142857

00:03:47.970 --> 00:03:51.337 Next flight. And so who develops Melanoma?  
NOTE Confidence: 0.874088577142857

00:03:51.340 --> 00:03:53.310 Well, anybody can, all ages,  
NOTE Confidence: 0.874088577142857

00:03:53.310 --> 00:03:54.564 genders and ethnicities.  
NOTE Confidence: 0.874088577142857

00:03:54.564 --> 00:03:57.072 However, the majority of people with  
NOTE Confidence: 0.874088577142857

00:03:57.072 --> 00:03:59.524 Melanoma are white men over the age of 50.  
NOTE Confidence: 0.874088577142857

00:03:59.530 --> 00:04:01.648 Interestingly, under the age of 50,  
NOTE Confidence: 0.874088577142857

00:04:01.650 --> 00:04:03.515 women are more likely than  
NOTE Confidence: 0.874088577142857

00:04:03.515 --> 00:04:05.007 men to develop Melanoma.

NOTE Confidence: 0.874088577142857  
00:04:05.010 --> 00:04:07.810 This is likely due to certain tanning habits.  
NOTE Confidence: 0.874088577142857  
00:04:07.810 --> 00:04:09.346 However, by 865,  
NOTE Confidence: 0.874088577142857  
00:04:09.346 --> 00:04:12.418 most people with Melanoma are men.  
NOTE Confidence: 0.874088577142857  
00:04:12.420 --> 00:04:14.510 Next fight.  
NOTE Confidence: 0.874088577142857  
00:04:14.510 --> 00:04:15.966 And if you look at this table,  
NOTE Confidence: 0.874088577142857  
00:04:15.970 --> 00:04:17.986 you'll see that the lifetime risk  
NOTE Confidence: 0.874088577142857  
00:04:17.986 --> 00:04:19.770 of developing Melanoma is increased  
NOTE Confidence: 0.874088577142857  
00:04:19.770 --> 00:04:21.670 over the past several decades,  
NOTE Confidence: 0.874088577142857  
00:04:21.670 --> 00:04:23.426 decades, and currently approximately  
NOTE Confidence: 0.874088577142857  
00:04:23.426 --> 00:04:26.622 one in 40 individuals in the United  
NOTE Confidence: 0.874088577142857  
00:04:26.622 --> 00:04:28.570 States will develop Melanoma.  
NOTE Confidence: 0.874088577142857  
00:04:28.570 --> 00:04:30.488 This is likely due to many factors,  
NOTE Confidence: 0.874088577142857  
00:04:30.490 --> 00:04:32.385 but possibly because we're picking  
NOTE Confidence: 0.874088577142857  
00:04:32.385 --> 00:04:34.280 up melanomas at earlier stages,  
NOTE Confidence: 0.874088577142857  
00:04:34.280 --> 00:04:35.928 so one of the things get started by  
NOTE Confidence: 0.874088577142857

00:04:35.928 --> 00:04:37.810 going over. How do we diagnose Melanoma?  
NOTE Confidence: 0.936124577333333

00:04:40.260 --> 00:04:43.404 And so the first step of diagnosing Melanoma  
NOTE Confidence: 0.936124577333333

00:04:43.404 --> 00:04:46.949 is to identify a concerning skin lesion.  
NOTE Confidence: 0.936124577333333

00:04:46.950 --> 00:04:49.498 In advance this slide.  
NOTE Confidence: 0.936124577333333

00:04:49.500 --> 00:04:50.660 You can advance again,  
NOTE Confidence: 0.936124577333333

00:04:50.660 --> 00:04:53.013 and so it's important for us to have  
NOTE Confidence: 0.936124577333333

00:04:53.013 --> 00:04:54.959 an idea of what Melanoma looks like.  
NOTE Confidence: 0.936124577333333

00:04:54.960 --> 00:04:57.890 You may be familiar with the ABC DES,  
NOTE Confidence: 0.936124577333333

00:04:57.890 --> 00:05:00.315 which stands for asymmetrical lesion,  
NOTE Confidence: 0.936124577333333

00:05:00.320 --> 00:05:02.080 a border that's irregular color  
NOTE Confidence: 0.936124577333333

00:05:02.080 --> 00:05:04.724 that's varied and then D is diameter  
NOTE Confidence: 0.936124577333333

00:05:04.724 --> 00:05:06.360 greater than 6 millimeters,  
NOTE Confidence: 0.936124577333333

00:05:06.360 --> 00:05:07.800 or a pencil tip eraser.  
NOTE Confidence: 0.936124577333333

00:05:07.800 --> 00:05:10.080 I don't love diameter because you can have  
NOTE Confidence: 0.936124577333333

00:05:10.080 --> 00:05:11.807 melanomas that are smaller than that,  
NOTE Confidence: 0.936124577333333

00:05:11.810 --> 00:05:14.180 and so I prefer dark for D as most of

NOTE Confidence: 0.936124577333333

00:05:14.248 --> 00:05:16.894 the melanomas are pigmented lesions and I

NOTE Confidence: 0.936124577333333

00:05:16.894 --> 00:05:19.510 think perhaps the most important one is.

NOTE Confidence: 0.936124577333333

00:05:19.510 --> 00:05:20.710 He which is evolution.

NOTE Confidence: 0.936124577333333

00:05:20.710 --> 00:05:22.868 So we're looking for a lesion that

NOTE Confidence: 0.936124577333333

00:05:22.868 --> 00:05:24.940 seems to be changing either in size,

NOTE Confidence: 0.936124577333333

00:05:24.940 --> 00:05:27.492 shape, or becomes symptomatic.

NOTE Confidence: 0.936124577333333

00:05:27.492 --> 00:05:29.406 Next slide please.

NOTE Confidence: 0.936124577333333

00:05:29.410 --> 00:05:31.363 And I think it's also helpful to have

NOTE Confidence: 0.936124577333333

00:05:31.363 --> 00:05:33.173 an idea what the different types

NOTE Confidence: 0.936124577333333

00:05:33.173 --> 00:05:35.251 of melanomas look like, and so on.

NOTE Confidence: 0.936124577333333

00:05:35.251 --> 00:05:36.733 The top left you'll see the

NOTE Confidence: 0.936124577333333

00:05:36.733 --> 00:05:37.769 superficial spreading type,

NOTE Confidence: 0.936124577333333

00:05:37.770 --> 00:05:39.070 which is the most common.

NOTE Confidence: 0.936124577333333

00:05:39.070 --> 00:05:41.520 But there can also be nodular types,

NOTE Confidence: 0.936124577333333

00:05:41.520 --> 00:05:42.384 lentigo maligna,

NOTE Confidence: 0.936124577333333

00:05:42.384 --> 00:05:44.976 which develops in sun exposed areas.  
NOTE Confidence: 0.936124577333333  
00:05:44.980 --> 00:05:48.004 Some melanomas can actually have no pigment,  
NOTE Confidence: 0.936124577333333  
00:05:48.010 --> 00:05:50.558 and they can appear as pink papules.  
NOTE Confidence: 0.936124577333333  
00:05:50.560 --> 00:05:52.422 And then there's the April and Hyginus  
NOTE Confidence: 0.936124577333333  
00:05:52.422 --> 00:05:54.738 type which can occur on the palms and soles,  
NOTE Confidence: 0.936124577333333  
00:05:54.740 --> 00:05:56.050 or even under the nails,  
NOTE Confidence: 0.936124577333333  
00:05:56.050 --> 00:05:59.394 as seen here as a pigment did band.  
NOTE Confidence: 0.936124577333333  
00:05:59.400 --> 00:06:01.869 Next slide, please.  
NOTE Confidence: 0.936124577333333  
00:06:01.870 --> 00:06:03.730 So once you've identified a  
NOTE Confidence: 0.936124577333333  
00:06:03.730 --> 00:06:04.474 concerning lesion,  
NOTE Confidence: 0.936124577333333  
00:06:04.480 --> 00:06:07.036 a physician performs a skin biopsy.  
NOTE Confidence: 0.936124577333333  
00:06:07.040 --> 00:06:09.664 This can be done either by shave punch  
NOTE Confidence: 0.936124577333333  
00:06:09.664 --> 00:06:11.638 biopsy, or an excision of the lesion.  
NOTE Confidence: 0.936124577333333  
00:06:11.640 --> 00:06:11.994 Now,  
NOTE Confidence: 0.936124577333333  
00:06:11.994 --> 00:06:14.826 the type of biopsy is not that important  
NOTE Confidence: 0.936124577333333  
00:06:14.826 --> 00:06:17.580 as long as the lesion is sampled in

NOTE Confidence: 0.936124577333333  
00:06:17.580 --> 00:06:20.362 its entire T so that an accurate  
NOTE Confidence: 0.936124577333333  
00:06:20.362 --> 00:06:22.980 diagnosis can be made and accurate.  
NOTE Confidence: 0.936124577333333  
00:06:22.980 --> 00:06:25.045 Evaluation of the depth of the lesion  
NOTE Confidence: 0.936124577333333  
00:06:25.045 --> 00:06:27.178 and that takes us to the final step.  
NOTE Confidence: 0.936124577333333  
00:06:27.180 --> 00:06:28.424 Step three in advance,  
NOTE Confidence: 0.936124577333333  
00:06:28.424 --> 00:06:29.979 which is where a pathologist  
NOTE Confidence: 0.936124577333333  
00:06:29.979 --> 00:06:31.790 will look under the microscope.  
NOTE Confidence: 0.936124577333333  
00:06:31.790 --> 00:06:34.166 To confirm the diagnosis and provide  
NOTE Confidence: 0.936124577333333  
00:06:34.166 --> 00:06:36.725 an initial stage which is based on  
NOTE Confidence: 0.936124577333333  
00:06:36.725 --> 00:06:39.227 how deep the Melanoma goes in the low  
NOTE Confidence: 0.936124577333333  
00:06:39.227 --> 00:06:41.460 into the lower layers of the skin.  
NOTE Confidence: 0.936124577333333  
00:06:41.460 --> 00:06:43.410 Next slide.  
NOTE Confidence: 0.936124577333333  
00:06:43.410 --> 00:06:45.237 So now that we know what Melanoma  
NOTE Confidence: 0.936124577333333  
00:06:45.237 --> 00:06:46.968 is and how to diagnose it,  
NOTE Confidence: 0.936124577333333  
00:06:46.970 --> 00:06:48.212 I wanted to briefly review some  
NOTE Confidence: 0.936124577333333

00:06:48.212 --> 00:06:49.582 of the risk factors and what we  
NOTE Confidence: 0.936124577333333  
00:06:49.582 --> 00:06:50.417 can do to prevent it.  
NOTE Confidence: 0.919397075  
00:06:52.580 --> 00:06:53.936 And so when it comes to  
NOTE Confidence: 0.919397075  
00:06:53.936 --> 00:06:54.840 risk factors for cancer,  
NOTE Confidence: 0.919397075  
00:06:54.840 --> 00:06:56.060 there really two types.  
NOTE Confidence: 0.919397075  
00:06:56.060 --> 00:06:57.585 Those that are environmental and  
NOTE Confidence: 0.919397075  
00:06:57.585 --> 00:06:59.399 in those that we can't control,  
NOTE Confidence: 0.919397075  
00:06:59.400 --> 00:07:00.207 which are hereditary.  
NOTE Confidence: 0.919397075  
00:07:00.207 --> 00:07:02.090 So I wanted to start by going  
NOTE Confidence: 0.919397075  
00:07:02.145 --> 00:07:03.940 over those that are environmental.  
NOTE Confidence: 0.77741945  
00:07:06.280 --> 00:07:09.118 Next slide, please.  
NOTE Confidence: 0.77741945  
00:07:09.120 --> 00:07:11.038 And so the modifiable risk factors here.  
NOTE Confidence: 0.77741945  
00:07:11.040 --> 00:07:14.416 If you look at these figures all involve  
NOTE Confidence: 0.77741945  
00:07:14.416 --> 00:07:17.690 ultraviolet radiation, next slide.  
NOTE Confidence: 0.77741945  
00:07:17.690 --> 00:07:19.946 And so ultraviolet radiation reaches the  
NOTE Confidence: 0.77741945  
00:07:19.946 --> 00:07:22.190 earth surface primarily is ultraviolet.

NOTE Confidence: 0.77741945

00:07:22.190 --> 00:07:23.210 A in ultraviolet feet.

NOTE Confidence: 0.77741945

00:07:23.210 --> 00:07:25.063 And as you can see in the

NOTE Confidence: 0.77741945

00:07:25.063 --> 00:07:26.368 figure on the top left,

NOTE Confidence: 0.77741945

00:07:26.370 --> 00:07:29.387 these penetrates the layers of the skin.

NOTE Confidence: 0.77741945

00:07:29.390 --> 00:07:32.468 And what happens is these ultraviolet

NOTE Confidence: 0.77741945

00:07:32.470 --> 00:07:35.158 penetration results and DNA damage and

NOTE Confidence: 0.77741945

00:07:35.158 --> 00:07:38.369 changes in our DNA called mutations.

NOTE Confidence: 0.77741945

00:07:38.370 --> 00:07:40.056 These accumulate and can result in

NOTE Confidence: 0.77741945

00:07:40.056 --> 00:07:41.620 the development of skin cancers,

NOTE Confidence: 0.77741945

00:07:41.620 --> 00:07:42.272 including Melanoma.

NOTE Confidence: 0.77741945

00:07:42.272 --> 00:07:44.880 I also wanted to point out that you

NOTE Confidence: 0.77741945

00:07:44.939 --> 00:07:47.309 ultraviolet a can penetrate car windows,

NOTE Confidence: 0.77741945

00:07:47.310 --> 00:07:48.514 which is something that.

NOTE Confidence: 0.77741945

00:07:48.514 --> 00:07:50.019 Patients often ask me about

NOTE Confidence: 0.77741945

00:07:50.019 --> 00:07:51.059 next slide please.

NOTE Confidence: 0.895974976666667

00:07:53.250 --> 00:07:54.870 And the type of ultraviolet  
NOTE Confidence: 0.895974976666667

00:07:54.870 --> 00:07:56.166 exposure that contributes the  
NOTE Confidence: 0.895974976666667

00:07:56.166 --> 00:07:57.677 most to Melanoma is unfortunately  
NOTE Confidence: 0.895974976666667

00:07:57.677 --> 00:07:59.690 the type that we love the most.  
NOTE Confidence: 0.895974976666667

00:07:59.690 --> 00:08:02.080 So intermittent short bursts of  
NOTE Confidence: 0.895974976666667

00:08:02.080 --> 00:08:03.972 outdoor activity, beach vacations,  
NOTE Confidence: 0.895974976666667

00:08:03.972 --> 00:08:07.234 and the majority of melanomas can be  
NOTE Confidence: 0.895974976666667

00:08:07.234 --> 00:08:09.519 attributed to ultraviolet exposure.  
NOTE Confidence: 0.895974976666667

00:08:09.520 --> 00:08:10.878 You do not want to look like  
NOTE Confidence: 0.895974976666667

00:08:10.878 --> 00:08:12.080 Will Ferrell in that picture.  
NOTE Confidence: 0.895974976666667

00:08:12.080 --> 00:08:14.095 There's also. Evidence thank you  
NOTE Confidence: 0.895974976666667

00:08:14.095 --> 00:08:16.110 can progress the next slide.  
NOTE Confidence: 0.895974976666667

00:08:16.110 --> 00:08:18.090 There's also evidence that  
NOTE Confidence: 0.895974976666667

00:08:18.090 --> 00:08:20.070 sunburns contribute to Melanoma.  
NOTE Confidence: 0.895974976666667

00:08:20.070 --> 00:08:21.790 Now we're not just talking  
NOTE Confidence: 0.895974976666667

00:08:21.790 --> 00:08:23.166 about sunburns in childhood,

NOTE Confidence: 0.895974976666667

00:08:23.170 --> 00:08:26.005 which is a bit of a misconception,

NOTE Confidence: 0.895974976666667

00:08:26.010 --> 00:08:27.239 as some patients will say, well,

NOTE Confidence: 0.895974976666667

00:08:27.239 --> 00:08:29.071 I already had a lot of numbers in

NOTE Confidence: 0.895974976666667

00:08:29.071 --> 00:08:30.733 child that I might as well enjoy

NOTE Confidence: 0.895974976666667

00:08:30.733 --> 00:08:32.270 myself on the golf course now,

NOTE Confidence: 0.895974976666667

00:08:32.270 --> 00:08:34.316 but we know that it's actually

NOTE Confidence: 0.895974976666667

00:08:34.316 --> 00:08:36.467 cumulative sunburns over the course of

NOTE Confidence: 0.895974976666667

00:08:36.467 --> 00:08:38.633 a lifetime that contributes to Melanoma,

NOTE Confidence: 0.895974976666667

00:08:38.640 --> 00:08:39.416 and indeed,

NOTE Confidence: 0.895974976666667

00:08:39.416 --> 00:08:41.356 sunburns during childhood can increase

NOTE Confidence: 0.895974976666667

00:08:41.356 --> 00:08:43.839 the odds of developing Melanoma.

NOTE Confidence: 0.895974976666667

00:08:43.840 --> 00:08:46.408 As you can see in these tables here,

NOTE Confidence: 0.895974976666667

00:08:46.410 --> 00:08:47.020 next slide.

NOTE Confidence: 0.914800643333333

00:08:49.480 --> 00:08:52.273 And. Tanning beds is one of the

NOTE Confidence: 0.914800643333333

00:08:52.273 --> 00:08:54.279 most important carcinogens that we

NOTE Confidence: 0.914800643333333

00:08:54.279 --> 00:08:56.493 know increase the risk of Melanoma.  
NOTE Confidence: 0.9148006433333333

00:08:56.500 --> 00:08:58.397 So studies have shown that young women,  
NOTE Confidence: 0.9148006433333333

00:08:58.400 --> 00:09:00.416 for example, under age of 30,  
NOTE Confidence: 0.9148006433333333

00:09:00.420 --> 00:09:02.440 had a six times increase  
NOTE Confidence: 0.9148006433333333

00:09:02.440 --> 00:09:04.056 odds of developing Melanoma.  
NOTE Confidence: 0.9148006433333333

00:09:04.060 --> 00:09:06.445 If they had a history of tanning bed use,  
NOTE Confidence: 0.9148006433333333

00:09:06.450 --> 00:09:07.865 so tanning bed should really  
NOTE Confidence: 0.9148006433333333

00:09:07.865 --> 00:09:09.280 come equipped with that sign.  
NOTE Confidence: 0.9148006433333333

00:09:09.280 --> 00:09:11.350 A question that I guess sometimes  
NOTE Confidence: 0.9148006433333333

00:09:11.350 --> 00:09:13.380 for patients is weather spray tanning  
NOTE Confidence: 0.9148006433333333

00:09:13.380 --> 00:09:15.708 is OK and the short answer is yes,  
NOTE Confidence: 0.9148006433333333

00:09:15.710 --> 00:09:17.691 spray tanning is perfectly safe and does  
NOTE Confidence: 0.9148006433333333

00:09:17.691 --> 00:09:19.918 not contribute to development of skin cancer.  
NOTE Confidence: 0.9148006433333333

00:09:19.920 --> 00:09:21.504 You may remember Ross.  
NOTE Confidence: 0.9148006433333333

00:09:21.504 --> 00:09:23.496 Friends, you can progress to the next slide.  
NOTE Confidence: 0.9148006433333333

00:09:23.500 --> 00:09:24.976 You just don't want to overdo

NOTE Confidence: 0.914800643333333  
00:09:24.976 --> 00:09:26.808 it or you look like a carrot.  
NOTE Confidence: 0.914800643333333  
00:09:26.810 --> 00:09:29.510 Next slide, please.  
NOTE Confidence: 0.914800643333333  
00:09:29.510 --> 00:09:30.491 And for next,  
NOTE Confidence: 0.914800643333333  
00:09:30.491 --> 00:09:32.453 we're going to discuss the risk  
NOTE Confidence: 0.914800643333333  
00:09:32.453 --> 00:09:34.666 factors that we can't control those  
NOTE Confidence: 0.914800643333333  
00:09:34.666 --> 00:09:36.486 that are hereditary or genetic.  
NOTE Confidence: 0.914800643333333  
00:09:36.490 --> 00:09:37.658 We can progress slide.  
NOTE Confidence: 0.793875308125  
00:09:40.160 --> 00:09:43.440 And so having nevi a large number of  
NOTE Confidence: 0.793875308125  
00:09:43.440 --> 00:09:46.956 nevi over 100 atypical moles and having  
NOTE Confidence: 0.793875308125  
00:09:46.956 --> 00:09:48.860 solar lentago's or sunspots all can  
NOTE Confidence: 0.793875308125  
00:09:48.860 --> 00:09:50.929 increase your risk of skin cancer as you  
NOTE Confidence: 0.793875308125  
00:09:50.929 --> 00:09:52.760 see on the photo on the lower right,  
NOTE Confidence: 0.793875308125  
00:09:52.760 --> 00:09:54.902 you'll see the development of these  
NOTE Confidence: 0.793875308125  
00:09:54.902 --> 00:09:56.460 solar lentago's occur in areas  
NOTE Confidence: 0.793875308125  
00:09:56.460 --> 00:09:57.660 that are sun exposed,  
NOTE Confidence: 0.793875308125

00:09:57.660 --> 00:10:00.788 whereas skin that is not seen chronic  
NOTE Confidence: 0.793875308125

00:10:00.788 --> 00:10:02.980 ultraviolet radiation looks far  
NOTE Confidence: 0.793875308125

00:10:02.980 --> 00:10:05.507 healthier without these solar lentago's.  
NOTE Confidence: 0.793875308125

00:10:05.507 --> 00:10:06.488 Next slide please.  
NOTE Confidence: 0.89535787625

00:10:08.650 --> 00:10:11.330 And we also know that having light hair,  
NOTE Confidence: 0.89535787625

00:10:11.330 --> 00:10:13.058 light skin, blue eyes,  
NOTE Confidence: 0.89535787625

00:10:13.058 --> 00:10:15.218 and freckles are characteristics that  
NOTE Confidence: 0.89535787625

00:10:15.218 --> 00:10:17.989 are all increased with higher chance  
NOTE Confidence: 0.89535787625

00:10:17.989 --> 00:10:20.254 of developing Melanoma compared to  
NOTE Confidence: 0.89535787625

00:10:20.321 --> 00:10:22.616 individuals that have darker hair,  
NOTE Confidence: 0.89535787625

00:10:22.620 --> 00:10:26.320 darker skin and darker eyes. Next slide.  
NOTE Confidence: 0.954839105

00:10:29.110 --> 00:10:31.366 In addition, having a personal history,  
NOTE Confidence: 0.954839105

00:10:31.370 --> 00:10:33.380 Melanoma increases your risk of  
NOTE Confidence: 0.954839105

00:10:33.380 --> 00:10:34.988 getting subsequent melanomas and  
NOTE Confidence: 0.954839105

00:10:34.988 --> 00:10:37.171 having a first degree relative with  
NOTE Confidence: 0.954839105

00:10:37.171 --> 00:10:38.896 Melanoma also doubles your risk.

NOTE Confidence: 0.954839105

00:10:38.900 --> 00:10:41.284 In addition to a personal and family history,

NOTE Confidence: 0.954839105

00:10:41.290 --> 00:10:43.324 we know that there are certain

NOTE Confidence: 0.954839105

00:10:43.324 --> 00:10:45.102 types of genetic syndromes that

NOTE Confidence: 0.954839105

00:10:45.102 --> 00:10:46.887 increase your risk of Melanoma.

NOTE Confidence: 0.954839105

00:10:46.890 --> 00:10:49.690 The most important one is the familial

NOTE Confidence: 0.954839105

00:10:49.690 --> 00:10:51.510 atypical multiple Melanoma syndrome,

NOTE Confidence: 0.954839105

00:10:51.510 --> 00:10:54.142 where mutations in genes that the CDKN 2

NOTE Confidence: 0.954839105

00:10:54.142 --> 00:10:56.688 a result in having hundreds of atypical

NOTE Confidence: 0.954839105

00:10:56.688 --> 00:10:59.379 looking nevi as seen in the picture.

NOTE Confidence: 0.954839105

00:10:59.380 --> 00:11:01.305 Here, but also highly increased

NOTE Confidence: 0.954839105

00:11:01.305 --> 00:11:04.146 risk of Melanoma as well as other

NOTE Confidence: 0.954839105

00:11:04.146 --> 00:11:06.256 cancers such as pancreatic cancer.

NOTE Confidence: 0.954839105

00:11:06.260 --> 00:11:07.049 Next slide, please.

NOTE Confidence: 0.94973061

00:11:10.140 --> 00:11:12.068 And perhaps this is the most important slide.

NOTE Confidence: 0.94973061

00:11:12.070 --> 00:11:13.799 So what can we do to prevent

NOTE Confidence: 0.94973061

00:11:13.799 --> 00:11:15.070 the development of Melanoma?  
NOTE Confidence: 0.94973061

00:11:15.070 --> 00:11:16.798 So first and foremost,  
NOTE Confidence: 0.94973061

00:11:16.798 --> 00:11:18.526 avoid indoor tanning beds.  
NOTE Confidence: 0.94973061

00:11:18.530 --> 00:11:19.766 Also, protect yourself  
NOTE Confidence: 0.94973061

00:11:19.766 --> 00:11:22.238 from the sun at all times,  
NOTE Confidence: 0.94973061

00:11:22.240 --> 00:11:23.660 so by seeking shade,  
NOTE Confidence: 0.94973061

00:11:23.660 --> 00:11:25.080 wearing some protective clothing,  
NOTE Confidence: 0.94973061

00:11:25.080 --> 00:11:27.190 there actually is clothing with  
NOTE Confidence: 0.94973061

00:11:27.190 --> 00:11:28.456 ultraviolet protective factors  
NOTE Confidence: 0.94973061

00:11:28.456 --> 00:11:30.626 which are made especially to help  
NOTE Confidence: 0.94973061

00:11:30.626 --> 00:11:32.522 prevent UV damage to the skin.  
NOTE Confidence: 0.94973061

00:11:32.530 --> 00:11:34.469 It's important to wear a wide brimmed  
NOTE Confidence: 0.94973061

00:11:34.469 --> 00:11:36.289 hat and sunglasses with UV protection.  
NOTE Confidence: 0.94973061

00:11:36.290 --> 00:11:38.255 In addition, applying broad spectrum  
NOTE Confidence: 0.94973061

00:11:38.255 --> 00:11:40.869 sunscreen with an SPF 30 or above.  
NOTE Confidence: 0.94973061

00:11:40.870 --> 00:11:43.488 To all exposed areas and reapplying will

NOTE Confidence: 0.94973061

00:11:43.488 --> 00:11:46.477 help reduce the chance of getting Melanoma.

NOTE Confidence: 0.94973061

00:11:46.480 --> 00:11:48.919 Next slide, please.

NOTE Confidence: 0.94973061

00:11:48.920 --> 00:11:50.420 And then in the final moments,

NOTE Confidence: 0.94973061

00:11:50.420 --> 00:11:52.023 I just wanted to briefly review how

NOTE Confidence: 0.94973061

00:11:52.023 --> 00:11:53.810 do we screen patients for Melanoma?

NOTE Confidence: 0.7709124475

00:11:56.120 --> 00:11:58.400 In advance this slide.

NOTE Confidence: 0.7709124475

00:11:58.400 --> 00:12:00.129 I wanted to start by saying that

NOTE Confidence: 0.7709124475

00:12:00.129 --> 00:12:01.747 there are no national screening

NOTE Confidence: 0.7709124475

00:12:01.747 --> 00:12:04.213 guidelines for Melanoma and the United

NOTE Confidence: 0.7709124475

00:12:04.213 --> 00:12:05.799 States Preventive Services Task

NOTE Confidence: 0.7709124475

00:12:05.799 --> 00:12:07.554 Force does not recommend screening

NOTE Confidence: 0.7709124475

00:12:07.554 --> 00:12:09.330 all adults that are asymptomatic

NOTE Confidence: 0.7709124475

00:12:09.330 --> 00:12:11.130 and don't have concerning lesions.

NOTE Confidence: 0.7709124475

00:12:11.130 --> 00:12:13.194 However, there are important

NOTE Confidence: 0.7709124475

00:12:13.194 --> 00:12:15.774 exceptions for at risk individuals,

NOTE Confidence: 0.7709124475

00:12:15.780 --> 00:12:17.295 meaning those that have a  
NOTE Confidence: 0.7709124475

00:12:17.295 --> 00:12:18.810 concerning lesion on their skin.  
NOTE Confidence: 0.7709124475

00:12:18.810 --> 00:12:20.530 A history of skin cancer  
NOTE Confidence: 0.7709124475

00:12:20.530 --> 00:12:21.906 or strong family history.  
NOTE Confidence: 0.7709124475

00:12:21.910 --> 00:12:24.090 These individuals should see a  
NOTE Confidence: 0.7709124475

00:12:24.090 --> 00:12:25.834 dermatologist and dermatologists would  
NOTE Confidence: 0.7709124475

00:12:25.834 --> 00:12:27.968 conduct a full body skin examination,  
NOTE Confidence: 0.7709124475

00:12:27.970 --> 00:12:29.470 which we're going to review.  
NOTE Confidence: 0.7709124475

00:12:29.470 --> 00:12:30.312 In addition,  
NOTE Confidence: 0.7709124475

00:12:30.312 --> 00:12:32.417 educating the youth about Sun  
NOTE Confidence: 0.7709124475

00:12:32.417 --> 00:12:34.271 protective behavior is also  
NOTE Confidence: 0.7709124475

00:12:34.271 --> 00:12:35.340 recommended next slide.  
NOTE Confidence: 0.933244383636364

00:12:37.960 --> 00:12:39.934 And we know that there are  
NOTE Confidence: 0.933244383636364

00:12:39.934 --> 00:12:41.850 benefits to a screening program.  
NOTE Confidence: 0.933244383636364

00:12:41.850 --> 00:12:43.405 One example is the American  
NOTE Confidence: 0.933244383636364

00:12:43.405 --> 00:12:44.338 Academy of Dermatology,

NOTE Confidence: 0.933244383636364  
00:12:44.340 --> 00:12:46.699 conducted a study and they found that  
NOTE Confidence: 0.933244383636364  
00:12:46.699 --> 00:12:48.592 dermatologists at a higher percentage  
NOTE Confidence: 0.933244383636364  
00:12:48.592 --> 00:12:51.040 of finding thinner melanomas than those  
NOTE Confidence: 0.933244383636364  
00:12:51.040 --> 00:12:53.699 compared to a general population registry.  
NOTE Confidence: 0.933244383636364  
00:12:53.700 --> 00:12:55.636 Interestingly, another study showed  
NOTE Confidence: 0.933244383636364  
00:12:55.636 --> 00:12:58.540 that patients and their spouses can  
NOTE Confidence: 0.933244383636364  
00:12:58.615 --> 00:13:00.799 be trained to look for Melanoma,  
NOTE Confidence: 0.933244383636364  
00:13:00.800 --> 00:13:03.565 and they were able to identify melanomas  
NOTE Confidence: 0.933244383636364  
00:13:03.565 --> 00:13:05.719 on themselves or their spouse,  
NOTE Confidence: 0.933244383636364  
00:13:05.720 --> 00:13:07.498 and they were able to find them  
NOTE Confidence: 0.933244383636364  
00:13:07.498 --> 00:13:09.009 at low as low stages.  
NOTE Confidence: 0.933244383636364  
00:13:09.010 --> 00:13:11.540 Next slide.  
NOTE Confidence: 0.933244383636364  
00:13:11.540 --> 00:13:13.757 So some tips that I think are  
NOTE Confidence: 0.933244383636364  
00:13:13.757 --> 00:13:16.319 helpful is the ugly duckling sign.  
NOTE Confidence: 0.933244383636364  
00:13:16.320 --> 00:13:18.024 So when you take a look at the  
NOTE Confidence: 0.933244383636364

00:13:18.024 --> 00:13:20.063 moles on your body or those of  
NOTE Confidence: 0.933244383636364

00:13:20.063 --> 00:13:21.303 a significant another friend,  
NOTE Confidence: 0.933244383636364

00:13:21.310 --> 00:13:24.030 you'll see that many most often look alike.  
NOTE Confidence: 0.933244383636364

00:13:24.030 --> 00:13:25.510 Those are called signature nevi.  
NOTE Confidence: 0.933244383636364

00:13:25.510 --> 00:13:27.607 It look like they belong in the same family.  
NOTE Confidence: 0.933244383636364

00:13:27.610 --> 00:13:29.130 When you see him all that looks like  
NOTE Confidence: 0.933244383636364

00:13:29.130 --> 00:13:30.410 it doesn't belong with the rest,  
NOTE Confidence: 0.933244383636364

00:13:30.410 --> 00:13:31.490 that's the ugly duckling.  
NOTE Confidence: 0.933244383636364

00:13:31.490 --> 00:13:33.869 I find that this sign is very helpful,  
NOTE Confidence: 0.933244383636364

00:13:33.870 --> 00:13:35.550 especially when I educate my  
NOTE Confidence: 0.933244383636364

00:13:35.550 --> 00:13:36.558 patients next slide.  
NOTE Confidence: 0.875878545454545

00:13:38.760 --> 00:13:41.340 And dermatologists are able to use  
NOTE Confidence: 0.875878545454545

00:13:41.340 --> 00:13:43.510 specialized lens with magnifying glass,  
NOTE Confidence: 0.875878545454545

00:13:43.510 --> 00:13:46.506 called a Mattis, built to more precisely  
NOTE Confidence: 0.875878545454545

00:13:46.506 --> 00:13:49.410 inspect skin lesions and identify Melanoma.  
NOTE Confidence: 0.875878545454545

00:13:49.410 --> 00:13:52.206 Digital photography is also helpful to

NOTE Confidence: 0.875878545454545

00:13:52.206 --> 00:13:54.987 take photographs of lesions and monitor

NOTE Confidence: 0.875878545454545

00:13:54.987 --> 00:13:57.525 them overtime for change next slide.

NOTE Confidence: 0.875878545454545

00:13:57.530 --> 00:13:59.343 So in closing, I wanted to briefly

NOTE Confidence: 0.875878545454545

00:13:59.343 --> 00:14:01.040 review how to screen yourself,

NOTE Confidence: 0.875878545454545

00:14:01.040 --> 00:14:03.848 but I think a video is far better than

NOTE Confidence: 0.875878545454545

00:14:03.848 --> 00:14:05.998 looking at this at these pictures.

NOTE Confidence: 0.875878545454545

00:14:06.000 --> 00:14:06.735 So next slide.

NOTE Confidence: 0.875878545454545

00:14:06.735 --> 00:14:08.450 And Doctor Lee know if you don't

NOTE Confidence: 0.875878545454545

00:14:08.505 --> 00:14:10.070 mind clicking the play button,

NOTE Confidence: 0.875878545454545

00:14:10.070 --> 00:14:11.918 you'll see a demonstration of how to

NOTE Confidence: 0.875878545454545

00:14:11.918 --> 00:14:13.878 perform a total body skin examination.

NOTE Confidence: 0.925292932857143

00:14:27.880 --> 00:14:29.980 So some important points are to make

NOTE Confidence: 0.925292932857143

00:14:29.980 --> 00:14:31.997 sure you check areas of the skin,

NOTE Confidence: 0.925292932857143

00:14:32.000 --> 00:14:33.580 such as behind the ears.

NOTE Confidence: 0.925292932857143

00:14:33.580 --> 00:14:35.505 Look through the hair in the scalp.

NOTE Confidence: 0.925292932857143

00:14:35.510 --> 00:14:37.256 Make sure you look at bodily  
NOTE Confidence: 0.925292932857143

00:14:37.256 --> 00:14:39.120 folds such as the underarms,  
NOTE Confidence: 0.925292932857143

00:14:39.120 --> 00:14:40.902 under their breasts.  
NOTE Confidence: 0.925292932857143

00:14:40.902 --> 00:14:42.684 Dermatologist check everywhere  
NOTE Confidence: 0.925292932857143

00:14:42.684 --> 00:14:45.060 including between the toes.  
NOTE Confidence: 0.925292932857143

00:14:45.060 --> 00:14:46.945 Palms and soles and even  
NOTE Confidence: 0.925292932857143

00:14:46.945 --> 00:14:48.830 the groin area as well.  
NOTE Confidence: 0.7953176175

00:14:51.050 --> 00:14:53.530 By doing a thorough photo body skin exam,  
NOTE Confidence: 0.7953176175

00:14:53.530 --> 00:14:55.535 you're more likely to detect  
NOTE Confidence: 0.7953176175

00:14:55.535 --> 00:14:58.050 something on your skin next slide.  
NOTE Confidence: 0.7953176175

00:14:58.050 --> 00:14:59.450 So I wanted to thank you all  
NOTE Confidence: 0.7953176175

00:14:59.450 --> 00:15:00.943 for your time and I'll gladly  
NOTE Confidence: 0.7953176175

00:15:00.943 --> 00:15:02.170 take any questions, thanks.  
NOTE Confidence: 0.874115446

00:15:04.680 --> 00:15:06.368 No, thank you so much, John.  
NOTE Confidence: 0.874115446

00:15:06.368 --> 00:15:08.274 So I guess I didn't realize that  
NOTE Confidence: 0.874115446

00:15:08.274 --> 00:15:09.380 there are two possibilities

NOTE Confidence: 0.874115446

00:15:09.380 --> 00:15:11.620 for typing in questions.

NOTE Confidence: 0.874115446

00:15:11.620 --> 00:15:12.840 You can put questions in

NOTE Confidence: 0.874115446

00:15:12.840 --> 00:15:14.657 the chat or in the Q&A.

NOTE Confidence: 0.874115446

00:15:14.657 --> 00:15:16.142 It might be better to

NOTE Confidence: 0.874115446

00:15:16.142 --> 00:15:18.300 put them all in the Q&A,

NOTE Confidence: 0.874115446

00:15:18.300 --> 00:15:20.280 but certainly there's one

NOTE Confidence: 0.874115446

00:15:20.280 --> 00:15:22.475 question here about your opinion

NOTE Confidence: 0.874115446

00:15:22.475 --> 00:15:24.050 regarding recommending the

NOTE Confidence: 0.874115446

00:15:24.050 --> 00:15:26.690 catena meter nacina made for

NOTE Confidence: 0.874115446

00:15:26.690 --> 00:15:28.550 patients who have Melanoma.

NOTE Confidence: 0.874115446

00:15:28.550 --> 00:15:29.390 Even if you haven't

NOTE Confidence: 0.904229548571429

00:15:29.400 --> 00:15:32.039 upgraded so, so that's a great question.

NOTE Confidence: 0.904229548571429

00:15:32.040 --> 00:15:34.830 So there are certain medications

NOTE Confidence: 0.904229548571429

00:15:34.830 --> 00:15:35.784 such as nicotinamide,

NOTE Confidence: 0.904229548571429

00:15:35.784 --> 00:15:38.390 which is a vitamin B derivative as well

NOTE Confidence: 0.904229548571429

00:15:38.390 --> 00:15:40.623 as acid Trident of vitamin A derivative,  
NOTE Confidence: 0.904229548571429

00:15:40.630 --> 00:15:43.830 which have been shown to reduce the the  
NOTE Confidence: 0.904229548571429

00:15:43.830 --> 00:15:45.980 possibility of getting skin cancers.  
NOTE Confidence: 0.904229548571429

00:15:45.980 --> 00:15:47.850 These have mostly been studied  
NOTE Confidence: 0.904229548571429

00:15:47.850 --> 00:15:49.720 though in squamous cell carcinoma  
NOTE Confidence: 0.904229548571429

00:15:49.787 --> 00:15:51.307 and basal cell carcinomas,  
NOTE Confidence: 0.904229548571429

00:15:51.310 --> 00:15:53.325 so I don't routinely recommend  
NOTE Confidence: 0.904229548571429

00:15:53.325 --> 00:15:54.937 these medications for reducing  
NOTE Confidence: 0.904229548571429

00:15:54.937 --> 00:15:56.458 the risk of Melanoma.  
NOTE Confidence: 0.880109751111111

00:15:57.400 --> 00:15:59.398 Thank you and then another question  
NOTE Confidence: 0.880109751111111

00:15:59.398 --> 00:16:01.608 about when you use Doppler ultrasound  
NOTE Confidence: 0.880109751111111

00:16:01.608 --> 00:16:04.056 to assess the depth and aggression  
NOTE Confidence: 0.880109751111111

00:16:04.060 --> 00:16:06.545 via two minier vascularity there's  
NOTE Confidence: 0.880109751111111

00:16:06.545 --> 00:16:09.607 a reference there for image guided  
NOTE Confidence: 0.880109751111111

00:16:09.607 --> 00:16:12.077 dermatology in spring of 2020.  
NOTE Confidence: 0.96448022

00:16:12.860 --> 00:16:15.112 So that's a good question, and one

NOTE Confidence: 0.96448022

00:16:15.112 --> 00:16:17.000 that it had to look at that reference.

NOTE Confidence: 0.96448022

00:16:17.000 --> 00:16:18.482 The surgical oncologist might be able

NOTE Confidence: 0.96448022

00:16:18.482 --> 00:16:20.379 to talk about the use of ultrasounds,

NOTE Confidence: 0.96448022

00:16:20.380 --> 00:16:22.756 which sometimes are done to look for lymph

NOTE Confidence: 0.96448022

00:16:22.756 --> 00:16:25.217 nodes we don't routinely do that though,

NOTE Confidence: 0.96448022

00:16:25.220 --> 00:16:28.228 so I would say in in standard practice

NOTE Confidence: 0.96448022

00:16:28.228 --> 00:16:30.789 the diagnosis is made based on biopsy,

NOTE Confidence: 0.96448022

00:16:30.790 --> 00:16:32.290 which which is the gold standard.

NOTE Confidence: 0.915311155384616

00:16:34.090 --> 00:16:36.088 Thank you so much for that and I guess

NOTE Confidence: 0.915311155384616

00:16:36.088 --> 00:16:38.047 if there are any additional questions

NOTE Confidence: 0.915311155384616

00:16:38.047 --> 00:16:40.098 for Doctor Leventhal if you wouldn't

NOTE Confidence: 0.915311155384616

00:16:40.098 --> 00:16:43.290 mind putting them into the Q&A.

NOTE Confidence: 0.915311155384616

00:16:43.290 --> 00:16:45.180 Area that would be great and

NOTE Confidence: 0.915311155384616

00:16:45.180 --> 00:16:46.750 I guess without further ado,

NOTE Confidence: 0.915311155384616

00:16:46.750 --> 00:16:49.375 we'll go ahead and introduce our second

NOTE Confidence: 0.915311155384616

00:16:49.375 --> 00:16:51.954 speaker who is the wonderful Doctor,  
NOTE Confidence: 0.915311155384616

00:16:51.954 --> 00:16:54.740 Jim Clune. He's a plastic surgeon who's  
NOTE Confidence: 0.915311155384616

00:16:54.740 --> 00:16:56.570 an assistant professor of surgery.  
NOTE Confidence: 0.915311155384616

00:16:56.570 --> 00:16:59.108 He's been with the group for a while already,  
NOTE Confidence: 0.915311155384616

00:16:59.110 --> 00:17:01.996 and he's going to talk to us about  
NOTE Confidence: 0.915311155384616

00:17:01.996 --> 00:17:04.328 surgery for primary Melanoma.  
NOTE Confidence: 0.915311155384616

00:17:04.330 --> 00:17:05.358 So thank you, Jim.  
NOTE Confidence: 0.890507126296296

00:17:07.930 --> 00:17:09.250 Great, thanks very much.  
NOTE Confidence: 0.890507126296296

00:17:09.250 --> 00:17:11.230 Glad to follow Doctor Leventhal here  
NOTE Confidence: 0.890507126296296

00:17:11.290 --> 00:17:13.576 because he is touched on a few things that  
NOTE Confidence: 0.890507126296296

00:17:13.576 --> 00:17:15.677 will make my talk a little bit easier.  
NOTE Confidence: 0.890507126296296

00:17:15.680 --> 00:17:18.830 You know surgery is a large  
NOTE Confidence: 0.890507126296296

00:17:18.830 --> 00:17:20.405 conversation regarding Melanoma,  
NOTE Confidence: 0.890507126296296

00:17:20.410 --> 00:17:22.363 but I'm going to kind of start as if  
NOTE Confidence: 0.890507126296296

00:17:22.363 --> 00:17:24.678 you were coming to the office with a  
NOTE Confidence: 0.890507126296296

00:17:24.678 --> 00:17:26.213 biopsy that's already being completed

NOTE Confidence: 0.890507126296296

00:17:26.213 --> 00:17:28.299 and a diagnosis of Melanoma and kind

NOTE Confidence: 0.890507126296296

00:17:28.299 --> 00:17:31.235 of where we go from there so you know,

NOTE Confidence: 0.890507126296296

00:17:31.235 --> 00:17:32.150 once ducked 11th,

NOTE Confidence: 0.890507126296296

00:17:32.150 --> 00:17:34.958 all or your dermatologist has done the biopsy

NOTE Confidence: 0.890507126296296

00:17:34.960 --> 00:17:37.120 and you have a diagnosis of a Melanoma.

NOTE Confidence: 0.890507126296296

00:17:37.120 --> 00:17:38.884 It could be a Melanoma insight 2.

NOTE Confidence: 0.890507126296296

00:17:38.890 --> 00:17:40.206 Or an invasive Melanoma.

NOTE Confidence: 0.890507126296296

00:17:40.206 --> 00:17:42.779 You'll also have a path report with you,

NOTE Confidence: 0.890507126296296

00:17:42.780 --> 00:17:44.820 so I usually go over the path report

NOTE Confidence: 0.890507126296296

00:17:44.820 --> 00:17:46.993 with our patient and then we talk

NOTE Confidence: 0.890507126296296

00:17:46.993 --> 00:17:48.764 about the surgical options usually,

NOTE Confidence: 0.890507126296296

00:17:48.764 --> 00:17:51.668 which involves removing the Melanoma and

NOTE Confidence: 0.890507126296296

00:17:51.668 --> 00:17:55.098 then in certain situations we also remove

NOTE Confidence: 0.890507126296296

00:17:55.098 --> 00:17:57.954 some lymph nodes for testing purposes.

NOTE Confidence: 0.890507126296296

00:17:57.960 --> 00:18:00.081 So, briefly, talking a little bit about

NOTE Confidence: 0.890507126296296

00:18:00.081 --> 00:18:01.659 Doctor Leventhal already talked about,  
NOTE Confidence: 0.890507126296296

00:18:01.660 --> 00:18:03.080 but there's really there's  
NOTE Confidence: 0.890507126296296

00:18:03.080 --> 00:18:04.855 two layers to your skin,  
NOTE Confidence: 0.890507126296296

00:18:04.860 --> 00:18:06.460 the epidermis and the dermis,  
NOTE Confidence: 0.890507126296296

00:18:06.460 --> 00:18:07.840 and then underneath the dermis,  
NOTE Confidence: 0.890507126296296

00:18:07.840 --> 00:18:10.039 which is the thick layer skin, is the dermis.  
NOTE Confidence: 0.890507126296296

00:18:10.039 --> 00:18:12.370 Here there's a fat and subcutaneous layer,  
NOTE Confidence: 0.890507126296296

00:18:12.370 --> 00:18:14.452 and the Melanoma resides in the  
NOTE Confidence: 0.890507126296296

00:18:14.452 --> 00:18:16.650 in the epidermis and the dermis.  
NOTE Confidence: 0.890507126296296

00:18:16.650 --> 00:18:17.790 And when it's invasive,  
NOTE Confidence: 0.890507126296296

00:18:17.790 --> 00:18:19.215 so it's important that the  
NOTE Confidence: 0.890507126296296

00:18:19.215 --> 00:18:20.648 biopsy include the epidermis,  
NOTE Confidence: 0.890507126296296

00:18:20.650 --> 00:18:22.730 and as much of the dermis as possible,  
NOTE Confidence: 0.890507126296296

00:18:22.730 --> 00:18:24.100 so we can really determine  
NOTE Confidence: 0.890507126296296

00:18:24.100 --> 00:18:25.470 the depth of the Melanoma.  
NOTE Confidence: 0.890507126296296

00:18:25.470 --> 00:18:26.825 So sometimes when a patient

NOTE Confidence: 0.890507126296296

00:18:26.825 --> 00:18:27.909 comes into the office.

NOTE Confidence: 0.890507126296296

00:18:27.910 --> 00:18:30.024 We re biopsy the area that they've

NOTE Confidence: 0.890507126296296

00:18:30.024 --> 00:18:32.337 already had a thinner biopsy to

NOTE Confidence: 0.890507126296296

00:18:32.337 --> 00:18:35.079 confirm the diagnosis and to really

NOTE Confidence: 0.890507126296296

00:18:35.079 --> 00:18:37.769 understand the depth of the Melanoma.

NOTE Confidence: 0.890507126296296

00:18:37.770 --> 00:18:39.138 And a lot of people always ask me.

NOTE Confidence: 0.890507126296296

00:18:39.140 --> 00:18:42.276 You know, I've had other skin cancers before.

NOTE Confidence: 0.890507126296296

00:18:42.280 --> 00:18:43.267 Is this similar?

NOTE Confidence: 0.890507126296296

00:18:43.267 --> 00:18:43.596 Well,

NOTE Confidence: 0.890507126296296

00:18:43.596 --> 00:18:45.570 they come from the same place

NOTE Confidence: 0.890507126296296

00:18:45.639 --> 00:18:46.969 they are in the skin,

NOTE Confidence: 0.890507126296296

00:18:46.970 --> 00:18:48.699 but the ones that most people are

NOTE Confidence: 0.890507126296296

00:18:48.699 --> 00:18:50.187 referring to are squamous cell

NOTE Confidence: 0.890507126296296

00:18:50.187 --> 00:18:51.917 carcinoma and basal cell carcinoma.

NOTE Confidence: 0.890507126296296

00:18:51.920 --> 00:18:53.576 These are much more common skin

NOTE Confidence: 0.890507126296296

00:18:53.576 --> 00:18:55.253 cancers and they come from the  
NOTE Confidence: 0.890507126296296

00:18:55.253 --> 00:18:56.813 squamous cells and the basil layer  
NOTE Confidence: 0.890507126296296

00:18:56.813 --> 00:18:58.638 at the bottom of the epidermis.  
NOTE Confidence: 0.890507126296296

00:18:58.640 --> 00:19:00.278 Your melanocytes are in here as  
NOTE Confidence: 0.890507126296296

00:19:00.278 --> 00:19:01.370 Doctor Leventhal mentioned that  
NOTE Confidence: 0.890507126296296

00:19:01.416 --> 00:19:03.082 give you the pigment to your skin  
NOTE Confidence: 0.890507126296296

00:19:03.082 --> 00:19:04.095 and they're scattered throughout  
NOTE Confidence: 0.890507126296296

00:19:04.095 --> 00:19:05.350 the basement membrane here in  
NOTE Confidence: 0.890507126296296

00:19:05.350 --> 00:19:06.850 your in your skin as well.  
NOTE Confidence: 0.913458807666667

00:19:09.340 --> 00:19:11.302 So the first thing we look at when you  
NOTE Confidence: 0.913458807666667

00:19:11.302 --> 00:19:13.191 come to the office is your pathology  
NOTE Confidence: 0.913458807666667

00:19:13.191 --> 00:19:14.769 report and really the thing that  
NOTE Confidence: 0.913458807666667

00:19:14.769 --> 00:19:16.553 we look at the most is the depth.  
NOTE Confidence: 0.913458807666667

00:19:16.560 --> 00:19:18.324 So this is an actual pathology report  
NOTE Confidence: 0.913458807666667

00:19:18.324 --> 00:19:20.205 and it shows the tumor thickness is  
NOTE Confidence: 0.913458807666667

00:19:20.205 --> 00:19:22.093 6 millimeters in this case and we

NOTE Confidence: 0.913458807666667  
00:19:22.093 --> 00:19:23.682 also look for a few other features  
NOTE Confidence: 0.913458807666667  
00:19:23.682 --> 00:19:25.052 such as ulceration, mitotic rate,  
NOTE Confidence: 0.913458807666667  
00:19:25.052 --> 00:19:27.476 and these are all things that will go  
NOTE Confidence: 0.913458807666667  
00:19:27.476 --> 00:19:29.420 through in detail with you to talk about  
NOTE Confidence: 0.913458807666667  
00:19:29.420 --> 00:19:30.953 your pathology report and determine  
NOTE Confidence: 0.913458807666667  
00:19:30.953 --> 00:19:34.540 what type of surgery you might need.  
NOTE Confidence: 0.913458807666667  
00:19:34.540 --> 00:19:36.348 And this is sort of a busy chart,  
NOTE Confidence: 0.913458807666667  
00:19:36.350 --> 00:19:39.234 but this is sort of the the  
NOTE Confidence: 0.913458807666667  
00:19:39.240 --> 00:19:40.374 the standard discussion.  
NOTE Confidence: 0.913458807666667  
00:19:40.374 --> 00:19:43.020 When you have surgery is you want  
NOTE Confidence: 0.913458807666667  
00:19:43.088 --> 00:19:45.370 to know how thick your Melanoma is.  
NOTE Confidence: 0.913458807666667  
00:19:45.370 --> 00:19:47.250 You want to know the margin when when  
NOTE Confidence: 0.913458807666667  
00:19:47.250 --> 00:19:49.574 I say margin it's the amount of normal  
NOTE Confidence: 0.913458807666667  
00:19:49.574 --> 00:19:51.701 skin that we're taking out around the  
NOTE Confidence: 0.913458807666667  
00:19:51.701 --> 00:19:53.435 Melanoma site and then a Sentinel  
NOTE Confidence: 0.913458807666667

00:19:53.435 --> 00:19:56.914 node which is a testing of a lymph node.

NOTE Confidence: 0.913458807666667

00:19:56.920 --> 00:19:58.888 It's kind of near the Melanoma

NOTE Confidence: 0.913458807666667

00:19:58.888 --> 00:20:00.806 site and not everybody needs to

NOTE Confidence: 0.913458807666667

00:20:00.806 --> 00:20:02.710 have a lymph node tested and I

NOTE Confidence: 0.913458807666667

00:20:02.710 --> 00:20:04.775 have a criteria here that we use.

NOTE Confidence: 0.913458807666667

00:20:04.780 --> 00:20:06.180 You can look at this later on.

NOTE Confidence: 0.913458807666667

00:20:06.180 --> 00:20:07.440 I think this is being recorded so

NOTE Confidence: 0.913458807666667

00:20:07.440 --> 00:20:08.862 you can refer back to this if you

NOTE Confidence: 0.913458807666667

00:20:08.862 --> 00:20:10.209 want to understand it in more detail,

NOTE Confidence: 0.913458807666667

00:20:10.210 --> 00:20:11.596 but this is something that we talked

NOTE Confidence: 0.913458807666667

00:20:11.596 --> 00:20:13.069 to you about in quite a bit of

NOTE Confidence: 0.913458807666667

00:20:13.069 --> 00:20:14.390 detail when you come to the office.

NOTE Confidence: 0.8576339

00:20:16.900 --> 00:20:18.378 So what is a margin?

NOTE Confidence: 0.8576339

00:20:18.378 --> 00:20:20.584 So the amount of normal skin that we

NOTE Confidence: 0.8576339

00:20:20.584 --> 00:20:22.184 removed from around the Melanoma.

NOTE Confidence: 0.8576339

00:20:22.190 --> 00:20:24.170 So here's a Melanoma on the heel of a

NOTE Confidence: 0.8576339

00:20:24.170 --> 00:20:26.130 patient, and it was a thin Melanoma,

NOTE Confidence: 0.8576339

00:20:26.130 --> 00:20:27.550 but it was relatively broad,

NOTE Confidence: 0.8576339

00:20:27.550 --> 00:20:29.665 but we took about a 1 centimeter margin of

NOTE Confidence: 0.8576339

00:20:29.665 --> 00:20:31.730 normal skin all the way around the Melanoma.

NOTE Confidence: 0.8576339

00:20:31.730 --> 00:20:32.650 So that's the first thing

NOTE Confidence: 0.8576339

00:20:32.650 --> 00:20:33.570 we're going to talk about.

NOTE Confidence: 0.8576339

00:20:33.570 --> 00:20:36.248 Is how much do we need to take out then?

NOTE Confidence: 0.8576339

00:20:36.248 --> 00:20:37.200 The next question is,

NOTE Confidence: 0.8576339

00:20:37.200 --> 00:20:38.845 do I need a lymph node biopsy?

NOTE Confidence: 0.8576339

00:20:38.850 --> 00:20:41.028 Well, what is a lymph node?

NOTE Confidence: 0.8576339

00:20:41.030 --> 00:20:42.950 Well, lymph nodes are sort of

NOTE Confidence: 0.8576339

00:20:42.950 --> 00:20:44.670 like the coffee filter paper,

NOTE Confidence: 0.8576339

00:20:44.670 --> 00:20:46.238 and they sit up in your axilla,

NOTE Confidence: 0.8576339

00:20:46.240 --> 00:20:47.432 your neck, your groin.

NOTE Confidence: 0.8576339

00:20:47.432 --> 00:20:48.922 If you prick your finger

NOTE Confidence: 0.8576339

00:20:48.922 --> 00:20:50.240 while you're gardening,  
NOTE Confidence: 0.8576339

00:20:50.240 --> 00:20:51.640 and you get an infection in your finger,  
NOTE Confidence: 0.8576339

00:20:51.640 --> 00:20:53.386 your lymph nodes in your armpit  
NOTE Confidence: 0.8576339

00:20:53.386 --> 00:20:55.269 may expand and enlarge as they're  
NOTE Confidence: 0.8576339

00:20:55.269 --> 00:20:56.597 fighting off the bacteria.  
NOTE Confidence: 0.8576339

00:20:56.600 --> 00:20:58.616 The same thing happens with Melanoma.  
NOTE Confidence: 0.8576339

00:20:58.620 --> 00:21:01.518 Your body may recognize that as a  
NOTE Confidence: 0.8576339

00:21:01.518 --> 00:21:04.082 foreign entity and the lymph node  
NOTE Confidence: 0.8576339

00:21:04.082 --> 00:21:06.980 will have Melanoma in the lymph node,  
NOTE Confidence: 0.8576339

00:21:06.980 --> 00:21:09.332 may enlarge overtime and as you  
NOTE Confidence: 0.8576339

00:21:09.332 --> 00:21:10.900 produce an immune response,  
NOTE Confidence: 0.8576339

00:21:10.900 --> 00:21:12.640 or if the Melanoma becomes filled  
NOTE Confidence: 0.8576339

00:21:12.640 --> 00:21:14.300 with the lymph node becomes.  
NOTE Confidence: 0.8576339

00:21:14.300 --> 00:21:15.317 Filled with Melanoma,  
NOTE Confidence: 0.8576339

00:21:15.317 --> 00:21:18.078 so one of the first places that a  
NOTE Confidence: 0.8576339

00:21:18.078 --> 00:21:20.318 Melanoma may travel is the lymph node,

NOTE Confidence: 0.8576339

00:21:20.320 --> 00:21:22.595 so we often will test these to

NOTE Confidence: 0.8576339

00:21:22.595 --> 00:21:23.570 see if there's.

NOTE Confidence: 0.8576339

00:21:23.570 --> 00:21:25.510 It's basically the best predictor

NOTE Confidence: 0.8576339

00:21:25.510 --> 00:21:28.113 of whether or not the Melanoma

NOTE Confidence: 0.8576339

00:21:28.113 --> 00:21:30.478 has metastasized and we can sort

NOTE Confidence: 0.8576339

00:21:30.478 --> 00:21:32.221 of predict how the patient May

NOTE Confidence: 0.8576339

00:21:32.221 --> 00:21:33.978 is going to do in the future,

NOTE Confidence: 0.8576339

00:21:33.980 --> 00:21:35.390 and whether or not they may

NOTE Confidence: 0.8576339

00:21:35.390 --> 00:21:36.095 need further treatment.

NOTE Confidence: 0.8576339

00:21:36.100 --> 00:21:37.918 So this is how I'm depicting

NOTE Confidence: 0.8576339

00:21:37.918 --> 00:21:39.130 how it would happen.

NOTE Confidence: 0.8576339

00:21:39.130 --> 00:21:40.900 But here's the blue Melanoma cells

NOTE Confidence: 0.8576339

00:21:40.900 --> 00:21:43.060 and they drop down into the lymphatic

NOTE Confidence: 0.8576339

00:21:43.060 --> 00:21:45.202 channels and then they can travel to

NOTE Confidence: 0.8576339

00:21:45.266 --> 00:21:47.324 the lymph nodes wherever that may be.

NOTE Confidence: 0.8576339

00:21:47.330 --> 00:21:49.445 So if you have a Melanoma on your arm  
NOTE Confidence: 0.8576339

00:21:49.450 --> 00:21:51.480 then the lymph lymphatic channels  
NOTE Confidence: 0.8576339

00:21:51.480 --> 00:21:53.990 which are depicted here is these.  
NOTE Confidence: 0.8576339

00:21:53.990 --> 00:21:56.624 Green tubules will lead to the  
NOTE Confidence: 0.8576339

00:21:56.624 --> 00:21:59.057 lymph nodes and the Melanoma  
NOTE Confidence: 0.8576339

00:21:59.057 --> 00:22:01.377 cells may migrate there.  
NOTE Confidence: 0.8576339

00:22:01.380 --> 00:22:03.018 So what we do in the operating  
NOTE Confidence: 0.8576339

00:22:03.018 --> 00:22:04.810 room was a lymph node biopsy.  
NOTE Confidence: 0.8576339

00:22:04.810 --> 00:22:06.450 But you have about.  
NOTE Confidence: 0.8576339

00:22:06.450 --> 00:22:09.088 You know 3040 lymph nodes in your armpit.  
NOTE Confidence: 0.8576339

00:22:09.090 --> 00:22:10.346 We don't want to take them all out.  
NOTE Confidence: 0.8576339

00:22:10.350 --> 00:22:12.454 We only want to take out the lymph  
NOTE Confidence: 0.8576339

00:22:12.454 --> 00:22:14.393 node that has the highest chance  
NOTE Confidence: 0.8576339

00:22:14.393 --> 00:22:16.083 of having Melanoma at first.  
NOTE Confidence: 0.8576339

00:22:16.090 --> 00:22:17.734 So that's what we call the  
NOTE Confidence: 0.8576339

00:22:17.734 --> 00:22:18.556 Sentinel lymph node.

NOTE Confidence: 0.8576339

00:22:18.560 --> 00:22:21.539 So we get a map made ahead of time.

NOTE Confidence: 0.8576339

00:22:21.540 --> 00:22:23.208 They go down to nuclear medicine,

NOTE Confidence: 0.8576339

00:22:23.210 --> 00:22:25.128 they inject some dye into your arm,

NOTE Confidence: 0.8576339

00:22:25.130 --> 00:22:27.740 and it has a radioactive isotope tag to it,

NOTE Confidence: 0.8576339

00:22:27.740 --> 00:22:29.837 and it they inject the dye here and it

NOTE Confidence: 0.8576339

00:22:29.837 --> 00:22:32.085 goes up the tubules into the lymph nodes.

NOTE Confidence: 0.8576339

00:22:32.090 --> 00:22:33.665 And the first lymph node that gets

NOTE Confidence: 0.8576339

00:22:33.665 --> 00:22:35.560 the die is the one that we have to

NOTE Confidence: 0.8576339

00:22:35.560 --> 00:22:37.140 take out in the operating room.

NOTE Confidence: 0.8576339

00:22:37.140 --> 00:22:38.939 And we often will take out a

NOTE Confidence: 0.8576339

00:22:38.939 --> 00:22:39.940 few others around it,

NOTE Confidence: 0.8576339

00:22:39.940 --> 00:22:42.127 but we don't need to take all the lymph

NOTE Confidence: 0.8576339

00:22:42.127 --> 00:22:43.989 nodes out for the testing purposes.

NOTE Confidence: 0.8576339

00:22:43.990 --> 00:22:45.838 So this is an example of what

NOTE Confidence: 0.8576339

00:22:45.838 --> 00:22:46.630 a lymph node

NOTE Confidence: 0.922124975384615

00:22:46.696 --> 00:22:48.480 map looks like, so this is a patient.  
NOTE Confidence: 0.922124975384615

00:22:48.480 --> 00:22:50.559 This is the head and their arms are up  
NOTE Confidence: 0.922124975384615

00:22:50.559 --> 00:22:52.780 behind their head like this and the injection  
NOTE Confidence: 0.922124975384615

00:22:52.780 --> 00:22:54.689 site looks like a tear in the chest.  
NOTE Confidence: 0.922124975384615

00:22:54.690 --> 00:22:57.536 They inject the dye here and then it maps  
NOTE Confidence: 0.922124975384615

00:22:57.536 --> 00:23:00.311 to a lymph node in the armpit and also two  
NOTE Confidence: 0.922124975384615

00:23:00.311 --> 00:23:02.779 lymph nodes down here just above the hip.  
NOTE Confidence: 0.922124975384615

00:23:02.780 --> 00:23:04.460 So this will give us some information  
NOTE Confidence: 0.922124975384615

00:23:04.460 --> 00:23:06.440 about what we need to do in the operating  
NOTE Confidence: 0.922124975384615

00:23:06.440 --> 00:23:08.430 room so when we go to the operating room  
NOTE Confidence: 0.922124975384615

00:23:08.430 --> 00:23:11.136 we inject the dye again and we use a  
NOTE Confidence: 0.922124975384615

00:23:11.136 --> 00:23:13.500 special counter called a Geiger counter.  
NOTE Confidence: 0.922124975384615

00:23:13.500 --> 00:23:16.174 And this allows us to detect that radioactive  
NOTE Confidence: 0.922124975384615

00:23:16.174 --> 00:23:18.750 isotope and identify where the lymph node is.  
NOTE Confidence: 0.922124975384615

00:23:18.750 --> 00:23:19.996 'cause we only want to take out  
NOTE Confidence: 0.922124975384615

00:23:19.996 --> 00:23:21.300 as few lymph nodes as possible.

NOTE Confidence: 0.922124975384615

00:23:21.300 --> 00:23:23.280 We want to make sure we take out the lymph

NOTE Confidence: 0.922124975384615

00:23:23.333 --> 00:23:25.141 node that is in charge of cleaning that

NOTE Confidence: 0.922124975384615

00:23:25.141 --> 00:23:27.210 piece of skin that where the Melanoma was.

NOTE Confidence: 0.9431281333333333

00:23:29.460 --> 00:23:31.956 So, continuing on our surgical options,

NOTE Confidence: 0.9431281333333333

00:23:31.960 --> 00:23:33.220 now we know our margin.

NOTE Confidence: 0.9431281333333333

00:23:33.220 --> 00:23:34.716 We base that on our depth and a

NOTE Confidence: 0.9431281333333333

00:23:34.716 --> 00:23:36.175 few other things that I talked

NOTE Confidence: 0.9431281333333333

00:23:36.175 --> 00:23:37.470 about in the pathology report,

NOTE Confidence: 0.9431281333333333

00:23:37.470 --> 00:23:39.073 and we also know if we need

NOTE Confidence: 0.9431281333333333

00:23:39.073 --> 00:23:40.619 a lymph node biopsy or not.

NOTE Confidence: 0.9431281333333333

00:23:40.620 --> 00:23:42.332 And we also got a map to show

NOTE Confidence: 0.9431281333333333

00:23:42.332 --> 00:23:43.898 us where that lymph node is.

NOTE Confidence: 0.9431281333333333

00:23:43.900 --> 00:23:45.874 If you need a lymph node biopsy.

NOTE Confidence: 0.9431281333333333

00:23:45.880 --> 00:23:47.640 So now we can go to the operating

NOTE Confidence: 0.9431281333333333

00:23:47.640 --> 00:23:49.586 room so the surgical steps are to

NOTE Confidence: 0.9431281333333333

00:23:49.586 --> 00:23:51.407 remove the Melanoma and then to  
NOTE Confidence: 0.9431281333333333

00:23:51.407 --> 00:23:52.987 identify and remove the intended  
NOTE Confidence: 0.9431281333333333

00:23:52.987 --> 00:23:55.392 lymph nodes for testing and then  
NOTE Confidence: 0.9431281333333333

00:23:55.392 --> 00:23:57.656 reconstruct the surgical site.  
NOTE Confidence: 0.9431281333333333

00:23:57.660 --> 00:23:58.620 As I said before,  
NOTE Confidence: 0.9431281333333333

00:23:58.620 --> 00:24:00.390 we remove the Melanoma we take about  
NOTE Confidence: 0.9431281333333333

00:24:00.390 --> 00:24:02.315 one to two centimeters of normal skin.  
NOTE Confidence: 0.9431281333333333

00:24:02.320 --> 00:24:03.750 With the Melanoma now there's  
NOTE Confidence: 0.9431281333333333

00:24:03.750 --> 00:24:05.180 also a Melanoma insight two,  
NOTE Confidence: 0.9431281333333333

00:24:05.180 --> 00:24:06.698 which I mentioned briefly earlier and  
NOTE Confidence: 0.9431281333333333

00:24:06.698 --> 00:24:08.379 that's in the upper layer of skin.  
NOTE Confidence: 0.9431281333333333

00:24:08.380 --> 00:24:09.403 In that case,  
NOTE Confidence: 0.9431281333333333

00:24:09.403 --> 00:24:11.449 we usually only take about a  
NOTE Confidence: 0.9431281333333333

00:24:11.449 --> 00:24:12.810 half a centimeter.  
NOTE Confidence: 0.9431281333333333

00:24:12.810 --> 00:24:14.819 And the reason we take a margin  
NOTE Confidence: 0.9431281333333333

00:24:14.819 --> 00:24:16.797 is that you know the Melanoma

NOTE Confidence: 0.9431281333333333  
00:24:16.797 --> 00:24:18.547 is is the central focus.  
NOTE Confidence: 0.9431281333333333  
00:24:18.550 --> 00:24:20.202 But we also worry that there may  
NOTE Confidence: 0.9431281333333333  
00:24:20.202 --> 00:24:21.530 be some small Melanoma cells  
NOTE Confidence: 0.9431281333333333  
00:24:21.530 --> 00:24:22.940 that may be slightly outside  
NOTE Confidence: 0.9431281333333333  
00:24:22.940 --> 00:24:24.769 of the main focus of Melanoma,  
NOTE Confidence: 0.9431281333333333  
00:24:24.770 --> 00:24:26.135 and that's why we take  
NOTE Confidence: 0.9431281333333333  
00:24:26.135 --> 00:24:26.954 this additional margin,  
NOTE Confidence: 0.9431281333333333  
00:24:26.960 --> 00:24:28.736 and this decreases the chances of  
NOTE Confidence: 0.9431281333333333  
00:24:28.736 --> 00:24:30.860 it coming back in the same place.  
NOTE Confidence: 0.9431281333333333  
00:24:30.860 --> 00:24:31.415 And you know,  
NOTE Confidence: 0.9431281333333333  
00:24:31.415 --> 00:24:31.600 I,  
NOTE Confidence: 0.9431281333333333  
00:24:31.600 --> 00:24:32.949 I always try and explain to the  
NOTE Confidence: 0.9431281333333333  
00:24:32.949 --> 00:24:34.517 patients how much we have to take out,  
NOTE Confidence: 0.9431281333333333  
00:24:34.520 --> 00:24:36.466 but it's a little bit hard to  
NOTE Confidence: 0.9431281333333333  
00:24:36.466 --> 00:24:37.300 understand our picture.  
NOTE Confidence: 0.9431281333333333

00:24:37.300 --> 00:24:38.852 What it looks like when we take out  
NOTE Confidence: 0.9431281333333333

00:24:38.852 --> 00:24:40.769 one to two centimeters for normal skin.  
NOTE Confidence: 0.9431281333333333

00:24:40.770 --> 00:24:42.978 So I'm going to show a few pictures.  
NOTE Confidence: 0.9431281333333333

00:24:42.980 --> 00:24:45.380 You know the images are blocked  
NOTE Confidence: 0.9431281333333333

00:24:45.380 --> 00:24:47.460 out enough that you know,  
NOTE Confidence: 0.9431281333333333

00:24:47.460 --> 00:24:49.220 but it's a surgical procedure,  
NOTE Confidence: 0.9431281333333333

00:24:49.220 --> 00:24:51.281 so this is a Melanoma on the scalp and  
NOTE Confidence: 0.9431281333333333

00:24:51.281 --> 00:24:53.226 this is about a 1 centimeter margin  
NOTE Confidence: 0.9431281333333333

00:24:53.226 --> 00:24:55.079 of normal skin that's been removed.  
NOTE Confidence: 0.9431281333333333

00:24:55.080 --> 00:24:56.776 This is a near where we take out  
NOTE Confidence: 0.9431281333333333

00:24:56.776 --> 00:24:58.585 about a centimeter of normal skin  
NOTE Confidence: 0.9431281333333333

00:24:58.585 --> 00:25:00.240 around where the Melanoma was,  
NOTE Confidence: 0.9431281333333333

00:25:00.240 --> 00:25:02.152 and this is a foot with about a  
NOTE Confidence: 0.9431281333333333

00:25:02.152 --> 00:25:03.660 centimeter of normal skin has  
NOTE Confidence: 0.9431281333333333

00:25:03.660 --> 00:25:05.285 been removed around the Melanoma.  
NOTE Confidence: 0.8640107

00:25:07.370 --> 00:25:10.086 So this is a brief depiction of the lymph

NOTE Confidence: 0.8640107

00:25:10.086 --> 00:25:11.807 node portion of this of the procedure.

NOTE Confidence: 0.8640107

00:25:11.810 --> 00:25:13.508 So we've taken the Melanoma out, right?

NOTE Confidence: 0.8640107

00:25:13.508 --> 00:25:14.816 So we've taken our margin and

NOTE Confidence: 0.8640107

00:25:14.816 --> 00:25:16.466 now we have to do the lymph node.

NOTE Confidence: 0.8640107

00:25:16.470 --> 00:25:19.431 So we this is the Melanoma site on this

NOTE Confidence: 0.8640107

00:25:19.431 --> 00:25:21.699 patient, we inject the dye right in here

NOTE Confidence: 0.8640107

00:25:21.699 --> 00:25:24.469 and then we use this little silver thing.

NOTE Confidence: 0.8640107

00:25:24.470 --> 00:25:27.359 It's a Geiger counter and we listen to where

NOTE Confidence: 0.8640107

00:25:27.359 --> 00:25:30.230 the lymph node is because the technetium,

NOTE Confidence: 0.8640107

00:25:30.230 --> 00:25:31.740 the isotope that we've injected,

NOTE Confidence: 0.8640107

00:25:31.740 --> 00:25:33.380 is going to be picked up by this

NOTE Confidence: 0.8640107

00:25:33.380 --> 00:25:34.699 Geiger counter and then we make

NOTE Confidence: 0.8640107

00:25:34.699 --> 00:25:35.983 our incision in that lymph node.

NOTE Confidence: 0.8640107

00:25:35.990 --> 00:25:37.110 Face and it could be in the neck,

NOTE Confidence: 0.8640107

00:25:37.110 --> 00:25:38.350 the gland and the cheek.

NOTE Confidence: 0.8640107

00:25:38.350 --> 00:25:40.130 The armpit of the groin.  
NOTE Confidence: 0.8640107

00:25:40.130 --> 00:25:42.286 And then we remove that lymph node.  
NOTE Confidence: 0.8640107

00:25:42.290 --> 00:25:44.019 And this is what a lymph node  
NOTE Confidence: 0.8640107

00:25:44.019 --> 00:25:45.530 looks like when it's removed.  
NOTE Confidence: 0.8640107

00:25:45.530 --> 00:25:46.328 They're pretty small.  
NOTE Confidence: 0.8640107

00:25:46.328 --> 00:25:47.924 Maybe the size of a nickel.  
NOTE Confidence: 0.8640107

00:25:47.930 --> 00:25:49.405 Some are even smaller and  
NOTE Confidence: 0.8640107

00:25:49.405 --> 00:25:50.290 somewhere slightly bigger,  
NOTE Confidence: 0.8640107

00:25:50.290 --> 00:25:52.010 and that's what we send to the lab,  
NOTE Confidence: 0.8640107

00:25:52.010 --> 00:25:53.424 and so the Melanoma that we took  
NOTE Confidence: 0.8640107

00:25:53.424 --> 00:25:54.886 out and the lymph node are sent  
NOTE Confidence: 0.8640107

00:25:54.886 --> 00:25:56.614 to the lab and they look under the  
NOTE Confidence: 0.8640107

00:25:56.614 --> 00:25:58.018 microscope and it takes them about  
NOTE Confidence: 0.8640107

00:25:58.018 --> 00:26:00.378 a week or so to let us know if we  
NOTE Confidence: 0.8640107

00:26:00.378 --> 00:26:02.300 removed all of the Melanoma and  
NOTE Confidence: 0.8640107

00:26:02.300 --> 00:26:04.035 also whether there's any Melanoma

NOTE Confidence: 0.8640107

00:26:04.035 --> 00:26:06.434 in the lymph node that we took out.

NOTE Confidence: 0.8640107

00:26:06.440 --> 00:26:08.060 So now we've removed the Melanoma.

NOTE Confidence: 0.8640107

00:26:08.060 --> 00:26:09.770 We've tested the lymph node.

NOTE Confidence: 0.8640107

00:26:09.770 --> 00:26:11.240 We've closed up where the lymph

NOTE Confidence: 0.8640107

00:26:11.240 --> 00:26:12.220 node was taken out,

NOTE Confidence: 0.8640107

00:26:12.220 --> 00:26:14.332 and now we have to repair

NOTE Confidence: 0.8640107

00:26:14.332 --> 00:26:15.740 the Melanoma excision site.

NOTE Confidence: 0.8640107

00:26:15.740 --> 00:26:17.390 So I'll briefly show what

NOTE Confidence: 0.8640107

00:26:17.390 --> 00:26:19.040 reconstruction looks like for the

NOTE Confidence: 0.8640107

00:26:19.100 --> 00:26:20.780 vast majority of our patients,

NOTE Confidence: 0.8640107

00:26:20.780 --> 00:26:22.172 the reconstruction will happen at the

NOTE Confidence: 0.8640107

00:26:22.172 --> 00:26:24.179 same time as the removal of the Melanoma,

NOTE Confidence: 0.8640107

00:26:24.180 --> 00:26:26.100 so you only have to have one surgery.

NOTE Confidence: 0.8640107

00:26:26.100 --> 00:26:26.817 In some instances,

NOTE Confidence: 0.8640107

00:26:26.817 --> 00:26:28.490 it is better to wait to make

NOTE Confidence: 0.8640107

00:26:28.544 --> 00:26:29.948 sure all the Melanoma is gone  
NOTE Confidence: 0.8640107

00:26:29.948 --> 00:26:31.700 before we do the reconstruction,  
NOTE Confidence: 0.8640107

00:26:31.700 --> 00:26:35.090 but that's that's the exception.  
NOTE Confidence: 0.8640107

00:26:35.090 --> 00:26:36.698 So this is the scalp Melanoma  
NOTE Confidence: 0.8640107

00:26:36.698 --> 00:26:37.770 that we just showed.  
NOTE Confidence: 0.8640107

00:26:37.770 --> 00:26:39.702 Remove the Melanoma and then we  
NOTE Confidence: 0.8640107

00:26:39.702 --> 00:26:41.877 do what's called flaps to put it  
NOTE Confidence: 0.8640107

00:26:41.877 --> 00:26:43.521 back together so this entire seas  
NOTE Confidence: 0.8640107

00:26:43.521 --> 00:26:45.696 of skin that we remove we are able  
NOTE Confidence: 0.8640107

00:26:45.696 --> 00:26:47.715 to rotate in and you know it seems  
NOTE Confidence: 0.8640107

00:26:47.715 --> 00:26:49.408 like a large surgery which it is  
NOTE Confidence: 0.8640107

00:26:49.408 --> 00:26:51.040 at the time but within a few weeks  
NOTE Confidence: 0.8640107

00:26:51.100 --> 00:26:52.857 the hair is growing back and the  
NOTE Confidence: 0.8640107

00:26:52.857 --> 00:26:53.954 scars look quite good.  
NOTE Confidence: 0.8640107

00:26:53.954 --> 00:26:56.018 Once the hair is growing back.  
NOTE Confidence: 0.8640107

00:26:56.020 --> 00:26:57.658 This is an example of a patient

NOTE Confidence: 0.8640107

00:26:57.658 --> 00:26:59.587 that had a similar scalp flap to

NOTE Confidence: 0.8640107

00:26:59.587 --> 00:27:01.042 the patient you just saw.

NOTE Confidence: 0.8640107

00:27:01.050 --> 00:27:03.190 You can sort of see this scar in the hairline,

NOTE Confidence: 0.8640107

00:27:03.190 --> 00:27:04.744 but the good thing about flaps rather

NOTE Confidence: 0.8640107

00:27:04.744 --> 00:27:06.269 than grafts is that the hair does.

NOTE Confidence: 0.8640107

00:27:06.270 --> 00:27:08.460 Throwback nicely.

NOTE Confidence: 0.8640107

00:27:08.460 --> 00:27:10.189 And this is a flap for the

NOTE Confidence: 0.8640107

00:27:10.189 --> 00:27:11.415 foot for after resection,

NOTE Confidence: 0.8640107

00:27:11.415 --> 00:27:13.365 so the Melanoma has been removed

NOTE Confidence: 0.8640107

00:27:13.365 --> 00:27:15.470 and then we design A flap of skin.

NOTE Confidence: 0.8640107

00:27:15.470 --> 00:27:17.630 They became rotated in to fill the defect.

NOTE Confidence: 0.8640107

00:27:17.630 --> 00:27:19.136 We always try and put flaps,

NOTE Confidence: 0.8640107

00:27:19.140 --> 00:27:20.687 which is a piece of skin that

NOTE Confidence: 0.8640107

00:27:20.687 --> 00:27:22.059 has the flap on it still.

NOTE Confidence: 0.8640107

00:27:22.060 --> 00:27:23.525 So especially on a weight

NOTE Confidence: 0.8640107

00:27:23.525 --> 00:27:24.990 bearing surface like on the  
NOTE Confidence: 0.854256826428571

00:27:25.049 --> 00:27:25.989 heel of the foot.  
NOTE Confidence: 0.854256826428571

00:27:25.990 --> 00:27:27.738 And then this isn't here, so again,  
NOTE Confidence: 0.854256826428571

00:27:27.738 --> 00:27:29.562 the melanomas been removed and we're  
NOTE Confidence: 0.854256826428571

00:27:29.562 --> 00:27:32.117 able to to use what's left of the ear  
NOTE Confidence: 0.854256826428571

00:27:32.117 --> 00:27:33.829 to reconstruct and make a new ear.  
NOTE Confidence: 0.854256826428571

00:27:33.830 --> 00:27:36.030 So in decisions can be made down here.  
NOTE Confidence: 0.854256826428571

00:27:36.030 --> 00:27:37.206 The rest of the ear can be  
NOTE Confidence: 0.854256826428571

00:27:37.206 --> 00:27:38.428 brought up to fill the defect,  
NOTE Confidence: 0.854256826428571

00:27:38.430 --> 00:27:39.820 and it's interesting when you  
NOTE Confidence: 0.854256826428571

00:27:39.820 --> 00:27:41.440 compare it to the contralateral ear.  
NOTE Confidence: 0.854256826428571

00:27:41.440 --> 00:27:43.264 And really, the main difference is the size.  
NOTE Confidence: 0.854256826428571

00:27:43.270 --> 00:27:45.167 But the interesting thing with ears is  
NOTE Confidence: 0.854256826428571

00:27:45.167 --> 00:27:47.057 when you look at somebody you really  
NOTE Confidence: 0.854256826428571

00:27:47.057 --> 00:27:49.170 don't see both ears at the same time,  
NOTE Confidence: 0.854256826428571

00:27:49.170 --> 00:27:51.146 so a size difference is not that big

NOTE Confidence: 0.854256826428571

00:27:51.146 --> 00:27:54.378 of a deal, but asymmetry would be.

NOTE Confidence: 0.854256826428571

00:27:54.380 --> 00:27:56.760 And this is an example of a

NOTE Confidence: 0.854256826428571

00:27:56.760 --> 00:27:57.780 another ear Melanoma.

NOTE Confidence: 0.854256826428571

00:27:57.780 --> 00:27:59.600 This is the main site a centimeter

NOTE Confidence: 0.854256826428571

00:27:59.600 --> 00:28:01.129 of normal skin on each side.

NOTE Confidence: 0.854256826428571

00:28:01.130 --> 00:28:02.444 The ear Melanoma has been removed

NOTE Confidence: 0.854256826428571

00:28:02.444 --> 00:28:03.980 and then the ear reconstructed.

NOTE Confidence: 0.86529277

00:28:06.130 --> 00:28:07.610 So and I'll briefly talk

NOTE Confidence: 0.86529277

00:28:07.610 --> 00:28:08.794 about this last topic,

NOTE Confidence: 0.86529277

00:28:08.800 --> 00:28:10.650 and this is completion lymphadenectomy.

NOTE Confidence: 0.86529277

00:28:10.650 --> 00:28:12.762 We used to do this for every patient

NOTE Confidence: 0.86529277

00:28:12.762 --> 00:28:15.170 that had a positive Sentinel lymph node.

NOTE Confidence: 0.86529277

00:28:15.170 --> 00:28:16.766 Meaning if we found Melanoma in

NOTE Confidence: 0.86529277

00:28:16.766 --> 00:28:18.461 the lymph node, we would remove

NOTE Confidence: 0.86529277

00:28:18.461 --> 00:28:20.243 all the lymph nodes around it.

NOTE Confidence: 0.86529277

00:28:20.250 --> 00:28:21.792 We for the most part have  
NOTE Confidence: 0.86529277

00:28:21.792 --> 00:28:23.220 slowed down on doing these.  
NOTE Confidence: 0.86529277

00:28:23.220 --> 00:28:24.965 Based on our research over  
NOTE Confidence: 0.86529277

00:28:24.965 --> 00:28:26.710 the last number of years.  
NOTE Confidence: 0.86529277

00:28:26.710 --> 00:28:29.680 But we do do this in certain cases still.  
NOTE Confidence: 0.86529277

00:28:29.680 --> 00:28:31.024 So if this is the case with you,  
NOTE Confidence: 0.86529277

00:28:31.030 --> 00:28:33.150 it's a conversation will have.  
NOTE Confidence: 0.86529277

00:28:33.150 --> 00:28:35.187 But for the vast majority of patients.  
NOTE Confidence: 0.86529277

00:28:35.190 --> 00:28:36.340 We're no longer doing this.  
NOTE Confidence: 0.912827275

00:28:38.800 --> 00:28:40.474 So thanks very much and I will take a  
NOTE Confidence: 0.912827275

00:28:40.474 --> 00:28:42.086 look and see what the questions are.  
NOTE Confidence: 0.864052746

00:28:44.800 --> 00:28:46.812 Alright, thank you so much, Jim.  
NOTE Confidence: 0.864052746

00:28:46.812 --> 00:28:50.364 I think you have one question.  
NOTE Confidence: 0.864052746

00:28:50.370 --> 00:28:52.710 Uhm, can you please talk about  
NOTE Confidence: 0.864052746

00:28:52.710 --> 00:28:54.840 Melanoma in the interior organs?  
NOTE Confidence: 0.742733206

00:28:54.970 --> 00:28:57.470 Perfect actually, so Doctor Alina,

NOTE Confidence: 0.742733206

00:28:57.470 --> 00:28:59.486 our surgical oncologist is here and

NOTE Confidence: 0.742733206

00:28:59.486 --> 00:29:02.106 I think I will defer the internal

NOTE Confidence: 0.742733206

00:29:02.106 --> 00:29:04.296 organs questions to her when she when

NOTE Confidence: 0.742733206

00:29:04.296 --> 00:29:05.640 she comes back and there you are.

NOTE Confidence: 0.9329352

00:29:07.240 --> 00:29:08.770 But maybe you can comment

NOTE Confidence: 0.745690592857143

00:29:08.800 --> 00:29:11.579 on your coastal melanomas a little bit.

NOTE Confidence: 0.745690592857143

00:29:11.580 --> 00:29:14.400 It's a slightly different question, but

NOTE Confidence: 0.707648952

00:29:14.410 --> 00:29:16.660 sure, yeah, so mucosa, Melanoma,

NOTE Confidence: 0.707648952

00:29:16.660 --> 00:29:19.708 you know this is the the.

NOTE Confidence: 0.707648952

00:29:19.710 --> 00:29:21.910 Any surface of the body, the vagina,

NOTE Confidence: 0.707648952

00:29:21.910 --> 00:29:24.510 the oral mucosa, nasal mucosa.

NOTE Confidence: 0.707648952

00:29:24.510 --> 00:29:27.335 These melanomas can occur there.

NOTE Confidence: 0.707648952

00:29:27.340 --> 00:29:29.412 They're obviously not the sun bearing skin

NOTE Confidence: 0.707648952

00:29:29.412 --> 00:29:31.707 that you might expect to find a Melanoma.

NOTE Confidence: 0.707648952

00:29:31.710 --> 00:29:32.890 So the genetics of this

NOTE Confidence: 0.707648952

00:29:32.890 --> 00:29:34.070 is a little bit different,  
NOTE Confidence: 0.707648952

00:29:34.070 --> 00:29:37.610 but the surgical option still remains.  
NOTE Confidence: 0.707648952

00:29:37.610 --> 00:29:39.410 Usually there's some upfront imaging that  
NOTE Confidence: 0.707648952

00:29:39.410 --> 00:29:41.412 is done before an operation will happen  
NOTE Confidence: 0.707648952

00:29:41.412 --> 00:29:43.768 on that maybe a pet scan or a CAT scan,  
NOTE Confidence: 0.707648952

00:29:43.770 --> 00:29:45.578 but the surgical procedure  
NOTE Confidence: 0.707648952

00:29:45.578 --> 00:29:47.386 itself is very similar.  
NOTE Confidence: 0.707648952

00:29:47.390 --> 00:29:49.496 We can still remove the mucosal  
NOTE Confidence: 0.707648952

00:29:49.496 --> 00:29:51.310 Melanoma and a lymph node.  
NOTE Confidence: 0.707648952

00:29:51.310 --> 00:29:52.620 Biopsy can actually still be.  
NOTE Confidence: 0.707648952

00:29:52.620 --> 00:29:53.823 Performed as well.  
NOTE Confidence: 0.707648952

00:29:53.823 --> 00:29:55.828 The mapping is slightly different,  
NOTE Confidence: 0.707648952

00:29:55.830 --> 00:29:58.028 but the genetics of this is different.  
NOTE Confidence: 0.943727795

00:29:59.560 --> 00:30:02.386 Time. Thank you so much Jim.  
NOTE Confidence: 0.943727795

00:30:02.390 --> 00:30:03.890 That was a terrific talk.  
NOTE Confidence: 0.943727795

00:30:03.890 --> 00:30:06.345 Wonderful work that you're doing and

NOTE Confidence: 0.943727795

00:30:06.345 --> 00:30:09.530 our next speaker is Doctor Kelly Alina,

NOTE Confidence: 0.943727795

00:30:09.530 --> 00:30:12.308 who's an assistant professor of surgery,

NOTE Confidence: 0.943727795

00:30:12.310 --> 00:30:15.566 and she's going to be talking to us

NOTE Confidence: 0.943727795

00:30:15.566 --> 00:30:18.035 about various approaches to treat

NOTE Confidence: 0.943727795

00:30:18.035 --> 00:30:21.173 the to treat patients with systemic

NOTE Confidence: 0.943727795

00:30:21.173 --> 00:30:23.529 therapy prior to the surgery.

NOTE Confidence: 0.943727795

00:30:23.530 --> 00:30:26.690 So thank you so much, Kelly.

NOTE Confidence: 0.943727795

00:30:26.690 --> 00:30:27.779 Floor is yours.

NOTE Confidence: 0.789296516

00:30:28.700 --> 00:30:31.432 So this is a usually II.

NOTE Confidence: 0.789296516

00:30:31.432 --> 00:30:32.986 It's much better when Doctor Kuhn and

NOTE Confidence: 0.789296516

00:30:32.986 --> 00:30:34.730 I are in person because Doctor Koon

NOTE Confidence: 0.789296516

00:30:34.730 --> 00:30:36.460 is a plastic surgeon by by train.

NOTE Confidence: 0.789296516

00:30:36.460 --> 00:30:37.548 So I don't know if you can see,

NOTE Confidence: 0.789296516

00:30:37.550 --> 00:30:39.032 but I'm actually 90 years old

NOTE Confidence: 0.789296516

00:30:39.032 --> 00:30:40.330 and Doctor Clune is done.

NOTE Confidence: 0.789296516

00:30:40.330 --> 00:30:42.810 Beautiful reconstruction work on me,  
NOTE Confidence: 0.789296516

00:30:42.810 --> 00:30:45.178 but you kind of miss or are running  
NOTE Confidence: 0.789296516

00:30:45.178 --> 00:30:47.187 side jokes on zoom a little bit.  
NOTE Confidence: 0.789296516

00:30:47.190 --> 00:30:49.325 So this nicely summarized with  
NOTE Confidence: 0.789296516

00:30:49.325 --> 00:30:51.460 Doctor Koenig spoke about which  
NOTE Confidence: 0.789296516

00:30:51.538 --> 00:30:53.573 is removing our primary tumor  
NOTE Confidence: 0.789296516

00:30:53.573 --> 00:30:55.608 and checking the lymph nodes.  
NOTE Confidence: 0.789296516

00:30:55.610 --> 00:30:58.774 But there's other situations and and again.  
NOTE Confidence: 0.789296516

00:30:58.780 --> 00:31:00.716 Thank you to the plant in the audience  
NOTE Confidence: 0.789296516

00:31:00.716 --> 00:31:02.274 for asking the question where the  
NOTE Confidence: 0.789296516

00:31:02.274 --> 00:31:04.322 Melanoma is spread and we can feel it  
NOTE Confidence: 0.789296516

00:31:04.322 --> 00:31:05.911 in the lymph nodes or it's traveled  
NOTE Confidence: 0.789296516

00:31:05.911 --> 00:31:08.650 to other locations like the brain  
NOTE Confidence: 0.789296516

00:31:08.650 --> 00:31:11.880 distally in the soft tissue or the  
NOTE Confidence: 0.789296516

00:31:11.880 --> 00:31:15.590 skin in the bow can travel to liver lungs.  
NOTE Confidence: 0.789296516

00:31:15.590 --> 00:31:18.215 And there's still a role for surgery,

NOTE Confidence: 0.789296516

00:31:18.220 --> 00:31:20.308 but more and more of this is being

NOTE Confidence: 0.789296516

00:31:20.308 --> 00:31:22.605 combined with a lot of the systemic

NOTE Confidence: 0.789296516

00:31:22.605 --> 00:31:23.977 immunotherapy and targeted therapies

NOTE Confidence: 0.789296516

00:31:23.977 --> 00:31:25.792 that my colleagues will talk a

NOTE Confidence: 0.789296516

00:31:25.792 --> 00:31:27.551 little bit more about this later.

NOTE Confidence: 0.789296516

00:31:27.551 --> 00:31:28.574 Give to patients.

NOTE Confidence: 0.789296516

00:31:28.574 --> 00:31:31.076 So back when we didn't have effective

NOTE Confidence: 0.789296516

00:31:31.076 --> 00:31:34.164 therapies that we could get through an Ivy,

NOTE Confidence: 0.789296516

00:31:34.170 --> 00:31:36.851 the checkpoint blockade and some of the

NOTE Confidence: 0.789296516

00:31:36.851 --> 00:31:38.747 targeted therapies that some Members

NOTE Confidence: 0.789296516

00:31:38.747 --> 00:31:41.169 joining us today may actually be been

NOTE Confidence: 0.789296516

00:31:41.169 --> 00:31:43.383 in the clinical trials and currently

NOTE Confidence: 0.789296516

00:31:43.383 --> 00:31:45.453 getting treatment with was that we

NOTE Confidence: 0.789296516

00:31:45.453 --> 00:31:47.700 still had a role for surgery and

NOTE Confidence: 0.789296516

00:31:47.775 --> 00:31:50.313 that role was really limited towards

NOTE Confidence: 0.789296516

00:31:50.313 --> 00:31:53.250 patients who had very limited disease.  
NOTE Confidence: 0.789296516

00:31:53.250 --> 00:31:56.026 So if someone had one or two sites,  
NOTE Confidence: 0.789296516

00:31:56.030 --> 00:31:58.480 it was reasonable and people would actually  
NOTE Confidence: 0.789296516

00:31:58.480 --> 00:32:00.650 live longer just with an operation.  
NOTE Confidence: 0.789296516

00:32:00.650 --> 00:32:04.200 But it really wasn't ideal.  
NOTE Confidence: 0.789296516

00:32:04.200 --> 00:32:06.420 You could see here it depending  
NOTE Confidence: 0.789296516

00:32:06.420 --> 00:32:07.874 upon where those locations,  
NOTE Confidence: 0.789296516

00:32:07.874 --> 00:32:10.016 which many times would be internally  
NOTE Confidence: 0.789296516

00:32:10.016 --> 00:32:12.077 people who had lymph node or places  
NOTE Confidence: 0.789296516

00:32:12.077 --> 00:32:13.810 that were deep in the tissue.  
NOTE Confidence: 0.789296516

00:32:13.810 --> 00:32:16.834 The skin they did well with surgeries,  
NOTE Confidence: 0.789296516

00:32:16.840 --> 00:32:18.712 people who had spread to the  
NOTE Confidence: 0.789296516

00:32:18.712 --> 00:32:20.450 lung or to other sites.  
NOTE Confidence: 0.789296516

00:32:20.450 --> 00:32:23.170 They didn't fare as well.  
NOTE Confidence: 0.789296516

00:32:23.170 --> 00:32:25.486 And Doctor Krueger and Doctor Schnall,  
NOTE Confidence: 0.789296516

00:32:25.490 --> 00:32:27.736 who are with us today, were part of

NOTE Confidence: 0.789296516

00:32:27.736 --> 00:32:29.746 a revolution and that revolution,

NOTE Confidence: 0.789296516

00:32:29.750 --> 00:32:30.942 and they were pioneers,

NOTE Confidence: 0.789296516

00:32:30.942 --> 00:32:33.170 and many members in the audience may

NOTE Confidence: 0.789296516

00:32:33.170 --> 00:32:35.080 have been the immunotherapy astronauts,

NOTE Confidence: 0.789296516

00:32:35.080 --> 00:32:37.640 as I like to refer to them as that were

NOTE Confidence: 0.789296516

00:32:37.707 --> 00:32:40.395 believed in different types of treatment.

NOTE Confidence: 0.789296516

00:32:40.400 --> 00:32:41.150 And really,

NOTE Confidence: 0.789296516

00:32:41.150 --> 00:32:43.025 the revolution came with immune

NOTE Confidence: 0.789296516

00:32:43.025 --> 00:32:45.942 therapy with a class of agents called

NOTE Confidence: 0.789296516

00:32:45.942 --> 00:32:48.097 Checkpoint blockade and it belimumab,

NOTE Confidence: 0.789296516

00:32:48.100 --> 00:32:51.169 and, you know.

NOTE Confidence: 0.789296516

00:32:51.170 --> 00:32:52.875 The research was recently awarded

NOTE Confidence: 0.789296516

00:32:52.875 --> 00:32:55.288 a Nobel Prize for this work and

NOTE Confidence: 0.789296516

00:32:55.288 --> 00:32:57.208 later the development of anti PD.

NOTE Confidence: 0.789296516

00:32:57.210 --> 00:32:59.256 One blockade really were game changers

NOTE Confidence: 0.789296516

00:32:59.256 --> 00:33:02.029 in the history of treatment of Melanoma.

NOTE Confidence: 0.789296516

00:33:02.030 --> 00:33:03.929 When it's spread,

NOTE Confidence: 0.789296516

00:33:03.930 --> 00:33:06.150 the other thing that was really

NOTE Confidence: 0.789296516

00:33:06.150 --> 00:33:08.020 important was the recognition that

NOTE Confidence: 0.789296516

00:33:08.020 --> 00:33:09.982 about half of melanomas also had

NOTE Confidence: 0.789296516

00:33:09.982 --> 00:33:12.048 an Achilles heel and that's called

NOTE Confidence: 0.789296516

00:33:12.048 --> 00:33:14.082 the B reputation which can actually

NOTE Confidence: 0.789296516

00:33:14.082 --> 00:33:16.375 be targeted by a dual treatment

NOTE Confidence: 0.789296516

00:33:16.375 --> 00:33:18.869 with oral therapies and we call

NOTE Confidence: 0.789296516

00:33:18.869 --> 00:33:21.229 these targeted therapies and again.

NOTE Confidence: 0.789296516

00:33:21.230 --> 00:33:24.268 This allowed to have immune therapy and

NOTE Confidence: 0.789296516

00:33:24.268 --> 00:33:26.490 again targeted therapy and surgery.

NOTE Confidence: 0.789296516

00:33:26.490 --> 00:33:29.125 Now in the armamentarium that

NOTE Confidence: 0.789296516

00:33:29.125 --> 00:33:31.760 we can combine in new

NOTE Confidence: 0.901961962666667

00:33:31.865 --> 00:33:34.760 and novel ways for patients.

NOTE Confidence: 0.901961962666667

00:33:34.760 --> 00:33:37.604 So many people would think with all of these

NOTE Confidence: 0.901961962666667  
00:33:37.604 --> 00:33:39.636 developments that we actually operate less.  
NOTE Confidence: 0.901961962666667  
00:33:39.640 --> 00:33:42.268 And I actually think that we have a whole  
NOTE Confidence: 0.901961962666667  
00:33:42.268 --> 00:33:44.626 host of new opportunities and patients  
NOTE Confidence: 0.901961962666667  
00:33:44.626 --> 00:33:47.072 whom sometimes we would begin with  
NOTE Confidence: 0.901961962666667  
00:33:47.072 --> 00:33:49.739 treatments that were given through the Ivy,  
NOTE Confidence: 0.901961962666667  
00:33:49.740 --> 00:33:52.188 the systemic treatments and now have  
NOTE Confidence: 0.901961962666667  
00:33:52.188 --> 00:33:54.649 opened up new opportunities for surgery.  
NOTE Confidence: 0.901961962666667  
00:33:54.650 --> 00:33:56.510 Now there's other more special circumstances  
NOTE Confidence: 0.901961962666667  
00:33:56.510 --> 00:33:59.019 that I want to touch on when patients  
NOTE Confidence: 0.901961962666667  
00:33:59.019 --> 00:34:00.843 come in with more advanced disease.  
NOTE Confidence: 0.901961962666667  
00:34:00.850 --> 00:34:02.712 So for example, a person who comes  
NOTE Confidence: 0.901961962666667  
00:34:02.712 --> 00:34:04.779 in with a Melanoma and we can.  
NOTE Confidence: 0.901961962666667  
00:34:04.780 --> 00:34:07.138 Actually feel it in the lymph  
NOTE Confidence: 0.901961962666667  
00:34:07.138 --> 00:34:09.250 nodes during a clinic visit.  
NOTE Confidence: 0.901961962666667  
00:34:09.250 --> 00:34:11.215 When we had some patients who  
NOTE Confidence: 0.901961962666667

00:34:11.215 --> 00:34:13.027 come in with multiple spots of  
NOTE Confidence: 0.901961962666667

00:34:13.027 --> 00:34:14.875 Melanoma that we can see and feel,  
NOTE Confidence: 0.901961962666667

00:34:14.880 --> 00:34:19.208 or those that have spread to an organ.  
NOTE Confidence: 0.901961962666667

00:34:19.210 --> 00:34:20.416 So. Are typical.  
NOTE Confidence: 0.901961962666667

00:34:20.416 --> 00:34:23.722 Way that things had been used was that  
NOTE Confidence: 0.901961962666667

00:34:23.722 --> 00:34:27.010 we would do an operation at Doctor Clone,  
NOTE Confidence: 0.901961962666667

00:34:27.010 --> 00:34:27.363 describe,  
NOTE Confidence: 0.901961962666667

00:34:27.363 --> 00:34:29.128 get a lot of information,  
NOTE Confidence: 0.901961962666667

00:34:29.130 --> 00:34:31.395 and then afterwards we would  
NOTE Confidence: 0.901961962666667

00:34:31.395 --> 00:34:33.660 be giving treatment with immune  
NOTE Confidence: 0.901961962666667

00:34:33.736 --> 00:34:36.292 therapy or a targeted agent, but.  
NOTE Confidence: 0.901961962666667

00:34:36.292 --> 00:34:39.386 More people started to question to say,  
NOTE Confidence: 0.901961962666667

00:34:39.390 --> 00:34:41.766 well if we have people who have a  
NOTE Confidence: 0.901961962666667

00:34:41.766 --> 00:34:44.049 little bit more of a risky disease,  
NOTE Confidence: 0.901961962666667

00:34:44.050 --> 00:34:45.961 does it make sense to give them  
NOTE Confidence: 0.901961962666667

00:34:45.961 --> 00:34:47.770 treatment first to see what happens?

NOTE Confidence: 0.901961962666667

00:34:47.770 --> 00:34:50.346 While we can still have the tumors in

NOTE Confidence: 0.901961962666667

00:34:50.346 --> 00:34:52.910 place and then follow that by surgery

NOTE Confidence: 0.901961962666667

00:34:52.910 --> 00:34:55.582 and there was a move over the last

NOTE Confidence: 0.901961962666667

00:34:55.582 --> 00:34:58.230 few years towards this and Melanoma

NOTE Confidence: 0.901961962666667

00:34:58.230 --> 00:34:59.846 was a little bit later to the game.

NOTE Confidence: 0.901961962666667

00:34:59.850 --> 00:35:00.578 But again,

NOTE Confidence: 0.901961962666667

00:35:00.578 --> 00:35:02.762 there's other cancers like breast cancer

NOTE Confidence: 0.901961962666667

00:35:02.762 --> 00:35:05.019 where this is actually quite common.

NOTE Confidence: 0.901961962666667

00:35:05.020 --> 00:35:05.560 So again,

NOTE Confidence: 0.901961962666667

00:35:05.560 --> 00:35:07.450 what would be the advantage is one

NOTE Confidence: 0.901961962666667

00:35:07.450 --> 00:35:09.437 you can determine responses to therapy

NOTE Confidence: 0.901961962666667

00:35:09.437 --> 00:35:11.660 while the tumor is still in place,

NOTE Confidence: 0.901961962666667

00:35:11.660 --> 00:35:14.114 potentially reduce the size of the

NOTE Confidence: 0.901961962666667

00:35:14.114 --> 00:35:16.739 tumor before it becomes an operation.

NOTE Confidence: 0.901961962666667

00:35:16.740 --> 00:35:17.418 There's again,

NOTE Confidence: 0.901961962666667

00:35:17.418 --> 00:35:19.113 this is a little controversial  
NOTE Confidence: 0.901961962666667

00:35:19.113 --> 00:35:21.005 about whether or not the responses  
NOTE Confidence: 0.901961962666667

00:35:21.005 --> 00:35:23.265 that we see to the immune system to  
NOTE Confidence: 0.901961962666667

00:35:23.265 --> 00:35:24.999 recognize the tumor may be better.  
NOTE Confidence: 0.901961962666667

00:35:25.000 --> 00:35:25.295 Again,  
NOTE Confidence: 0.901961962666667

00:35:25.295 --> 00:35:27.065 I think that's still a little  
NOTE Confidence: 0.901961962666667

00:35:27.065 --> 00:35:28.420 bit subject to debate.  
NOTE Confidence: 0.901961962666667

00:35:28.420 --> 00:35:30.680 The other thing that it does is it allows us.  
NOTE Confidence: 0.901961962666667

00:35:30.680 --> 00:35:32.054 As for research,  
NOTE Confidence: 0.901961962666667

00:35:32.054 --> 00:35:35.260 in order to really study these responses.  
NOTE Confidence: 0.901961962666667

00:35:35.260 --> 00:35:37.780 More in a real time setting,  
NOTE Confidence: 0.901961962666667

00:35:37.780 --> 00:35:39.885 and there's again a little  
NOTE Confidence: 0.901961962666667

00:35:39.885 --> 00:35:41.990 controversial about whether or not  
NOTE Confidence: 0.901961962666667

00:35:42.059 --> 00:35:44.417 this actually leads to a decrease  
NOTE Confidence: 0.901961962666667

00:35:44.417 --> 00:35:46.423 in early recurrences in patients  
NOTE Confidence: 0.901961962666667

00:35:46.423 --> 00:35:48.957 who are deemed to be higher risk.

NOTE Confidence: 0.901961962666667  
00:35:48.960 --> 00:35:50.364 So beginning in 2019,  
NOTE Confidence: 0.901961962666667  
00:35:50.364 --> 00:35:53.998 one of the first what we call a neoadjuvant,  
NOTE Confidence: 0.901961962666667  
00:35:54.000 --> 00:35:56.094 which means that you'd give the  
NOTE Confidence: 0.901961962666667  
00:35:56.094 --> 00:35:57.490 treatment before the surgery  
NOTE Confidence: 0.901961962666667  
00:35:57.552 --> 00:35:59.237 was with the targeted agents.  
NOTE Confidence: 0.901961962666667  
00:35:59.240 --> 00:35:59.655 Again,  
NOTE Confidence: 0.901961962666667  
00:35:59.655 --> 00:36:02.560 people who had the B RAF mutation  
NOTE Confidence: 0.901961962666667  
00:36:02.560 --> 00:36:04.060 and what they did was.  
NOTE Confidence: 0.901961962666667  
00:36:04.060 --> 00:36:07.770 They gave patients and these are given.  
NOTE Confidence: 0.901961962666667  
00:36:07.770 --> 00:36:08.330 Daily,  
NOTE Confidence: 0.901961962666667  
00:36:08.330 --> 00:36:10.478 so the Dubrovnik has given actually  
NOTE Confidence: 0.901961962666667  
00:36:10.478 --> 00:36:12.310 usually 150 milligrams twice a day,  
NOTE Confidence: 0.901961962666667  
00:36:12.310 --> 00:36:14.438 so a total of 300 milligrams and then  
NOTE Confidence: 0.901961962666667  
00:36:14.438 --> 00:36:16.448 the train Aetna 2 milligrams daily.  
NOTE Confidence: 0.901961962666667  
00:36:16.450 --> 00:36:18.970 They gave it to the patients for 12 weeks.  
NOTE Confidence: 0.901961962666667

00:36:18.970 --> 00:36:20.128 They took about a week off,  
NOTE Confidence: 0.901961962666667

00:36:20.130 --> 00:36:21.708 had surgery and then about two  
NOTE Confidence: 0.901961962666667

00:36:21.708 --> 00:36:23.063 weeks later than they finished  
NOTE Confidence: 0.901961962666667

00:36:23.063 --> 00:36:24.539 off the course of a year,  
NOTE Confidence: 0.901961962666667

00:36:24.540 --> 00:36:26.269 then receiving the agent and they said,  
NOTE Confidence: 0.901961962666667

00:36:26.270 --> 00:36:26.640 well,  
NOTE Confidence: 0.901961962666667

00:36:26.640 --> 00:36:28.490 how do these patients do  
NOTE Confidence: 0.886860101666667

00:36:28.490 --> 00:36:31.664 so? They noted that in about 86% of  
NOTE Confidence: 0.886860101666667

00:36:31.664 --> 00:36:33.463 the patients what they had removed and  
NOTE Confidence: 0.886860101666667

00:36:33.463 --> 00:36:35.617 in this case these were just people  
NOTE Confidence: 0.886860101666667

00:36:35.617 --> 00:36:37.540 who presented with large lymph nodes,  
NOTE Confidence: 0.886860101666667

00:36:37.540 --> 00:36:39.700 they shrunk. And when they looked  
NOTE Confidence: 0.886860101666667

00:36:39.700 --> 00:36:41.440 underneath the microscope to say,  
NOTE Confidence: 0.886860101666667

00:36:41.440 --> 00:36:43.869 did all of the Melanoma resolved would  
NOTE Confidence: 0.886860101666667

00:36:43.869 --> 00:36:46.207 that's called a pathologic complete response  
NOTE Confidence: 0.886860101666667

00:36:46.207 --> 00:36:49.730 that happened in almost half of the patients,

NOTE Confidence: 0.886860101666667

00:36:49.730 --> 00:36:51.465 but with everything in life

NOTE Confidence: 0.886860101666667

00:36:51.465 --> 00:36:53.141 there's always a tradeoff, right?

NOTE Confidence: 0.886860101666667

00:36:53.141 --> 00:36:55.389 So again, we many of our patients will

NOTE Confidence: 0.886860101666667

00:36:55.389 --> 00:36:57.934 be the first one to tell you is that you

NOTE Confidence: 0.886860101666667

00:36:57.934 --> 00:37:00.118 know what are the costs of treatment,

NOTE Confidence: 0.886860101666667

00:37:00.120 --> 00:37:02.374 and we usually measure that in not

NOTE Confidence: 0.886860101666667

00:37:02.374 --> 00:37:03.720 necessarily just financial costs,

NOTE Confidence: 0.886860101666667

00:37:03.720 --> 00:37:05.880 but the toxicity that can be

NOTE Confidence: 0.886860101666667

00:37:05.880 --> 00:37:06.960 associated with that.

NOTE Confidence: 0.886860101666667

00:37:06.960 --> 00:37:08.656 So in this case there was about 30.

NOTE Confidence: 0.886860101666667

00:37:08.660 --> 00:37:11.450 Percent of patients who had toxicity,

NOTE Confidence: 0.886860101666667

00:37:11.450 --> 00:37:12.380 which we call grade 3,

NOTE Confidence: 0.886860101666667

00:37:12.380 --> 00:37:13.596 which is enough that you have to go.

NOTE Confidence: 0.886860101666667

00:37:13.600 --> 00:37:15.706 The doctor sometimes be brought into

NOTE Confidence: 0.886860101666667

00:37:15.706 --> 00:37:18.030 the hospital and what they did is when

NOTE Confidence: 0.886860101666667

00:37:18.030 --> 00:37:20.000 they looked at patients over two years,  
NOTE Confidence: 0.886860101666667

00:37:20.000 --> 00:37:23.300 about 43% or so.  
NOTE Confidence: 0.886860101666667

00:37:23.300 --> 00:37:27.080 Actually had some recurrences  
NOTE Confidence: 0.886860101666667

00:37:27.080 --> 00:37:29.348 when we look at.  
NOTE Confidence: 0.886860101666667

00:37:29.350 --> 00:37:30.910 Immune therapy again,  
NOTE Confidence: 0.886860101666667

00:37:30.910 --> 00:37:32.470 very small studies.  
NOTE Confidence: 0.886860101666667

00:37:32.470 --> 00:37:32.715 Again,  
NOTE Confidence: 0.886860101666667

00:37:32.715 --> 00:37:34.430 we're still getting more of this information.  
NOTE Confidence: 0.886860101666667

00:37:34.430 --> 00:37:37.382 The first one used a combination of two  
NOTE Confidence: 0.886860101666667

00:37:37.382 --> 00:37:39.728 different types of checkpoint blockade and  
NOTE Confidence: 0.886860101666667

00:37:39.728 --> 00:37:42.769 compare that to a single agent and again.  
NOTE Confidence: 0.886860101666667

00:37:42.770 --> 00:37:44.026 Again, looked and said,  
NOTE Confidence: 0.886860101666667

00:37:44.026 --> 00:37:46.532 did we see a response when people looked  
NOTE Confidence: 0.886860101666667

00:37:46.532 --> 00:37:49.190 at X rays and CAT scans and so forth?  
NOTE Confidence: 0.886860101666667

00:37:49.190 --> 00:37:51.032 What did it look like underneath  
NOTE Confidence: 0.886860101666667

00:37:51.032 --> 00:37:52.770 the microscope and the combination

NOTE Confidence: 0.886860101666667  
00:37:52.770 --> 00:37:55.045 actually had more complete responses.  
NOTE Confidence: 0.886860101666667  
00:37:55.050 --> 00:37:56.550 So where where you looked you  
NOTE Confidence: 0.886860101666667  
00:37:56.550 --> 00:37:57.966 didn't see alive Melanoma cells  
NOTE Confidence: 0.886860101666667  
00:37:57.966 --> 00:37:59.058 underneath the microscope?  
NOTE Confidence: 0.886860101666667  
00:37:59.060 --> 00:37:59.868 But again,  
NOTE Confidence: 0.886860101666667  
00:37:59.868 --> 00:38:02.696 this is really stark in that three  
NOTE Confidence: 0.886860101666667  
00:38:02.696 --> 00:38:05.589 out of four people got serious  
NOTE Confidence: 0.886860101666667  
00:38:05.589 --> 00:38:08.230 toxicity and when one looks at again  
NOTE Confidence: 0.886860101666667  
00:38:08.230 --> 00:38:11.008 over a two year period of time,  
NOTE Confidence: 0.886860101666667  
00:38:11.010 --> 00:38:12.720 80% of those and again these  
NOTE Confidence: 0.886860101666667  
00:38:12.720 --> 00:38:13.860 these data keep getting.  
NOTE Confidence: 0.886860101666667  
00:38:13.860 --> 00:38:16.704 Updated as we as we learn more and more.  
NOTE Confidence: 0.886860101666667  
00:38:16.710 --> 00:38:19.098 Didn't have any of the Melanoma  
NOTE Confidence: 0.886860101666667  
00:38:19.098 --> 00:38:20.690 progress or comeback compared  
NOTE Confidence: 0.886860101666667  
00:38:20.755 --> 00:38:22.582 to when we just gave a single  
NOTE Confidence: 0.886860101666667

00:38:22.582 --> 00:38:24.800 one of the checkpoint blockades.  
NOTE Confidence: 0.886860101666667

00:38:24.800 --> 00:38:26.366 This is the anti PD one.  
NOTE Confidence: 0.886860101666667

00:38:26.370 --> 00:38:29.496 Agent were again much less toxicity  
NOTE Confidence: 0.886860101666667

00:38:29.496 --> 00:38:33.380 but you know people did not have as as  
NOTE Confidence: 0.886860101666667

00:38:33.380 --> 00:38:37.880 long of a recurrence free survival.  
NOTE Confidence: 0.886860101666667

00:38:37.880 --> 00:38:41.800 Again, now people have looked at this with.  
NOTE Confidence: 0.886860101666667

00:38:41.800 --> 00:38:42.666 Different combinations,  
NOTE Confidence: 0.886860101666667

00:38:42.666 --> 00:38:43.099 again,  
NOTE Confidence: 0.886860101666667

00:38:43.099 --> 00:38:45.264 trying to find a combination  
NOTE Confidence: 0.886860101666667

00:38:45.264 --> 00:38:47.669 for which things work well where  
NOTE Confidence: 0.886860101666667

00:38:47.669 --> 00:38:49.514 we get really great responses,  
NOTE Confidence: 0.886860101666667

00:38:49.520 --> 00:38:52.772 but we have more minimal toxicity and  
NOTE Confidence: 0.886860101666667

00:38:52.772 --> 00:38:55.600 this dose here in highlighted here  
NOTE Confidence: 0.886860101666667

00:38:55.600 --> 00:38:58.441 at B which is the PD one agent giving  
NOTE Confidence: 0.886860101666667

00:38:58.441 --> 00:39:00.761 that at a higher dose in a lower  
NOTE Confidence: 0.886860101666667

00:39:00.761 --> 00:39:03.525 dose of the implement which is a CTA

NOTE Confidence: 0.886860101666667  
00:39:03.525 --> 00:39:05.706 for agent translates over to here,  
NOTE Confidence: 0.886860101666667  
00:39:05.706 --> 00:39:07.998 which is the best response with  
NOTE Confidence: 0.886860101666667  
00:39:07.998 --> 00:39:11.031 the least amount of toxicity and  
NOTE Confidence: 0.886860101666667  
00:39:11.031 --> 00:39:12.057 this combination.  
NOTE Confidence: 0.886860101666667  
00:39:12.060 --> 00:39:14.440 Is actually now being actively  
NOTE Confidence: 0.886860101666667  
00:39:14.440 --> 00:39:17.460 looked at in ongoing clinical trials.  
NOTE Confidence: 0.886860101666667  
00:39:17.460 --> 00:39:17.937 Again,  
NOTE Confidence: 0.886860101666667  
00:39:17.937 --> 00:39:20.799 trying to get the most amount  
NOTE Confidence: 0.886860101666667  
00:39:20.799 --> 00:39:22.230 of benefit again,  
NOTE Confidence: 0.886860101666667  
00:39:22.230 --> 00:39:24.336 we could probably debate for hours,  
NOTE Confidence: 0.886860101666667  
00:39:24.340 --> 00:39:25.830 the utility and where we  
NOTE Confidence: 0.886860101666667  
00:39:25.830 --> 00:39:27.320 think the field is going.  
NOTE Confidence: 0.886860101666667  
00:39:27.320 --> 00:39:28.030 But again,  
NOTE Confidence: 0.886860101666667  
00:39:28.030 --> 00:39:30.160 I think it's really important to  
NOTE Confidence: 0.886860101666667  
00:39:30.160 --> 00:39:32.434 talk about these things as some  
NOTE Confidence: 0.886860101666667

00:39:32.434 --> 00:39:34.678 clinical trials will also be opening  
NOTE Confidence: 0.958443291428571

00:39:34.753 --> 00:39:39.157 up. Now this is a more recently published.  
NOTE Confidence: 0.958443291428571

00:39:39.160 --> 00:39:41.267 Compilation, so there's been six of these.  
NOTE Confidence: 0.958443291428571

00:39:41.270 --> 00:39:42.870 What we call neoadjuvant trials.  
NOTE Confidence: 0.958443291428571

00:39:42.870 --> 00:39:45.422 Two have used the targeted agents and four  
NOTE Confidence: 0.958443291428571

00:39:45.422 --> 00:39:48.356 have used the immune therapy and one of the  
NOTE Confidence: 0.958443291428571

00:39:48.356 --> 00:39:50.847 things that people are starting to look at.  
NOTE Confidence: 0.958443291428571

00:39:50.850 --> 00:39:53.810 And again, this is combining all those trials  
NOTE Confidence: 0.958443291428571

00:39:53.810 --> 00:39:56.684 together is when we look after we remove  
NOTE Confidence: 0.958443291428571

00:39:56.684 --> 00:39:59.170 the tumor underneath the microscope does.  
NOTE Confidence: 0.958443291428571

00:39:59.170 --> 00:40:01.606 What we see that pathologic response,  
NOTE Confidence: 0.958443291428571

00:40:01.610 --> 00:40:03.380 whether or not the tumor looks  
NOTE Confidence: 0.958443291428571

00:40:03.380 --> 00:40:05.883 like that it's been killed by the  
NOTE Confidence: 0.958443291428571

00:40:05.883 --> 00:40:07.567 therapies underneath the microscope,  
NOTE Confidence: 0.958443291428571

00:40:07.570 --> 00:40:09.274 does that translate into  
NOTE Confidence: 0.958443291428571

00:40:09.274 --> 00:40:10.978 how people are doing,

NOTE Confidence: 0.958443291428571

00:40:10.980 --> 00:40:14.868 and particularly for the targeted therapy,

NOTE Confidence: 0.958443291428571

00:40:14.870 --> 00:40:16.557 if you did not have one of

NOTE Confidence: 0.958443291428571

00:40:16.557 --> 00:40:17.890 these very strong responses,

NOTE Confidence: 0.958443291428571

00:40:17.890 --> 00:40:21.150 people did not do well with the same

NOTE Confidence: 0.958443291428571

00:40:21.150 --> 00:40:22.348 thing here, with the immunotherapy.

NOTE Confidence: 0.958443291428571

00:40:22.348 --> 00:40:23.650 So all of these ones over here,

NOTE Confidence: 0.958443291428571

00:40:23.650 --> 00:40:25.400 these are people who had what we

NOTE Confidence: 0.958443291428571

00:40:25.400 --> 00:40:27.205 called a path out pathologic response

NOTE Confidence: 0.958443291428571

00:40:27.205 --> 00:40:29.529 compared to those people who did not.

NOTE Confidence: 0.958443291428571

00:40:29.530 --> 00:40:30.214 And again,

NOTE Confidence: 0.958443291428571

00:40:30.214 --> 00:40:31.924 you can see these curves

NOTE Confidence: 0.958443291428571

00:40:31.924 --> 00:40:33.559 different from across the room.

NOTE Confidence: 0.92143744

00:40:36.240 --> 00:40:39.089 So. The role of surgery

NOTE Confidence: 0.92143744

00:40:39.089 --> 00:40:40.388 in these combinations.

NOTE Confidence: 0.92143744

00:40:40.390 --> 00:40:42.231 Getting the timing right for the right

NOTE Confidence: 0.92143744

00:40:42.231 --> 00:40:44.650 people at the right time and the right order.  
NOTE Confidence: 0.92143744

00:40:44.650 --> 00:40:47.870 That's going to be continuing to expand.  
NOTE Confidence: 0.92143744

00:40:47.870 --> 00:40:51.094 And again, we always need to be cautious.  
NOTE Confidence: 0.92143744

00:40:51.100 --> 00:40:52.702 As I showed you really balancing  
NOTE Confidence: 0.92143744

00:40:52.702 --> 00:40:54.828 this with the real side effects that  
NOTE Confidence: 0.92143744

00:40:54.828 --> 00:40:56.498 can happen with these treatments.  
NOTE Confidence: 0.92143744

00:40:56.500 --> 00:40:59.068 So again, a tremendous amount of  
NOTE Confidence: 0.92143744

00:40:59.068 --> 00:41:00.780 research and novel combination  
NOTE Confidence: 0.92143744

00:41:00.857 --> 00:41:02.897 therapies are also being used,  
NOTE Confidence: 0.92143744

00:41:02.900 --> 00:41:05.528 so I I think that this is going to  
NOTE Confidence: 0.92143744

00:41:05.528 --> 00:41:07.812 be an opportunity for ongoing growth.  
NOTE Confidence: 0.92143744

00:41:07.812 --> 00:41:11.115 To benefit patients in the future and not  
NOTE Confidence: 0.92143744

00:41:11.115 --> 00:41:13.450 to be outdone by Doctor Leventhal's cartoons,  
NOTE Confidence: 0.92143744

00:41:13.450 --> 00:41:15.970 here you're smart to see me.  
NOTE Confidence: 0.92143744

00:41:15.970 --> 00:41:16.640 Doctor Lewis,  
NOTE Confidence: 0.92143744

00:41:16.640 --> 00:41:18.650 I should make this doctor Leventhal

NOTE Confidence: 0.92143744

00:41:18.650 --> 00:41:20.060 these moles in your backs.

NOTE Confidence: 0.92143744

00:41:20.060 --> 00:41:21.992 Definitely look suspicious.

NOTE Confidence: 0.92143744

00:41:21.992 --> 00:41:25.400 So and with that I'll take any questions.

NOTE Confidence: 0.892911312

00:41:29.560 --> 00:41:31.700 Thank you so much, Kelly.

NOTE Confidence: 0.892911312

00:41:31.700 --> 00:41:34.280 I think you have three questions, OK?

NOTE Confidence: 0.802986448

00:41:36.800 --> 00:41:39.520 Two left OK. We talked about the melon

NOTE Confidence: 0.802986448

00:41:39.520 --> 00:41:41.884 on the other organs desmoplastic

NOTE Confidence: 0.802986448

00:41:41.884 --> 00:41:44.564 Melanoma compared to other forms

NOTE Confidence: 0.802986448

00:41:44.564 --> 00:41:47.729 of Melanoma. So on that sure.

NOTE Confidence: 0.90126989375

00:41:47.760 --> 00:41:49.888 So desmoplastic Melanoma there,

NOTE Confidence: 0.90126989375

00:41:49.888 --> 00:41:52.016 there's actually two varieties,

NOTE Confidence: 0.90126989375

00:41:52.020 --> 00:41:54.132 one we call a pure form and when

NOTE Confidence: 0.90126989375

00:41:54.132 --> 00:41:56.389 we call them mixed form and what

NOTE Confidence: 0.90126989375

00:41:56.389 --> 00:41:58.715 their what they do is they look very

NOTE Confidence: 0.90126989375

00:41:58.715 --> 00:42:00.180 differently underneath the microscope.

NOTE Confidence: 0.90126989375

00:42:00.180 --> 00:42:02.730 Generally they're thicker and there's more  
NOTE Confidence: 0.90126989375

00:42:02.730 --> 00:42:05.129 fibrotic tissue in association with those.  
NOTE Confidence: 0.90126989375

00:42:05.130 --> 00:42:07.050 Now what's interesting is that  
NOTE Confidence: 0.90126989375

00:42:07.050 --> 00:42:09.340 depending upon which variety you have,  
NOTE Confidence: 0.90126989375

00:42:09.340 --> 00:42:11.908 one is equally likely to go to lymph  
NOTE Confidence: 0.90126989375

00:42:11.908 --> 00:42:14.186 nodes much with Doctor Clune has  
NOTE Confidence: 0.90126989375

00:42:14.186 --> 00:42:16.080 described the other one, really.  
NOTE Confidence: 0.90126989375

00:42:16.080 --> 00:42:18.640 Doesn't like to go to the lymph nodes?  
NOTE Confidence: 0.90126989375

00:42:18.640 --> 00:42:21.376 Both of them have the risk of spreading,  
NOTE Confidence: 0.90126989375

00:42:21.380 --> 00:42:23.385 but interestingly seemed to be  
NOTE Confidence: 0.90126989375

00:42:23.385 --> 00:42:25.390 more sensitive even to single  
NOTE Confidence: 0.90126989375

00:42:25.465 --> 00:42:27.337 therapy with immune therapy,  
NOTE Confidence: 0.90126989375

00:42:27.340 --> 00:42:29.218 so I don't know if that  
NOTE Confidence: 0.90126989375

00:42:29.218 --> 00:42:30.157 answered your question,  
NOTE Confidence: 0.90126989375

00:42:30.160 --> 00:42:32.074 but that's a general overview of  
NOTE Confidence: 0.90126989375

00:42:32.074 --> 00:42:33.910 the world of Desmoplastic Melanoma.

NOTE Confidence: 0.90126989375  
00:42:34.660 --> 00:42:35.110 Thank you.  
NOTE Confidence: 0.8145137  
00:42:41.040 --> 00:42:41.610 Train.  
NOTE Confidence: 0.855330146  
00:42:44.440 --> 00:42:46.550 Hey so, welcome back everyone.  
NOTE Confidence: 0.8454331975  
00:42:47.730 --> 00:42:49.250 We're going to finish off  
NOTE Confidence: 0.8454331975  
00:42:49.250 --> 00:42:51.230 with two additional talks.  
NOTE Confidence: 0.8454331975  
00:42:51.230 --> 00:42:54.140 The first one is from Doctor Tran,  
NOTE Confidence: 0.869549228  
00:42:54.660 --> 00:42:57.043 who is a medical oncologist and  
NOTE Confidence: 0.869549228  
00:42:57.043 --> 00:42:58.742 assistant professor of medicine who just  
NOTE Confidence: 0.869549228  
00:42:58.742 --> 00:43:00.992 joined our group and she's going to be  
NOTE Confidence: 0.869549228  
00:43:00.992 --> 00:43:02.996 talking to us about systemic therapy.  
NOTE Confidence: 0.869549228  
00:43:03.000 --> 00:43:04.995 In other words, therapy that's  
NOTE Confidence: 0.869549228  
00:43:04.995 --> 00:43:07.560 given by Ivy or by mouth.  
NOTE Confidence: 0.869549228  
00:43:07.560 --> 00:43:10.416 Uhm, for patients who've had this,  
NOTE Confidence: 0.869549228  
00:43:10.420 --> 00:43:12.240 their their melanomas resected,  
NOTE Confidence: 0.869549228  
00:43:12.240 --> 00:43:14.510 so take it away, tweet.  
NOTE Confidence: 0.740895402727273

00:43:15.950 --> 00:43:17.050 Thank you so much,  
NOTE Confidence: 0.740895402727273

00:43:17.050 --> 00:43:19.080 Doctor Kluger and my colleague Dr Alino.  
NOTE Confidence: 0.740895402727273

00:43:19.080 --> 00:43:21.166 Perfectly set me up for this logical  
NOTE Confidence: 0.740895402727273

00:43:21.166 --> 00:43:23.045 progression here so the doctor Alina  
NOTE Confidence: 0.740895402727273

00:43:23.045 --> 00:43:24.899 focused a lot of neoadjuvant therapies  
NOTE Confidence: 0.740895402727273

00:43:24.899 --> 00:43:26.888 in Melanoma and I'm gonna have the  
NOTE Confidence: 0.740895402727273

00:43:26.888 --> 00:43:28.976 pleasure to talk to you about sort  
NOTE Confidence: 0.740895402727273

00:43:28.976 --> 00:43:31.300 of what we think of as clinicians  
NOTE Confidence: 0.740895402727273

00:43:31.377 --> 00:43:33.652 when we see a patient with high  
NOTE Confidence: 0.740895402727273

00:43:33.652 --> 00:43:35.785 risk disease of recurrence and what  
NOTE Confidence: 0.740895402727273

00:43:35.785 --> 00:43:38.305 we can do to minimize that risk.  
NOTE Confidence: 0.740895402727273

00:43:38.310 --> 00:43:40.668 So, just in terms of defining  
NOTE Confidence: 0.740895402727273

00:43:40.668 --> 00:43:42.520 exactly what Advent therapy is,  
NOTE Confidence: 0.740895402727273

00:43:42.520 --> 00:43:44.656 we throw a lot of jargon around in  
NOTE Confidence: 0.740895402727273

00:43:44.656 --> 00:43:46.570 our clinic. But just to be clear.  
NOTE Confidence: 0.740895402727273

00:43:46.570 --> 00:43:49.020 We kind of lump sum high risk

NOTE Confidence: 0.740895402727273  
00:43:49.020 --> 00:43:50.730 melanomas into two buckets,  
NOTE Confidence: 0.740895402727273  
00:43:50.730 --> 00:43:53.502 meaning either their resectable or their  
NOTE Confidence: 0.740895402727273  
00:43:53.502 --> 00:43:56.400 unrespectable in terms of their disease.  
NOTE Confidence: 0.740895402727273  
00:43:56.400 --> 00:43:58.990 UM, when you talk about  
NOTE Confidence: 0.740895402727273  
00:43:58.990 --> 00:44:00.544 receptable before surgery,  
NOTE Confidence: 0.740895402727273  
00:44:00.550 --> 00:44:02.356 any treatment that we use before  
NOTE Confidence: 0.740895402727273  
00:44:02.356 --> 00:44:04.080 surgery is considered new adjutant.  
NOTE Confidence: 0.740895402727273  
00:44:04.080 --> 00:44:05.982 Any treatment that we've used after  
NOTE Confidence: 0.740895402727273  
00:44:05.982 --> 00:44:07.850 surgery we consider atrovent and really,  
NOTE Confidence: 0.740895402727273  
00:44:07.850 --> 00:44:09.760 the goals of these treatments  
NOTE Confidence: 0.740895402727273  
00:44:09.760 --> 00:44:11.670 either before or after surgery,  
NOTE Confidence: 0.740895402727273  
00:44:11.670 --> 00:44:13.050 are a little bit different.  
NOTE Confidence: 0.740895402727273  
00:44:13.050 --> 00:44:15.976 So as doctor Alino perfectly laid out,  
NOTE Confidence: 0.740895402727273  
00:44:15.980 --> 00:44:17.200 the goals of New Advent.  
NOTE Confidence: 0.740895402727273  
00:44:17.200 --> 00:44:20.098 Therapy basically to shrink the tumor,  
NOTE Confidence: 0.740895402727273

00:44:20.100 --> 00:44:22.060 and hopefully if the tumor is smaller,  
NOTE Confidence: 0.740895402727273

00:44:22.060 --> 00:44:24.349 that makes the surgery a little easier.  
NOTE Confidence: 0.740895402727273

00:44:24.350 --> 00:44:26.075 You'll have a higher chance  
NOTE Confidence: 0.740895402727273

00:44:26.075 --> 00:44:27.455 of getting clean margins.  
NOTE Confidence: 0.740895402727273

00:44:27.460 --> 00:44:29.560 We also you get an opportunity to  
NOTE Confidence: 0.740895402727273

00:44:29.560 --> 00:44:31.139 assess the response to therapy.  
NOTE Confidence: 0.740895402727273

00:44:31.140 --> 00:44:33.360 So if your therapies potentially affected,  
NOTE Confidence: 0.740895402727273

00:44:33.360 --> 00:44:35.586 there might be a lot of immune  
NOTE Confidence: 0.740895402727273

00:44:35.586 --> 00:44:37.530 infiltration into any residual tumor,  
NOTE Confidence: 0.740895402727273

00:44:37.530 --> 00:44:39.385 or there might be a complete response.  
NOTE Confidence: 0.740895402727273

00:44:39.390 --> 00:44:41.766 And there's a pathologic response where  
NOTE Confidence: 0.740895402727273

00:44:41.766 --> 00:44:44.863 the tumor is almost obliterated by the  
NOTE Confidence: 0.740895402727273

00:44:44.863 --> 00:44:47.258 effectiveness of there are treatments.  
NOTE Confidence: 0.740895402727273

00:44:47.260 --> 00:44:49.690 They're also one of the additional  
NOTE Confidence: 0.740895402727273

00:44:49.690 --> 00:44:51.682 unique things about treating UM  
NOTE Confidence: 0.740895402727273

00:44:51.682 --> 00:44:53.530 a patient with a tumor already

NOTE Confidence: 0.740895402727273  
00:44:53.530 --> 00:44:55.358 in places that you can help,  
NOTE Confidence: 0.740895402727273  
00:44:55.360 --> 00:44:57.388 stimulate or educate the immune system,  
NOTE Confidence: 0.740895402727273  
00:44:57.390 --> 00:44:59.658 particularly with RF very  
NOTE Confidence: 0.740895402727273  
00:44:59.658 --> 00:45:01.359 effective immune therapies,  
NOTE Confidence: 0.740895402727273  
00:45:01.360 --> 00:45:03.860 because they will have access  
NOTE Confidence: 0.740895402727273  
00:45:03.860 --> 00:45:05.860 to these tumor neoantigens.  
NOTE Confidence: 0.740895402727273  
00:45:05.860 --> 00:45:07.480 In terms of management therapy,  
NOTE Confidence: 0.740895402727273  
00:45:07.480 --> 00:45:08.821 though after surgery,  
NOTE Confidence: 0.740895402727273  
00:45:08.821 --> 00:45:11.056 potentially all gross or visible  
NOTE Confidence: 0.740895402727273  
00:45:11.056 --> 00:45:13.668 tumor is removed and so really  
NOTE Confidence: 0.740895402727273  
00:45:13.668 --> 00:45:15.723 we're talking about not treating  
NOTE Confidence: 0.740895402727273  
00:45:15.723 --> 00:45:18.200 the actual primary tumor itself,  
NOTE Confidence: 0.740895402727273  
00:45:18.200 --> 00:45:19.800 but treating micrometastatic disease  
NOTE Confidence: 0.740895402727273  
00:45:19.800 --> 00:45:22.601 that those few clusters of cells that  
NOTE Confidence: 0.740895402727273  
00:45:22.601 --> 00:45:24.653 might have hitched along the lymphatic  
NOTE Confidence: 0.740895402727273

00:45:24.653 --> 00:45:26.875 vessels or into the blood that might  
NOTE Confidence: 0.740895402727273

00:45:26.875 --> 00:45:29.296 be hiding out in other areas of the  
NOTE Confidence: 0.740895402727273

00:45:29.296 --> 00:45:31.802 body just waiting for their chance to  
NOTE Confidence: 0.740895402727273

00:45:31.802 --> 00:45:34.080 repair and so active in therapy was  
NOTE Confidence: 0.740895402727273

00:45:34.080 --> 00:45:36.020 really targeted trying to eradicate.  
NOTE Confidence: 0.740895402727273

00:45:36.020 --> 00:45:36.507 Completely,  
NOTE Confidence: 0.740895402727273

00:45:36.507 --> 00:45:38.455 these remaining residual clusters  
NOTE Confidence: 0.740895402727273

00:45:38.455 --> 00:45:42.021 of cells and the whole goal of agile  
NOTE Confidence: 0.740895402727273

00:45:42.021 --> 00:45:44.127 in therapy is to prevent relapse  
NOTE Confidence: 0.740895402727273

00:45:44.127 --> 00:45:46.530 or recurrence and ultimately to  
NOTE Confidence: 0.740895402727273

00:45:46.530 --> 00:45:49.000 improve survival in our patients.  
NOTE Confidence: 0.740895402727273

00:45:49.000 --> 00:45:51.611 This is a little bit different from  
NOTE Confidence: 0.740895402727273

00:45:51.611 --> 00:45:53.280 unresectable or metastatic disease,  
NOTE Confidence: 0.740895402727273

00:45:53.280 --> 00:45:56.638 where it's kind of more of  
NOTE Confidence: 0.740895402727273

00:45:56.638 --> 00:45:57.580 a salvage approach.  
NOTE Confidence: 0.740895402727273

00:45:57.580 --> 00:45:59.676 Trying to control the growth of the tumor,

NOTE Confidence: 0.740895402727273  
00:45:59.680 --> 00:46:01.328 trying to delay progression,  
NOTE Confidence: 0.740895402727273  
00:46:01.328 --> 00:46:02.976 trying to improve survival,  
NOTE Confidence: 0.740895402727273  
00:46:02.980 --> 00:46:04.684 and maybe with our more effective  
NOTE Confidence: 0.740895402727273  
00:46:04.684 --> 00:46:06.619 therapies these days in a small subset.  
NOTE Confidence: 0.740895402727273  
00:46:06.620 --> 00:46:08.723 Patients potentially still  
NOTE Confidence: 0.740895402727273  
00:46:08.723 --> 00:46:11.527 provide accurate if option.  
NOTE Confidence: 0.740895402727273  
00:46:11.530 --> 00:46:13.581 When you focus on your budget in  
NOTE Confidence: 0.740895402727273  
00:46:13.581 --> 00:46:15.421 adamant therapy long there are certain  
NOTE Confidence: 0.740895402727273  
00:46:15.421 --> 00:46:17.740 limitations that we have to be aware of.  
NOTE Confidence: 0.740895402727273  
00:46:17.740 --> 00:46:20.320 So in terms of neoadjuvant therapy,  
NOTE Confidence: 0.740895402727273  
00:46:20.320 --> 00:46:22.798 if we give these tumors upfront  
NOTE Confidence: 0.740895402727273  
00:46:22.798 --> 00:46:24.450 and delay surgery or  
NOTE Confidence: 0.859592943888889  
00:46:24.535 --> 00:46:26.113 curative resection by  
NOTE Confidence: 0.859592943888889  
00:46:26.113 --> 00:46:28.743 potentially up to three months.  
NOTE Confidence: 0.859592943888889  
00:46:28.750 --> 00:46:30.340 If the tumors don't respond,  
NOTE Confidence: 0.859592943888889

00:46:30.340 --> 00:46:32.650 that could mean that the tumor is  
NOTE Confidence: 0.859592943888889

00:46:32.650 --> 00:46:34.481 growing that entire interval and  
NOTE Confidence: 0.859592943888889

00:46:34.481 --> 00:46:36.797 making the surgery even more difficult  
NOTE Confidence: 0.859592943888889

00:46:36.797 --> 00:46:39.200 to provide a complete resection for.  
NOTE Confidence: 0.859592943888889

00:46:39.200 --> 00:46:40.500 In addition to that,  
NOTE Confidence: 0.859592943888889

00:46:40.500 --> 00:46:42.125 any treatments that we provide.  
NOTE Confidence: 0.859592943888889

00:46:42.130 --> 00:46:44.190 Systemically, have their own side  
NOTE Confidence: 0.859592943888889

00:46:44.190 --> 00:46:46.762 effects and toxicities and so when  
NOTE Confidence: 0.859592943888889

00:46:46.762 --> 00:46:49.426 we have to consider side effects,  
NOTE Confidence: 0.859592943888889

00:46:49.430 --> 00:46:51.430 potentially those side effects  
NOTE Confidence: 0.859592943888889

00:46:51.430 --> 00:46:53.930 may delay the curative surgery.  
NOTE Confidence: 0.859592943888889

00:46:53.930 --> 00:46:55.970 The limitations in the atrovant setting,  
NOTE Confidence: 0.859592943888889

00:46:55.970 --> 00:46:57.728 though, is that you know we're  
NOTE Confidence: 0.859592943888889

00:46:57.728 --> 00:46:59.520 treating a lot of patients,  
NOTE Confidence: 0.859592943888889

00:46:59.520 --> 00:47:01.734 some of whom may never have  
NOTE Confidence: 0.859592943888889

00:47:01.734 --> 00:47:03.210 recurred to begin with,

NOTE Confidence: 0.859592943888889

00:47:03.210 --> 00:47:05.569 and so you are subjecting a large

NOTE Confidence: 0.859592943888889

00:47:05.569 --> 00:47:07.958 group of patients to potentially a

NOTE Confidence: 0.859592943888889

00:47:07.958 --> 00:47:10.143 treatment without the added benefit.

NOTE Confidence: 0.859592943888889

00:47:10.150 --> 00:47:10.682 Overall,

NOTE Confidence: 0.859592943888889

00:47:10.682 --> 00:47:14.406 in terms of decreasing relapse or recurrence.

NOTE Confidence: 0.859592943888889

00:47:14.410 --> 00:47:17.318 These side effects may also significantly

NOTE Confidence: 0.859592943888889

00:47:17.318 --> 00:47:19.658 impact their quality of life,

NOTE Confidence: 0.859592943888889

00:47:19.660 --> 00:47:21.348 particularly with immune therapies.

NOTE Confidence: 0.859592943888889

00:47:21.348 --> 00:47:24.780 Some of these side effects may be permanent.

NOTE Confidence: 0.859592943888889

00:47:24.780 --> 00:47:25.149 Also,

NOTE Confidence: 0.859592943888889

00:47:25.149 --> 00:47:26.994 even with the best effective

NOTE Confidence: 0.859592943888889

00:47:26.994 --> 00:47:28.840 agement therapies that we have,

NOTE Confidence: 0.859592943888889

00:47:28.840 --> 00:47:31.006 it's not an absolute guarantee that

NOTE Confidence: 0.859592943888889

00:47:31.006 --> 00:47:33.180 this tumor will not come back.

NOTE Confidence: 0.859592943888889

00:47:33.180 --> 00:47:35.130 There's also a financial toxicity

NOTE Confidence: 0.859592943888889

00:47:35.130 --> 00:47:37.080 for these drugs as well.  
NOTE Confidence: 0.859592943888889

00:47:37.080 --> 00:47:38.658 They're not cheap,  
NOTE Confidence: 0.859592943888889

00:47:38.658 --> 00:47:41.138 and ultimately you know it,  
NOTE Confidence: 0.859592943888889

00:47:41.138 --> 00:47:43.518 it ultimately comes down to  
NOTE Confidence: 0.859592943888889

00:47:43.518 --> 00:47:45.689 what insurance will provide,  
NOTE Confidence: 0.859592943888889

00:47:45.690 --> 00:47:47.415 what the patient will put  
NOTE Confidence: 0.859592943888889

00:47:47.415 --> 00:47:48.795 up with opportunity costs,  
NOTE Confidence: 0.859592943888889

00:47:48.800 --> 00:47:50.738 all the visits to the clinic,  
NOTE Confidence: 0.859592943888889

00:47:50.740 --> 00:47:54.196 even beyond just the financial toxicity.  
NOTE Confidence: 0.859592943888889

00:47:54.200 --> 00:47:56.180 There's a lot of time commitment  
NOTE Confidence: 0.859592943888889

00:47:56.180 --> 00:47:58.138 for these patients to come back  
NOTE Confidence: 0.859592943888889

00:47:58.138 --> 00:48:00.133 for agile in therapy for a year,  
NOTE Confidence: 0.859592943888889

00:48:00.140 --> 00:48:02.960 so when we consider effective therapies,  
NOTE Confidence: 0.859592943888889

00:48:02.960 --> 00:48:03.482 you know.  
NOTE Confidence: 0.859592943888889

00:48:03.482 --> 00:48:05.309 What are the drugs that we are  
NOTE Confidence: 0.859592943888889

00:48:05.309 --> 00:48:06.998 using in the adjuvant setting?

NOTE Confidence: 0.859592943888889

00:48:07.000 --> 00:48:08.750 We've applied a lot of the drugs

NOTE Confidence: 0.859592943888889

00:48:08.750 --> 00:48:10.297 that we know are effective

NOTE Confidence: 0.859592943888889

00:48:10.297 --> 00:48:11.777 in the metastatic setting.

NOTE Confidence: 0.859592943888889

00:48:11.780 --> 00:48:13.831 Our question is ultimately if they work

NOTE Confidence: 0.859592943888889

00:48:13.831 --> 00:48:16.118 so well in the metastatic setting,

NOTE Confidence: 0.859592943888889

00:48:16.120 --> 00:48:18.556 can they be moved up earlier

NOTE Confidence: 0.859592943888889

00:48:18.556 --> 00:48:20.180 in higher risk disease,

NOTE Confidence: 0.859592943888889

00:48:20.180 --> 00:48:21.422 particularly stage three?

NOTE Confidence: 0.859592943888889

00:48:21.422 --> 00:48:24.320 Disease in in used in that setting

NOTE Confidence: 0.859592943888889

00:48:24.396 --> 00:48:27.048 so that they can decrease recurrence

NOTE Confidence: 0.859592943888889

00:48:27.048 --> 00:48:29.378 breast in improves survival and overall

NOTE Confidence: 0.859592943888889

00:48:29.378 --> 00:48:31.331 the you have to consider sort of

NOTE Confidence: 0.859592943888889

00:48:31.331 --> 00:48:33.540 the side effects versus the quality.

NOTE Confidence: 0.859592943888889

00:48:33.540 --> 00:48:35.870 Life from the years gained.

NOTE Confidence: 0.859592943888889

00:48:35.870 --> 00:48:38.408 When we take a look at stage three disease,

NOTE Confidence: 0.859592943888889

00:48:38.410 --> 00:48:41.154 we like to subset or sub stage  
NOTE Confidence: 0.859592943888889

00:48:41.154 --> 00:48:43.356 stage three disease into various  
NOTE Confidence: 0.859592943888889

00:48:43.356 --> 00:48:45.240 sub categories as well.  
NOTE Confidence: 0.859592943888889

00:48:45.240 --> 00:48:47.963 Stage 3A where you had the five  
NOTE Confidence: 0.859592943888889

00:48:47.963 --> 00:48:49.850 year Melanoma specific survival,  
NOTE Confidence: 0.859592943888889

00:48:49.850 --> 00:48:52.846 so meaning survival as it just relates  
NOTE Confidence: 0.859592943888889

00:48:52.846 --> 00:48:56.226 to Melanoma as being the cause of death.  
NOTE Confidence: 0.859592943888889

00:48:56.230 --> 00:48:58.726 So five year survival for stage  
NOTE Confidence: 0.859592943888889

00:48:58.730 --> 00:49:00.650 3A Melanoma is really good.  
NOTE Confidence: 0.859592943888889

00:49:00.650 --> 00:49:02.930 It's 93% when we consider that over 10  
NOTE Confidence: 0.859592943888889

00:49:02.930 --> 00:49:05.610 years a little bit a lot longer interval,  
NOTE Confidence: 0.859592943888889

00:49:05.610 --> 00:49:06.070 it's.  
NOTE Confidence: 0.859592943888889

00:49:06.070 --> 00:49:09.290 88% if you were taking a quiz.  
NOTE Confidence: 0.859592943888889

00:49:09.290 --> 00:49:11.845 These are passing spores and so you  
NOTE Confidence: 0.859592943888889

00:49:11.845 --> 00:49:14.699 can really see that stage 3A melanomas  
NOTE Confidence: 0.859592943888889

00:49:14.700 --> 00:49:17.115 overall have really good outcomes

NOTE Confidence: 0.859592943888889

00:49:17.115 --> 00:49:19.530 regardless of adding any additional

NOTE Confidence: 0.859592943888889

00:49:19.607 --> 00:49:21.777 ajibon therapy in that setting.

NOTE Confidence: 0.859592943888889

00:49:21.780 --> 00:49:22.124 However,

NOTE Confidence: 0.859592943888889

00:49:22.124 --> 00:49:25.220 when we move down this list to stage 3B,

NOTE Confidence: 0.859592943888889

00:49:25.220 --> 00:49:27.880 stage 3C or stage 3D,

NOTE Confidence: 0.859592943888889

00:49:27.880 --> 00:49:29.810 this drops particularly in stage

NOTE Confidence: 0.859592943888889

00:49:29.810 --> 00:49:32.839 3D disease to a five year Melanoma.

NOTE Confidence: 0.859592943888889

00:49:32.840 --> 00:49:36.104 Specific survival of 32% in a 10 year.

NOTE Confidence: 0.859592943888889

00:49:36.110 --> 00:49:39.230 Melanoma specific survival of 24%.

NOTE Confidence: 0.859592943888889

00:49:39.230 --> 00:49:41.385 These are bismal numbers and

NOTE Confidence: 0.859592943888889

00:49:41.385 --> 00:49:43.540 so really the objective in

NOTE Confidence: 0.85593494

00:49:43.621 --> 00:49:45.617 Advent therapy is trying

NOTE Confidence: 0.85593494

00:49:45.617 --> 00:49:47.613 to improve these outcomes.

NOTE Confidence: 0.85593494

00:49:47.620 --> 00:49:50.293 When I see a patient in our in our

NOTE Confidence: 0.85593494

00:49:50.293 --> 00:49:52.330 Melanoma medical oncology clinic,

NOTE Confidence: 0.85593494

00:49:52.330 --> 00:49:54.759 you know it's really the stage three  
NOTE Confidence: 0.85593494

00:49:54.759 --> 00:49:56.568 Melanoma patients that we focus on.  
NOTE Confidence: 0.85593494

00:49:56.570 --> 00:49:58.754 Because this is the cohort of  
NOTE Confidence: 0.85593494

00:49:58.754 --> 00:50:01.053 individuals who we think there is  
NOTE Confidence: 0.85593494

00:50:01.053 --> 00:50:03.357 an active role for adjuvant therapy  
NOTE Confidence: 0.85593494

00:50:03.357 --> 00:50:05.350 in improving patient outcomes.  
NOTE Confidence: 0.85593494

00:50:05.350 --> 00:50:07.666 So what we take into consideration  
NOTE Confidence: 0.85593494

00:50:07.666 --> 00:50:09.691 is the biology, so the pathology  
NOTE Confidence: 0.85593494

00:50:09.691 --> 00:50:11.413 that was taken from the biopsy,  
NOTE Confidence: 0.85593494

00:50:11.420 --> 00:50:13.108 the wide localists excision,  
NOTE Confidence: 0.85593494

00:50:13.108 --> 00:50:15.218 the lymph node assessments that  
NOTE Confidence: 0.85593494

00:50:15.218 --> 00:50:17.758 are done by doctors Cloonan dolino.  
NOTE Confidence: 0.85593494

00:50:17.760 --> 00:50:19.720 Really, we're looking at the tumor thickness,  
NOTE Confidence: 0.85593494

00:50:19.720 --> 00:50:21.436 the number of lymph nodes involved,  
NOTE Confidence: 0.85593494

00:50:21.440 --> 00:50:24.578 and overall the stage 3 subtype.  
NOTE Confidence: 0.85593494

00:50:24.580 --> 00:50:25.924 In addition to that,

NOTE Confidence: 0.85593494

00:50:25.924 --> 00:50:28.520 we do our standard radio graphic staging,

NOTE Confidence: 0.85593494

00:50:28.520 --> 00:50:30.515 which includes either CT of the chest,

NOTE Confidence: 0.85593494

00:50:30.520 --> 00:50:33.238 abdomen, pelvis, or whole body pet,

NOTE Confidence: 0.85593494

00:50:33.240 --> 00:50:34.638 as well as in brain MRI.

NOTE Confidence: 0.85593494

00:50:34.640 --> 00:50:36.656 And that's really just to make sure

NOTE Confidence: 0.85593494

00:50:36.656 --> 00:50:38.653 that we're dealing with exactly stage

NOTE Confidence: 0.85593494

00:50:38.653 --> 00:50:40.801 three disease and we're not accidentally

NOTE Confidence: 0.85593494

00:50:40.801 --> 00:50:42.520 missing early stage four disease.

NOTE Confidence: 0.85593494

00:50:42.520 --> 00:50:45.233 Now we have a lot of different

NOTE Confidence: 0.85593494

00:50:45.233 --> 00:50:47.009 opportunities and advancements

NOTE Confidence: 0.85593494

00:50:47.009 --> 00:50:49.377 in next generation sequencing

NOTE Confidence: 0.85593494

00:50:49.377 --> 00:50:52.119 for tumor molecular profiling,

NOTE Confidence: 0.85593494

00:50:52.120 --> 00:50:54.424 so this is when we take the tumor

NOTE Confidence: 0.85593494

00:50:54.424 --> 00:50:56.928 that is respected on and you know in

NOTE Confidence: 0.85593494

00:50:56.928 --> 00:51:00.312 the OR and send it for sequencing of

NOTE Confidence: 0.85593494

00:51:00.312 --> 00:51:02.384 various mutations gene amplifications,  
NOTE Confidence: 0.85593494

00:51:02.390 --> 00:51:04.950 things that could be potentially  
NOTE Confidence: 0.85593494

00:51:04.950 --> 00:51:06.998 targeted in the future.  
NOTE Confidence: 0.85593494

00:51:07.000 --> 00:51:09.160 In the most relevant setting in our clinic,  
NOTE Confidence: 0.85593494

00:51:09.160 --> 00:51:09.618 though,  
NOTE Confidence: 0.85593494

00:51:09.618 --> 00:51:12.366 the most important question for deciding  
NOTE Confidence: 0.85593494

00:51:12.366 --> 00:51:15.006 about which adamant therapy to offer  
NOTE Confidence: 0.85593494

00:51:15.006 --> 00:51:17.388 individuals is there beer at status,  
NOTE Confidence: 0.85593494

00:51:17.390 --> 00:51:20.702 so B rap is a gene typically be wrapped.  
NOTE Confidence: 0.85593494

00:51:20.710 --> 00:51:26.710 This specific mutations the V600E or V600K.  
NOTE Confidence: 0.85593494

00:51:26.710 --> 00:51:28.194 Indicate that these melanomas  
NOTE Confidence: 0.85593494

00:51:28.194 --> 00:51:30.049 are success susceptible to what  
NOTE Confidence: 0.85593494

00:51:30.049 --> 00:51:32.110 we consider targeted therapies,  
NOTE Confidence: 0.85593494

00:51:32.110 --> 00:51:35.704 so these are actual oral drug  
NOTE Confidence: 0.85593494

00:51:35.704 --> 00:51:38.100 treatments that specifically inhibit  
NOTE Confidence: 0.85593494

00:51:38.100 --> 00:51:40.830 tumors with harboring this mutation,

NOTE Confidence: 0.85593494

00:51:40.830 --> 00:51:43.014 the one that's FDA approved in this

NOTE Confidence: 0.85593494

00:51:43.014 --> 00:51:44.910 realm is to Bracknell traumatized

NOTE Confidence: 0.85593494

00:51:44.910 --> 00:51:47.140 after we know alluded to.

NOTE Confidence: 0.85593494

00:51:47.140 --> 00:51:48.708 So this is an oral pill that

NOTE Confidence: 0.85593494

00:51:48.708 --> 00:51:49.930 you take for one year.

NOTE Confidence: 0.85593494

00:51:49.930 --> 00:51:52.395 All of these adjectives therapies

NOTE Confidence: 0.85593494

00:51:52.395 --> 00:51:54.860 typically have a duration of

NOTE Confidence: 0.85593494

00:51:54.949 --> 00:51:57.099 one year after the surgery.

NOTE Confidence: 0.85593494

00:51:57.100 --> 00:51:59.228 If you don't have a beer at mutation,

NOTE Confidence: 0.85593494

00:51:59.230 --> 00:52:01.106 so we consider this be rack wildtype,

NOTE Confidence: 0.85593494

00:52:01.110 --> 00:52:02.962 regardless of tumor biomarker,

NOTE Confidence: 0.85593494

00:52:02.962 --> 00:52:06.454 that we look at to assess sensitivity

NOTE Confidence: 0.85593494

00:52:06.454 --> 00:52:08.966 to immunotherapy this PDL.

NOTE Confidence: 0.85593494

00:52:08.970 --> 00:52:10.884 One positive ITI if you're wild

NOTE Confidence: 0.85593494

00:52:10.884 --> 00:52:13.613 type to be raft then the other

NOTE Confidence: 0.85593494

00:52:13.613 --> 00:52:15.908 alternative options are immune therapy.

NOTE Confidence: 0.85593494

00:52:15.910 --> 00:52:17.849 The first one that gained FDA approval

NOTE Confidence: 0.85593494

00:52:17.849 --> 00:52:19.808 was at the gym after your boy.

NOTE Confidence: 0.85593494

00:52:19.810 --> 00:52:22.040 All these immune therapies are

NOTE Confidence: 0.85593494

00:52:22.040 --> 00:52:24.150 intravenous and they're also given

NOTE Confidence: 0.85593494

00:52:24.150 --> 00:52:27.080 over the course of a year too.

NOTE Confidence: 0.85593494

00:52:27.080 --> 00:52:28.376 It blew my map.

NOTE Confidence: 0.85593494

00:52:28.376 --> 00:52:28.700 Interestingly,

NOTE Confidence: 0.85593494

00:52:28.700 --> 00:52:30.860 fell out of favor though because

NOTE Confidence: 0.85593494

00:52:30.860 --> 00:52:31.940 it's highly toxic.

NOTE Confidence: 0.85593494

00:52:31.940 --> 00:52:34.795 About 50% of patients develop

NOTE Confidence: 0.85593494

00:52:34.795 --> 00:52:37.046 serious toxicity to this drug,

NOTE Confidence: 0.85593494

00:52:37.046 --> 00:52:40.551 and it also was later shown that the

NOTE Confidence: 0.85593494

00:52:40.551 --> 00:52:43.263 volume after Opdivo was superior to

NOTE Confidence: 0.85593494

00:52:43.263 --> 00:52:46.860 epulu map in terms of decreasing relapse.

NOTE Confidence: 0.85593494

00:52:46.860 --> 00:52:47.916 Free survival.

NOTE Confidence: 0.85593494

00:52:47.916 --> 00:52:52.140 So really, when we see individuals in clinic,

NOTE Confidence: 0.85593494

00:52:52.140 --> 00:52:55.675 it's really a discussion about new volume

NOTE Confidence: 0.85593494

00:52:55.675 --> 00:52:58.189 app versus pembrolizumab or KEYTRUDA.

NOTE Confidence: 0.85593494

00:52:58.190 --> 00:53:01.249 These are both anti PD one inhibitors,

NOTE Confidence: 0.85593494

00:53:01.250 --> 00:53:03.889 meaning they target the PD one pathway

NOTE Confidence: 0.85593494

00:53:03.889 --> 00:53:06.050 to stimulate the immune system.

NOTE Confidence: 0.85593494

00:53:06.050 --> 00:53:08.582 So these are drugs that activate

NOTE Confidence: 0.85593494

00:53:08.582 --> 00:53:10.270 our own immune system

NOTE Confidence: 0.849536046153846

00:53:10.355 --> 00:53:12.635 to try to increase cytotoxic T

NOTE Confidence: 0.849536046153846

00:53:12.635 --> 00:53:15.260 cell activity to basically find

NOTE Confidence: 0.849536046153846

00:53:15.260 --> 00:53:17.790 and destroy the cancer cells.

NOTE Confidence: 0.849536046153846

00:53:17.790 --> 00:53:19.750 Uhm, the other alternative option

NOTE Confidence: 0.849536046153846

00:53:19.750 --> 00:53:22.658 that will talk about a little bit

NOTE Confidence: 0.849536046153846

00:53:22.658 --> 00:53:24.833 too is clinical trial opportunities

NOTE Confidence: 0.849536046153846

00:53:24.833 --> 00:53:27.330 in the advanced setting as well.

NOTE Confidence: 0.849536046153846

00:53:27.330 --> 00:53:29.986 So when we talk about relapse free survival,  
NOTE Confidence: 0.849536046153846

00:53:29.990 --> 00:53:32.366 we're gonna make you guys all experts and  
NOTE Confidence: 0.849536046153846

00:53:32.366 --> 00:53:34.677 looking at these curves in a little bit.  
NOTE Confidence: 0.849536046153846

00:53:34.680 --> 00:53:37.074 But what we're looking for is  
NOTE Confidence: 0.849536046153846

00:53:37.074 --> 00:53:39.860 separation of the curves and the higher,  
NOTE Confidence: 0.849536046153846

00:53:39.860 --> 00:53:41.846 the greater the degree of separation,  
NOTE Confidence: 0.849536046153846

00:53:41.850 --> 00:53:43.480 the higher the clinical potential,  
NOTE Confidence: 0.849536046153846

00:53:43.480 --> 00:53:45.532 clinical impact in differences  
NOTE Confidence: 0.849536046153846

00:53:45.532 --> 00:53:47.584 in those treatment arms.  
NOTE Confidence: 0.849536046153846

00:53:47.590 --> 00:53:49.570 So in the first iteration  
NOTE Confidence: 0.849536046153846

00:53:49.570 --> 00:53:51.154 of these immune therapies,  
NOTE Confidence: 0.849536046153846

00:53:51.160 --> 00:53:53.976 so it believe map was compared to placebo,  
NOTE Confidence: 0.849536046153846

00:53:53.980 --> 00:53:56.409 and you can see in terms of  
NOTE Confidence: 0.849536046153846

00:53:56.409 --> 00:53:57.836 decreasing recurrence, free survival.  
NOTE Confidence: 0.849536046153846

00:53:57.836 --> 00:53:59.288 It blew my map,  
NOTE Confidence: 0.849536046153846

00:53:59.290 --> 00:54:03.462 was superior to just a miss placebo

NOTE Confidence: 0.849536046153846

00:54:03.462 --> 00:54:05.446 care later on and I tell you,

NOTE Confidence: 0.849536046153846

00:54:05.450 --> 00:54:07.585 This is why if aluminum at fell

NOTE Confidence: 0.849536046153846

00:54:07.585 --> 00:54:10.230 out of favor when the volume at was

NOTE Confidence: 0.849536046153846

00:54:10.230 --> 00:54:12.614 compared to Apple map new volume at

NOTE Confidence: 0.849536046153846

00:54:12.614 --> 00:54:14.875 out be out competed at Blue Man.

NOTE Confidence: 0.849536046153846

00:54:14.880 --> 00:54:17.275 Additionally the one additional added

NOTE Confidence: 0.849536046153846

00:54:17.275 --> 00:54:20.243 benefit was that with new volume

NOTE Confidence: 0.849536046153846

00:54:20.243 --> 00:54:22.693 app the serious grade toxicities

NOTE Confidence: 0.849536046153846

00:54:22.693 --> 00:54:25.601 decreased to about 1415% versus 50%

NOTE Confidence: 0.849536046153846

00:54:25.601 --> 00:54:28.463 of patients in the clinical trials.

NOTE Confidence: 0.849536046153846

00:54:28.470 --> 00:54:29.174 Later on,

NOTE Confidence: 0.849536046153846

00:54:29.174 --> 00:54:30.934 Campbellism ever was also compared

NOTE Confidence: 0.849536046153846

00:54:30.934 --> 00:54:32.350 to standard of care,

NOTE Confidence: 0.849536046153846

00:54:32.350 --> 00:54:35.164 and so pembrolizumab also did trade

NOTE Confidence: 0.849536046153846

00:54:35.164 --> 00:54:38.235 and increase benefit in terms of

NOTE Confidence: 0.849536046153846

00:54:38.235 --> 00:54:40.376 decreasing relapse. Free survival.  
NOTE Confidence: 0.849536046153846

00:54:40.376 --> 00:54:43.967 Now this is for those individuals who  
NOTE Confidence: 0.849536046153846

00:54:43.967 --> 00:54:47.538 have a beer at least 600 E or V600K mutation.  
NOTE Confidence: 0.849536046153846

00:54:47.538 --> 00:54:49.558 They were eligible to receive  
NOTE Confidence: 0.849536046153846

00:54:49.558 --> 00:54:51.493 treatment with these oral drugs  
NOTE Confidence: 0.849536046153846

00:54:51.493 --> 00:54:53.467 called graph Neb and Trim Aetna,  
NOTE Confidence: 0.849536046153846

00:54:53.470 --> 00:54:55.726 and what's striking here is that  
NOTE Confidence: 0.849536046153846

00:54:55.726 --> 00:54:57.613 these curves really do separate  
NOTE Confidence: 0.849536046153846

00:54:57.613 --> 00:54:59.965 out and we see a robust improvement  
NOTE Confidence: 0.849536046153846

00:54:59.965 --> 00:55:02.815 and we left pretty survival with  
NOTE Confidence: 0.849536046153846

00:55:02.815 --> 00:55:05.599 these B RAF MEK inhibitors.  
NOTE Confidence: 0.849536046153846

00:55:05.600 --> 00:55:08.029 When we look at overall survival though,  
NOTE Confidence: 0.849536046153846

00:55:08.030 --> 00:55:11.694 it's not so much of a clear picture.  
NOTE Confidence: 0.849536046153846

00:55:11.700 --> 00:55:13.172 With these immune therapies,  
NOTE Confidence: 0.849536046153846

00:55:13.172 --> 00:55:15.012 there's a lot of crossover  
NOTE Confidence: 0.849536046153846

00:55:15.012 --> 00:55:16.840 in terms of these curves,

NOTE Confidence: 0.849536046153846

00:55:16.840 --> 00:55:19.612 indicating that the benefit in terms

NOTE Confidence: 0.849536046153846

00:55:19.612 --> 00:55:22.530 of these immune therapy drugs in

NOTE Confidence: 0.849536046153846

00:55:22.530 --> 00:55:24.995 reducing or improving overall survival

NOTE Confidence: 0.849536046153846

00:55:24.995 --> 00:55:28.460 is very minimal, and so with the volume up,

NOTE Confidence: 0.849536046153846

00:55:28.460 --> 00:55:29.580 and it blew my map.

NOTE Confidence: 0.849536046153846

00:55:29.580 --> 00:55:31.650 Basically these curves overlap with

NOTE Confidence: 0.849536046153846

00:55:31.650 --> 00:55:33.720 pembrolizumab versus standard of care.

NOTE Confidence: 0.849536046153846

00:55:33.720 --> 00:55:35.940 These curves also basically overlap.

NOTE Confidence: 0.849536046153846

00:55:35.940 --> 00:55:37.860 It's really what their brand new band Trim,

NOTE Confidence: 0.849536046153846

00:55:37.860 --> 00:55:38.287 Aetna,

NOTE Confidence: 0.849536046153846

00:55:38.287 --> 00:55:41.703 again with these patients who Harbor B RAF.

NOTE Confidence: 0.849536046153846

00:55:41.710 --> 00:55:45.388 Mutations that have a ongoing improvement

NOTE Confidence: 0.849536046153846

00:55:45.388 --> 00:55:49.219 in overall survival years out this data.

NOTE Confidence: 0.849536046153846

00:55:49.220 --> 00:55:52.538 You know the best as as these

NOTE Confidence: 0.849536046153846

00:55:52.538 --> 00:55:55.128 data mature for on and on.

NOTE Confidence: 0.849536046153846

00:55:55.130 --> 00:55:57.426 Who knows, it may be a separation.  
NOTE Confidence: 0.849536046153846

00:55:57.430 --> 00:55:58.753 In our clinic.  
NOTE Confidence: 0.849536046153846

00:55:58.753 --> 00:56:01.351 We don't really think that these  
NOTE Confidence: 0.849536046153846

00:56:01.351 --> 00:56:03.697 there is a significant impact or  
NOTE Confidence: 0.849536046153846

00:56:03.697 --> 00:56:05.732 in improving overall survival with  
NOTE Confidence: 0.849536046153846

00:56:05.732 --> 00:56:07.717 immune targeted therapies like there  
NOTE Confidence: 0.849536046153846

00:56:07.717 --> 00:56:10.638 is with B raft targeting therapies.  
NOTE Confidence: 0.849536046153846

00:56:10.640 --> 00:56:12.859 So when we have an individual patient  
NOTE Confidence: 0.849536046153846

00:56:12.859 --> 00:56:14.749 and their family in front of us,  
NOTE Confidence: 0.849536046153846

00:56:14.750 --> 00:56:16.628 you know what are the basic  
NOTE Confidence: 0.849536046153846

00:56:16.628 --> 00:56:18.288 considerations that we have to  
NOTE Confidence: 0.849536046153846

00:56:18.288 --> 00:56:20.340 take into account when deciding on  
NOTE Confidence: 0.849536046153846

00:56:20.340 --> 00:56:21.940 a personalized regimen for them.  
NOTE Confidence: 0.849536046153846

00:56:21.940 --> 00:56:23.732 We really have to take into account  
NOTE Confidence: 0.849536046153846

00:56:23.732 --> 00:56:25.220 the individual, you know what are there.  
NOTE Confidence: 0.849536046153846

00:56:25.220 --> 00:56:28.550 Priorities, what are there you know?

NOTE Confidence: 0.849536046153846

00:56:28.550 --> 00:56:30.458 What is the emphasis on their

NOTE Confidence: 0.849536046153846

00:56:30.458 --> 00:56:31.730 current quality of life

NOTE Confidence: 0.9027175325

00:56:31.790 --> 00:56:33.347 and how to maintain that?

NOTE Confidence: 0.9027175325

00:56:33.347 --> 00:56:36.000 What are there other medical corner Bilitis?

NOTE Confidence: 0.9027175325

00:56:36.000 --> 00:56:38.224 Do they have a history of autoimmune disease

NOTE Confidence: 0.9027175325

00:56:38.224 --> 00:56:40.124 that we could potentially exacerbate

NOTE Confidence: 0.9027175325

00:56:40.124 --> 00:56:42.264 with these immune activating drugs?

NOTE Confidence: 0.9027175325

00:56:42.270 --> 00:56:44.190 You know what their comfort

NOTE Confidence: 0.9027175325

00:56:44.190 --> 00:56:46.110 is with surveillance versus a

NOTE Confidence: 0.9027175325

00:56:46.183 --> 00:56:48.409 desire to be aggressive up front.

NOTE Confidence: 0.9027175325

00:56:48.410 --> 00:56:50.111 And overall again, going back to cost

NOTE Confidence: 0.9027175325

00:56:50.111 --> 00:56:52.130 and this is not just financial costs.

NOTE Confidence: 0.9027175325

00:56:52.130 --> 00:56:54.538 This is, you know, time off of work

NOTE Confidence: 0.9027175325

00:56:54.538 --> 00:56:57.178 time is spent in the clinic with us.

NOTE Confidence: 0.9027175325

00:56:57.180 --> 00:56:59.105 Uhm, I know you guys like us.

NOTE Confidence: 0.9027175325

00:56:59.110 --> 00:57:01.346 There are no substitute for, you know,  
NOTE Confidence: 0.9027175325

00:57:01.346 --> 00:57:03.061 you're awesome families and spending  
NOTE Confidence: 0.9027175325

00:57:03.061 --> 00:57:05.626 time out on the doing your hobbies and  
NOTE Confidence: 0.9027175325

00:57:05.626 --> 00:57:08.256 living your life and so this is a this  
NOTE Confidence: 0.9027175325

00:57:08.256 --> 00:57:10.248 is quite a considerable cost to spend  
NOTE Confidence: 0.9027175325

00:57:10.248 --> 00:57:13.470 an additional year in and out of our clinic.  
NOTE Confidence: 0.9027175325

00:57:13.470 --> 00:57:14.910 Getting ongoing treatments and  
NOTE Confidence: 0.9027175325

00:57:14.910 --> 00:57:16.710 again the the question is,  
NOTE Confidence: 0.9027175325

00:57:16.710 --> 00:57:18.590 you know, not all patients.  
NOTE Confidence: 0.9027175325

00:57:18.590 --> 00:57:21.290 Uhm, derive the same exact  
NOTE Confidence: 0.9027175325

00:57:21.290 --> 00:57:23.450 benefit from these medications.  
NOTE Confidence: 0.9027175325

00:57:23.450 --> 00:57:26.330 So in addition to factors on the individual,  
NOTE Confidence: 0.9027175325

00:57:26.330 --> 00:57:27.686 there are also two more factors  
NOTE Confidence: 0.9027175325

00:57:27.686 --> 00:57:29.010 that we take into account,  
NOTE Confidence: 0.9027175325

00:57:29.010 --> 00:57:30.870 such as B raft status,  
NOTE Confidence: 0.9027175325

00:57:30.870 --> 00:57:31.872 what other aggressive,

NOTE Confidence: 0.9027175325

00:57:31.872 --> 00:57:33.208 pathological features that might

NOTE Confidence: 0.9027175325

00:57:33.208 --> 00:57:34.580 be in the tumor,

NOTE Confidence: 0.9027175325

00:57:34.580 --> 00:57:35.788 such as you know,

NOTE Confidence: 0.9027175325

00:57:35.788 --> 00:57:37.600 the number of mitotic cells that

NOTE Confidence: 0.9027175325

00:57:37.662 --> 00:57:39.622 don't really get into factored

NOTE Confidence: 0.9027175325

00:57:39.622 --> 00:57:41.582 into our current staging criteria.

NOTE Confidence: 0.9027175325

00:57:41.590 --> 00:57:43.444 And really our emphasis on trying

NOTE Confidence: 0.9027175325

00:57:43.444 --> 00:57:45.918 to focus on the individuals who have

NOTE Confidence: 0.9027175325

00:57:45.918 --> 00:57:48.422 the higher stage stage three disease.

NOTE Confidence: 0.9027175325

00:57:48.422 --> 00:57:50.198 Those that are really.

NOTE Confidence: 0.9027175325

00:57:50.200 --> 00:57:53.077 Higher risk of having a great parents

NOTE Confidence: 0.9027175325

00:57:53.077 --> 00:57:54.857 and decreased overall survival

NOTE Confidence: 0.9027175325

00:57:54.857 --> 00:57:56.270 due to recurrence.

NOTE Confidence: 0.9027175325

00:57:56.270 --> 00:57:59.110 So going back to our original diagram here,

NOTE Confidence: 0.9027175325

00:57:59.110 --> 00:58:01.301 you know it's pretty clear that with

NOTE Confidence: 0.9027175325

00:58:01.301 --> 00:58:04.150 the B raft targeting drugs you know

NOTE Confidence: 0.9027175325

00:58:04.150 --> 00:58:06.450 these are effective in decreasing

NOTE Confidence: 0.9027175325

00:58:06.450 --> 00:58:08.510 recurrence and improving survival.

NOTE Confidence: 0.9027175325

00:58:08.510 --> 00:58:10.995 Plus the side effects here if they

NOTE Confidence: 0.9027175325

00:58:10.995 --> 00:58:13.499 do occur are pretty reversible.

NOTE Confidence: 0.9027175325

00:58:13.500 --> 00:58:15.150 You know these are all drugs,

NOTE Confidence: 0.9027175325

00:58:15.150 --> 00:58:16.560 they tend to side effects,

NOTE Confidence: 0.9027175325

00:58:16.560 --> 00:58:18.665 tend to improve after withdrawal

NOTE Confidence: 0.9027175325

00:58:18.665 --> 00:58:20.770 of the drugs if needed,

NOTE Confidence: 0.9027175325

00:58:20.770 --> 00:58:22.945 whereas with immune therapy were

NOTE Confidence: 0.9027175325

00:58:22.945 --> 00:58:24.685 really edgy reeducating the

NOTE Confidence: 0.9027175325

00:58:24.685 --> 00:58:26.819 immune system to go after these.

NOTE Confidence: 0.9027175325

00:58:26.820 --> 00:58:27.120 Tumors,

NOTE Confidence: 0.9027175325

00:58:27.120 --> 00:58:28.920 and so sometimes when they when

NOTE Confidence: 0.9027175325

00:58:28.920 --> 00:58:31.135 we push the immune system to the

NOTE Confidence: 0.9027175325

00:58:31.135 --> 00:58:33.007 opposite end of the spectrum and

NOTE Confidence: 0.9027175325

00:58:33.071 --> 00:58:35.129 cause a lot of side effects in

NOTE Confidence: 0.9027175325

00:58:35.129 --> 00:58:36.712 terms of autoimmune toxicities,

NOTE Confidence: 0.9027175325

00:58:36.712 --> 00:58:39.480 potentially these side effects

NOTE Confidence: 0.9027175325

00:58:39.480 --> 00:58:40.864 are irreversible.

NOTE Confidence: 0.9027175325

00:58:40.870 --> 00:58:42.760 They all tend to show that there

NOTE Confidence: 0.9027175325

00:58:42.760 --> 00:58:44.450 is a decrease in recurrence,

NOTE Confidence: 0.9027175325

00:58:44.450 --> 00:58:46.956 but still the data is not very

NOTE Confidence: 0.9027175325

00:58:46.956 --> 00:58:49.498 indicative that it really long term

NOTE Confidence: 0.9027175325

00:58:49.498 --> 00:58:51.823 improves survival for these folks,

NOTE Confidence: 0.9027175325

00:58:51.830 --> 00:58:53.258 so really kind of the next step

NOTE Confidence: 0.9027175325

00:58:53.258 --> 00:58:54.340 way and what you know.

NOTE Confidence: 0.9027175325

00:58:54.340 --> 00:58:55.798 Dot my colleague Dr Issues UK

NOTE Confidence: 0.9027175325

00:58:55.798 --> 00:58:57.139 is going to focus on is.

NOTE Confidence: 0.9027175325

00:58:57.140 --> 00:58:59.905 How can we check all of these

NOTE Confidence: 0.9027175325

00:58:59.905 --> 00:59:02.343 boxes here where you know they

NOTE Confidence: 0.9027175325

00:59:02.343 --> 00:59:05.534 will with newer drug targets,  
NOTE Confidence: 0.9027175325

00:59:05.534 --> 00:59:08.221 we can potentially have something  
NOTE Confidence: 0.9027175325

00:59:08.221 --> 00:59:10.356 that doesn't have prolonged or  
NOTE Confidence: 0.9027175325

00:59:10.356 --> 00:59:12.308 irreversible side effects that it  
NOTE Confidence: 0.9027175325

00:59:12.308 --> 00:59:14.043 will decrease recurrence that it  
NOTE Confidence: 0.9027175325

00:59:14.043 --> 00:59:16.004 will improve survival, you know?  
NOTE Confidence: 0.9027175325

00:59:16.004 --> 00:59:17.739 So we're always developing our  
NOTE Confidence: 0.9027175325

00:59:17.739 --> 00:59:19.279 clinical trial program at Yale.  
NOTE Confidence: 0.9027175325

00:59:19.280 --> 00:59:23.095 Most recently we did have a phase.  
NOTE Confidence: 0.9027175325

00:59:23.100 --> 00:59:27.538 And an Advent clinical trial with Madonna.  
NOTE Confidence: 0.9027175325

00:59:27.540 --> 00:59:27.970 And yes,  
NOTE Confidence: 0.9027175325

00:59:27.970 --> 00:59:29.475 this is the same order that came  
NOTE Confidence: 0.9027175325

00:59:29.475 --> 00:59:30.428 up with the code.  
NOTE Confidence: 0.9027175325

00:59:30.430 --> 00:59:32.548 One of the COVID vaccines that's  
NOTE Confidence: 0.9027175325

00:59:32.548 --> 00:59:33.607 been really effective  
NOTE Confidence: 0.965381562

00:59:33.610 --> 00:59:36.080 using the same exact technology.

NOTE Confidence: 0.965381562

00:59:36.080 --> 00:59:38.966 Basically an M RNA vaccine that

NOTE Confidence: 0.965381562

00:59:38.966 --> 00:59:40.409 is engineered specifically

NOTE Confidence: 0.965381562

00:59:40.409 --> 00:59:42.948 to NEO antigens or epitopes.

NOTE Confidence: 0.965381562

00:59:42.950 --> 00:59:45.337 These sophistic to protein tags that are

NOTE Confidence: 0.965381562

00:59:45.337 --> 00:59:48.170 present in the tumor patient tumor samples.

NOTE Confidence: 0.965381562

00:59:48.170 --> 00:59:50.746 And really using that as a target

NOTE Confidence: 0.965381562

00:59:50.750 --> 00:59:52.070 in combination with pembrolizumab,

NOTE Confidence: 0.965381562

00:59:52.070 --> 00:59:53.390 one of the immune.

NOTE Confidence: 0.965381562

00:59:53.390 --> 00:59:56.589 Therapies to try to stimulate the immune

NOTE Confidence: 0.965381562

00:59:56.589 --> 00:59:59.279 system against individual specific Melanoma.

NOTE Confidence: 0.965381562

00:59:59.280 --> 01:00:00.968 So really interesting client,

NOTE Confidence: 0.965381562

01:00:00.968 --> 01:00:01.900 typically, unfortunately,

NOTE Confidence: 0.965381562

01:00:01.900 --> 01:00:05.310 that trial is now closed to additional

NOTE Confidence: 0.965381562

01:00:05.310 --> 01:00:07.740 accrual accrual at our site, but,

NOTE Confidence: 0.965381562

01:00:07.740 --> 01:00:09.700 uhm, you know one of the ongoing

NOTE Confidence: 0.965381562

01:00:09.700 --> 01:00:11.950 things is how can we make our  
NOTE Confidence: 0.965381562

01:00:11.950 --> 01:00:13.250 clinical program more robust?  
NOTE Confidence: 0.965381562

01:00:13.250 --> 01:00:15.495 Do you know encouraging these  
NOTE Confidence: 0.965381562

01:00:15.495 --> 01:00:17.740 clinical trials which are really  
NOTE Confidence: 0.965381562

01:00:17.821 --> 01:00:19.779 scientifically interesting?  
NOTE Confidence: 0.869210308

01:00:23.150 --> 01:00:24.650 Thank you so much we.  
NOTE Confidence: 0.869210308

01:00:24.650 --> 01:00:26.170 I think there are two questions for  
NOTE Confidence: 0.869210308

01:00:26.170 --> 01:00:28.350 you before we move on to the last talk.  
NOTE Confidence: 0.869210308

01:00:28.350 --> 01:00:30.518 One is if you could just elaborate a  
NOTE Confidence: 0.869210308

01:00:30.518 --> 01:00:32.857 little bit about the permanent toxicities  
NOTE Confidence: 0.869210308

01:00:32.860 --> 01:00:35.355 and whether all people are tested  
NOTE Confidence: 0.869210308

01:00:35.355 --> 01:00:37.740 for beer at the time of diagnosis.  
NOTE Confidence: 0.717987865

01:00:39.100 --> 01:00:41.860 Sure, so the immune related toxicities,  
NOTE Confidence: 0.717987865

01:00:41.860 --> 01:00:42.799 UM it. Interestingly,  
NOTE Confidence: 0.717987865

01:00:42.799 --> 01:00:44.677 on some of these clinical trials  
NOTE Confidence: 0.717987865

01:00:44.677 --> 01:00:46.757 is particularly with the pendulum,

NOTE Confidence: 0.717987865  
01:00:46.760 --> 01:00:48.448 have active in therapy,  
NOTE Confidence: 0.717987865  
01:00:48.448 --> 01:00:50.558 and if aluminum app treatment,  
NOTE Confidence: 0.717987865  
01:00:50.560 --> 01:00:53.430 some of those patients who had curative  
NOTE Confidence: 0.717987865  
01:00:53.430 --> 01:00:55.879 resections and were technically disease  
NOTE Confidence: 0.717987865  
01:00:55.879 --> 01:00:58.754 free did have irreversible toxicities.  
NOTE Confidence: 0.717987865  
01:00:58.760 --> 01:01:00.914 And there were some deaths reported  
NOTE Confidence: 0.717987865  
01:01:00.914 --> 01:01:02.350 on these adjutants studies.  
NOTE Confidence: 0.717987865  
01:01:02.350 --> 01:01:04.366 So one death on an Advent  
NOTE Confidence: 0.717987865  
01:01:04.366 --> 01:01:06.480 study is one death too many.  
NOTE Confidence: 0.717987865  
01:01:06.480 --> 01:01:09.226 These are patients who potentially cured.  
NOTE Confidence: 0.717987865  
01:01:09.226 --> 01:01:11.368 Of their disease and we really just  
NOTE Confidence: 0.717987865  
01:01:11.368 --> 01:01:13.689 trying to focus on decreasing relapse.  
NOTE Confidence: 0.717987865  
01:01:13.690 --> 01:01:14.194 And again,  
NOTE Confidence: 0.717987865  
01:01:14.194 --> 01:01:16.210 this kind of goes back to the point  
NOTE Confidence: 0.717987865  
01:01:16.268 --> 01:01:18.298 of what we're trying to emphasize is  
NOTE Confidence: 0.717987865

01:01:18.298 --> 01:01:20.390 really trying to figure out who would  
NOTE Confidence: 0.717987865

01:01:20.390 --> 01:01:23.378 benefit the most from these therapies  
NOTE Confidence: 0.717987865

01:01:23.378 --> 01:01:26.908 and maybe develop future better  
NOTE Confidence: 0.717987865

01:01:26.908 --> 01:01:29.135 predictive algorithms or biomarkers  
NOTE Confidence: 0.717987865

01:01:29.135 --> 01:01:31.155 to really identify individuals  
NOTE Confidence: 0.717987865

01:01:31.155 --> 01:01:34.240 at most most at risk for relapse.  
NOTE Confidence: 0.717987865

01:01:34.240 --> 01:01:38.006 Come in addition. So the other question.  
NOTE Confidence: 0.717987865

01:01:38.010 --> 01:01:38.483 Dr.  
NOTE Confidence: 0.717987865

01:01:38.483 --> 01:01:39.429 Cleaver was.  
NOTE Confidence: 0.89570018

01:01:39.770 --> 01:01:42.640 Does everyone get tested for? BRF yes,  
NOTE Confidence: 0.7959598033333333

01:01:42.700 --> 01:01:44.110 thank you reminder.  
NOTE Confidence: 0.7959598033333333

01:01:44.110 --> 01:01:46.930 So at our institution with anyone  
NOTE Confidence: 0.7959598033333333

01:01:46.930 --> 01:01:49.872 with the phase three or even the  
NOTE Confidence: 0.7959598033333333

01:01:49.872 --> 01:01:52.732 high risk stage stage two or in  
NOTE Confidence: 0.7959598033333333

01:01:52.732 --> 01:01:54.761 all stage three Melanoma really,  
NOTE Confidence: 0.7959598033333333

01:01:54.761 --> 01:01:56.565 yet uhm molecular profiling

NOTE Confidence: 0.7959598033333333

01:01:56.565 --> 01:01:59.520 done on their tumor in advance.

NOTE Confidence: 0.7959598033333333

01:01:59.520 --> 01:02:01.430 And so this molecular profiling.

NOTE Confidence: 0.7959598033333333

01:02:01.430 --> 01:02:04.106 Depending on the panel that your

NOTE Confidence: 0.7959598033333333

01:02:04.106 --> 01:02:05.890 medical oncologist orders typically

NOTE Confidence: 0.7959598033333333

01:02:05.965 --> 01:02:07.640 will also include byref testing

NOTE Confidence: 0.7959598033333333

01:02:07.640 --> 01:02:10.040 and so that is very routinely.

NOTE Confidence: 0.7959598033333333

01:02:10.040 --> 01:02:11.171 Donna understood institution.

NOTE Confidence: 0.7959598033333333

01:02:11.171 --> 01:02:13.433 It's good to have that information

NOTE Confidence: 0.7959598033333333

01:02:13.433 --> 01:02:15.322 up front in our back pocket in

NOTE Confidence: 0.7959598033333333

01:02:15.322 --> 01:02:17.249 case we need to fall back on it,

NOTE Confidence: 0.7959598033333333

01:02:17.250 --> 01:02:19.235 and particularly in in folks

NOTE Confidence: 0.7959598033333333

01:02:19.235 --> 01:02:20.823 with stage three disease.

NOTE Confidence: 0.7959598033333333

01:02:20.830 --> 01:02:23.285 UM, really byref targeting his

NOTE Confidence: 0.7959598033333333

01:02:23.285 --> 01:02:26.404 sort of demonstrated the best in

NOTE Confidence: 0.7959598033333333

01:02:26.404 --> 01:02:29.269 terms of decreasing relapse and

NOTE Confidence: 0.7959598033333333

01:02:29.269 --> 01:02:31.561 improving overall overall survival.  
NOTE Confidence: 0.86641608

01:02:33.440 --> 01:02:34.760 Thank you so much. Tweet.  
NOTE Confidence: 0.86641608

01:02:34.760 --> 01:02:35.800 It was a great talk.  
NOTE Confidence: 0.86641608

01:02:35.800 --> 01:02:37.456 Thanks for everything and I'm going  
NOTE Confidence: 0.86641608

01:02:37.456 --> 01:02:39.000 to introduce our last speaker,  
NOTE Confidence: 0.86641608

01:02:39.000 --> 01:02:41.580 but certainly not least not least,  
NOTE Confidence: 0.86641608

01:02:41.580 --> 01:02:44.336 Doctor Jeff Ishizuka is going to  
NOTE Confidence: 0.86641608

01:02:44.336 --> 01:02:46.928 be talking to us about research,  
NOTE Confidence: 0.86641608

01:02:46.930 --> 01:02:49.045 clinical trials, and what we're  
NOTE Confidence: 0.86641608

01:02:49.045 --> 01:02:50.815 planning to do for advanced Melanoma.  
NOTE Confidence: 0.86641608

01:02:50.820 --> 01:02:52.987 Some Melanoma that's already spread, so.  
NOTE Confidence: 0.86641608

01:02:52.987 --> 01:02:56.256 Jeff is an assistant professor of medicine.  
NOTE Confidence: 0.86641608

01:02:56.260 --> 01:02:57.730 He's in medical oncologist and  
NOTE Confidence: 0.86641608

01:02:57.730 --> 01:02:59.038 a physician scientist Jeff.  
NOTE Confidence: 0.86641608

01:02:59.038 --> 01:03:00.346 The floor is yours.  
NOTE Confidence: 0.937573563157895

01:03:02.930 --> 01:03:05.170 Thank you so much, I'm happy to be

NOTE Confidence: 0.937573563157895  
01:03:05.170 --> 01:03:07.272 here tonight talking a little bit  
NOTE Confidence: 0.937573563157895  
01:03:07.272 --> 01:03:09.122 about research and clinical trials,  
NOTE Confidence: 0.937573563157895  
01:03:09.130 --> 01:03:10.915 and you know some of these topics  
NOTE Confidence: 0.937573563157895  
01:03:10.915 --> 01:03:12.958 have come up a little bit through  
NOTE Confidence: 0.937573563157895  
01:03:12.958 --> 01:03:14.788 Doctor Lena or Doctor Trans talks.  
NOTE Confidence: 0.937573563157895  
01:03:14.790 --> 01:03:16.155 And and we'll revisit those  
NOTE Confidence: 0.937573563157895  
01:03:16.155 --> 01:03:18.240 and try and go one cut deeper.  
NOTE Confidence: 0.905206601428572  
01:03:22.330 --> 01:03:24.178 So I think there are three major  
NOTE Confidence: 0.905206601428572  
01:03:24.178 --> 01:03:26.287 points that I want to cover tonight.  
NOTE Confidence: 0.905206601428572  
01:03:26.290 --> 01:03:28.152 The first is the kind of Melanoma  
NOTE Confidence: 0.905206601428572  
01:03:28.152 --> 01:03:30.523 research we do at Yale to try to kind of  
NOTE Confidence: 0.905206601428572  
01:03:30.523 --> 01:03:32.618 pull back the curtain a little bit and  
NOTE Confidence: 0.905206601428572  
01:03:32.618 --> 01:03:34.435 let you know the research activities.  
NOTE Confidence: 0.905206601428572  
01:03:34.435 --> 01:03:36.560 The breadth of research activities  
NOTE Confidence: 0.905206601428572  
01:03:36.560 --> 01:03:38.660 that are going on here.  
NOTE Confidence: 0.905206601428572

01:03:38.660 --> 01:03:40.484 The second is to think about clinical trials.  
NOTE Confidence: 0.905206601428572

01:03:40.490 --> 01:03:42.926 Think about why, why you might participate.  
NOTE Confidence: 0.905206601428572

01:03:42.930 --> 01:03:44.694 You know what some of the factors  
NOTE Confidence: 0.905206601428572

01:03:44.694 --> 01:03:46.368 that go into the decision to  
NOTE Confidence: 0.905206601428572

01:03:46.368 --> 01:03:48.084 bring a clinical trial to Yale,  
NOTE Confidence: 0.905206601428572

01:03:48.090 --> 01:03:50.848 and you know the factors that might.  
NOTE Confidence: 0.905206601428572

01:03:50.850 --> 01:03:52.760 Induce somebody to want to  
NOTE Confidence: 0.905206601428572

01:03:52.760 --> 01:03:54.288 participate in clinical research.  
NOTE Confidence: 0.905206601428572

01:03:54.290 --> 01:03:57.168 And then finally just briefly to touch  
NOTE Confidence: 0.905206601428572

01:03:57.168 --> 01:03:59.670 upon some of the clinical opportunities  
NOTE Confidence: 0.905206601428572

01:03:59.740 --> 01:04:02.116 that are either available or coming  
NOTE Confidence: 0.905206601428572

01:04:02.116 --> 01:04:04.870 soon into the clinical trial portfolio.  
NOTE Confidence: 0.905206601428572

01:04:04.870 --> 01:04:06.118 Things that we're particularly  
NOTE Confidence: 0.905206601428572

01:04:06.118 --> 01:04:07.990 excited about for the future and  
NOTE Confidence: 0.905206601428572

01:04:08.041 --> 01:04:09.625 to give you a sense of where we  
NOTE Confidence: 0.905206601428572

01:04:09.625 --> 01:04:13.080 might be going as an institution.

NOTE Confidence: 0.905206601428572  
01:04:13.080 --> 01:04:15.341 So, so first, what kind of Melanoma  
NOTE Confidence: 0.905206601428572  
01:04:15.341 --> 01:04:16.819 research is happening at Yale?  
NOTE Confidence: 0.905206601428572  
01:04:16.820 --> 01:04:18.470 And I would say that there  
NOTE Confidence: 0.905206601428572  
01:04:18.470 --> 01:04:19.570 are three basic kinds,  
NOTE Confidence: 0.905206601428572  
01:04:19.570 --> 01:04:21.126 starting with basic research.  
NOTE Confidence: 0.905206601428572  
01:04:21.126 --> 01:04:23.460 Basic research is research that that  
NOTE Confidence: 0.905206601428572  
01:04:23.527 --> 01:04:25.652 really ask questions about fundamental  
NOTE Confidence: 0.905206601428572  
01:04:25.652 --> 01:04:28.310 mechanisms and cancer and related biology.  
NOTE Confidence: 0.905206601428572  
01:04:28.310 --> 01:04:30.758 So how does cancer development spread?  
NOTE Confidence: 0.905206601428572  
01:04:30.760 --> 01:04:32.315 How does the immune system  
NOTE Confidence: 0.905206601428572  
01:04:32.315 --> 01:04:33.559 recognize and eliminate tumors?  
NOTE Confidence: 0.905206601428572  
01:04:33.560 --> 01:04:35.569 What is the genetic basis for cancer?  
NOTE Confidence: 0.905206601428572  
01:04:35.570 --> 01:04:36.560 There are a lot of questions,  
NOTE Confidence: 0.905206601428572  
01:04:36.560 --> 01:04:38.180 but they're they're really on this  
NOTE Confidence: 0.905206601428572  
01:04:38.180 --> 01:04:39.779 kind of fundamental end of things,  
NOTE Confidence: 0.905206601428572

01:04:39.780 --> 01:04:42.264 and you know, they there may be some some.

NOTE Confidence: 0.905206601428572

01:04:42.270 --> 01:04:43.594 Aspects that are applied,

NOTE Confidence: 0.905206601428572

01:04:43.594 --> 01:04:45.249 but it's potentially a little

NOTE Confidence: 0.905206601428572

01:04:45.249 --> 01:04:47.244 bit further back from the most

NOTE Confidence: 0.905206601428572

01:04:47.244 --> 01:04:48.844 applied research that would be

NOTE Confidence: 0.905206601428572

01:04:48.907 --> 01:04:50.647 the most immediately beneficial

NOTE Confidence: 0.905206601428572

01:04:50.650 --> 01:04:52.309 on the other end of the spectrum.

NOTE Confidence: 0.905206601428572

01:04:52.310 --> 01:04:53.597 There's clinical research,

NOTE Confidence: 0.905206601428572

01:04:53.597 --> 01:04:55.742 so that's that's collaboration with

NOTE Confidence: 0.905206601428572

01:04:55.742 --> 01:04:58.165 you with patients and this directly

NOTE Confidence: 0.905206601428572

01:04:58.165 --> 01:05:00.040 tries to advance the development

NOTE Confidence: 0.905206601428572

01:05:00.040 --> 01:05:02.591 of new treatments or understand or

NOTE Confidence: 0.905206601428572

01:05:02.591 --> 01:05:04.706 improve experiences and and understand

NOTE Confidence: 0.905206601428572

01:05:04.710 --> 01:05:07.160 patterns of incidents and outcome

NOTE Confidence: 0.905206601428572

01:05:07.160 --> 01:05:08.944 so you know is a new therapy better

NOTE Confidence: 0.905206601428572

01:05:08.944 --> 01:05:10.228 than current standard of care.

NOTE Confidence: 0.905206601428572  
01:05:10.230 --> 01:05:12.398 How can our care of patients here at.  
NOTE Confidence: 0.905206601428572  
01:05:12.400 --> 01:05:13.950 That's my little be improved.  
NOTE Confidence: 0.905206601428572  
01:05:13.950 --> 01:05:15.270 Those are the types of questions  
NOTE Confidence: 0.905206601428572  
01:05:15.270 --> 01:05:16.888 that one might ask you in clinical  
NOTE Confidence: 0.905206601428572  
01:05:16.888 --> 01:05:18.262 research and between the two you  
NOTE Confidence: 0.905206601428572  
01:05:18.262 --> 01:05:19.409 have translational research and  
NOTE Confidence: 0.905206601428572  
01:05:19.409 --> 01:05:20.859 the goal of translational research  
NOTE Confidence: 0.905206601428572  
01:05:20.859 --> 01:05:22.624 is is really everything in between  
NOTE Confidence: 0.905206601428572  
01:05:22.624 --> 01:05:24.840 is to bridge the gap between basic  
NOTE Confidence: 0.905206601428572  
01:05:24.840 --> 01:05:26.376 research and clinical research.  
NOTE Confidence: 0.905206601428572  
01:05:26.380 --> 01:05:26.902 You know,  
NOTE Confidence: 0.905206601428572  
01:05:26.902 --> 01:05:28.468 can we predict from patient two  
NOTE Confidence: 0.905206601428572  
01:05:28.468 --> 01:05:30.250 more blood samples who will benefit  
NOTE Confidence: 0.905206601428572  
01:05:30.250 --> 01:05:31.454 from a given treatment.  
NOTE Confidence: 0.905206601428572  
01:05:31.460 --> 01:05:33.400 Some aspects of basic questions,  
NOTE Confidence: 0.905206601428572

01:05:33.400 --> 01:05:34.066 basic biology,  
NOTE Confidence: 0.905206601428572

01:05:34.066 --> 01:05:36.397 but also things that we might be  
NOTE Confidence: 0.905206601428572

01:05:36.397 --> 01:05:38.775 able to apply readily in the clinic.  
NOTE Confidence: 0.905206601428572

01:05:38.780 --> 01:05:41.012 So as a case study for this and  
NOTE Confidence: 0.905206601428572

01:05:41.012 --> 01:05:43.298 for how research works at Yale,  
NOTE Confidence: 0.905206601428572

01:05:43.300 --> 01:05:45.316 I did want to return to the idea of  
NOTE Confidence: 0.905206601428572

01:05:45.316 --> 01:05:46.692 these immuno therapies and these  
NOTE Confidence: 0.905206601428572

01:05:46.692 --> 01:05:48.699 have come up in in both Doctor  
NOTE Confidence: 0.905206601428572

01:05:48.699 --> 01:05:50.535 Trans and Doctorale knows talks and  
NOTE Confidence: 0.905206601428572

01:05:50.535 --> 01:05:52.240 and I believe Dr Alino actually  
NOTE Confidence: 0.905206601428572

01:05:52.240 --> 01:05:54.060 mentioned you know called him a sort  
NOTE Confidence: 0.905206601428572

01:05:54.118 --> 01:05:56.141 of a revolution and I don't think  
NOTE Confidence: 0.905206601428572

01:05:56.141 --> 01:05:57.558 that's exaggerated because I think  
NOTE Confidence: 0.905206601428572

01:05:57.558 --> 01:05:59.034 compared to some of the therapies  
NOTE Confidence: 0.905206601428572

01:05:59.034 --> 01:06:01.505 that that came before you know it  
NOTE Confidence: 0.905206601428572

01:06:01.505 --> 01:06:03.480 was such a seachange and

NOTE Confidence: 0.852755915

01:06:03.571 --> 01:06:06.535 what we're able to offer when

NOTE Confidence: 0.852755915

01:06:06.535 --> 01:06:08.511 these therapies were approved.

NOTE Confidence: 0.852755915

01:06:08.520 --> 01:06:10.208 And you know, I'm not going to go

NOTE Confidence: 0.852755915

01:06:10.208 --> 01:06:11.819 deep into the basic biology here,

NOTE Confidence: 0.852755915

01:06:11.820 --> 01:06:14.140 but as was previously mentioned,

NOTE Confidence: 0.852755915

01:06:14.140 --> 01:06:15.540 the big breakthrough, I think,

NOTE Confidence: 0.852755915

01:06:15.540 --> 01:06:17.724 was that the immune system was capable

NOTE Confidence: 0.852755915

01:06:17.724 --> 01:06:19.759 of recognizing and eliminating tumors,

NOTE Confidence: 0.852755915

01:06:19.760 --> 01:06:22.118 and in particular T cells in

NOTE Confidence: 0.852755915

01:06:22.118 --> 01:06:24.180 the little blue BLOB here,

NOTE Confidence: 0.852755915

01:06:24.180 --> 01:06:26.616 you know, had the potential to

NOTE Confidence: 0.852755915

01:06:26.616 --> 01:06:28.760 attack and destroy tumor cells,

NOTE Confidence: 0.852755915

01:06:28.760 --> 01:06:30.622 and that what was going on was

NOTE Confidence: 0.852755915

01:06:30.622 --> 01:06:32.490 that in many cases the brakes

NOTE Confidence: 0.852755915

01:06:32.490 --> 01:06:34.155 were on the immune system.

NOTE Confidence: 0.852755915

01:06:34.160 --> 01:06:35.575 There were inhibitory pathways like  
NOTE Confidence: 0.852755915

01:06:35.575 --> 01:06:37.271 the little red arrow points out  
NOTE Confidence: 0.852755915

01:06:37.271 --> 01:06:38.657 that we're stopping the T cells.  
NOTE Confidence: 0.852755915

01:06:38.660 --> 01:06:40.760 From expanding and attacking cancer  
NOTE Confidence: 0.852755915

01:06:40.760 --> 01:06:42.832 and and so the breakthrough came when  
NOTE Confidence: 0.852755915

01:06:42.832 --> 01:06:44.967 people realize that you can use antibodies,  
NOTE Confidence: 0.852755915

01:06:44.970 --> 01:06:46.832 drugs, that you give in the veins  
NOTE Confidence: 0.852755915

01:06:46.832 --> 01:06:48.800 to block these inhibitory pathways,  
NOTE Confidence: 0.852755915

01:06:48.800 --> 01:06:50.249 to kind of unleash the T cells,  
NOTE Confidence: 0.852755915

01:06:50.250 --> 01:06:52.635 allow them to proliferate and  
NOTE Confidence: 0.852755915

01:06:52.635 --> 01:06:55.020 to attack the tumor cells.  
NOTE Confidence: 0.852755915

01:06:55.020 --> 01:06:56.808 And this was a massive improvement  
NOTE Confidence: 0.852755915

01:06:56.808 --> 01:06:59.208 over over many of the prior therapies.  
NOTE Confidence: 0.852755915

01:06:59.210 --> 01:07:01.592 Overall less toxic and more effective  
NOTE Confidence: 0.852755915

01:07:01.592 --> 01:07:04.698 and I have to say I was still  
NOTE Confidence: 0.852755915

01:07:04.698 --> 01:07:06.846 in training when some of these

NOTE Confidence: 0.852755915

01:07:06.932 --> 01:07:09.348 therapies were first developed.

NOTE Confidence: 0.852755915

01:07:09.350 --> 01:07:11.192 And approved and you could really

NOTE Confidence: 0.852755915

01:07:11.192 --> 01:07:12.113 see the changes.

NOTE Confidence: 0.852755915

01:07:12.120 --> 01:07:14.160 And in clinical practice and

NOTE Confidence: 0.852755915

01:07:14.160 --> 01:07:16.200 what we're able to offer.

NOTE Confidence: 0.852755915

01:07:16.200 --> 01:07:16.446 Ultimately,

NOTE Confidence: 0.852755915

01:07:16.446 --> 01:07:18.414 this was an advance that started in Melanoma,

NOTE Confidence: 0.852755915

01:07:18.420 --> 01:07:21.716 but has spread to many other tumor types.

NOTE Confidence: 0.852755915

01:07:21.720 --> 01:07:23.960 But but a lot of the key components

NOTE Confidence: 0.852755915

01:07:23.960 --> 01:07:25.665 to this advance were actually

NOTE Confidence: 0.852755915

01:07:25.665 --> 01:07:28.661 occurred at Yale or with the help of

NOTE Confidence: 0.852755915

01:07:28.661 --> 01:07:30.746 Yale scientists and physicians and

NOTE Confidence: 0.852755915

01:07:30.746 --> 01:07:33.152 patients treated at yellow as well.

NOTE Confidence: 0.852755915

01:07:33.152 --> 01:07:35.714 And so I'll take you through that

NOTE Confidence: 0.852755915

01:07:35.714 --> 01:07:37.079 a little bit,

NOTE Confidence: 0.852755915

01:07:37.080 --> 01:07:38.800 but but even as I talk about it,  
NOTE Confidence: 0.852755915

01:07:38.800 --> 01:07:40.725 you know openly acknowledged that  
NOTE Confidence: 0.852755915

01:07:40.725 --> 01:07:42.650 although you know although these  
NOTE Confidence: 0.852755915

01:07:42.710 --> 01:07:44.902 drugs are were in our are great in  
NOTE Confidence: 0.852755915

01:07:44.902 --> 01:07:46.618 some regards we've talked about,  
NOTE Confidence: 0.852755915

01:07:46.620 --> 01:07:48.132 there's there's still too toxic and  
NOTE Confidence: 0.852755915

01:07:48.132 --> 01:07:49.749 they're still not affected for everybody.  
NOTE Confidence: 0.852755915

01:07:49.750 --> 01:07:51.262 And so everybody on this team goes  
NOTE Confidence: 0.852755915

01:07:51.262 --> 01:07:53.490 to bed at night and wakes up in the  
NOTE Confidence: 0.852755915

01:07:53.490 --> 01:07:55.033 morning most days thinking about this  
NOTE Confidence: 0.852755915

01:07:55.033 --> 01:07:57.275 and thinking about how we can make it better.  
NOTE Confidence: 0.852755915

01:07:57.275 --> 01:07:59.405 And that's really at the heart  
NOTE Confidence: 0.852755915

01:07:59.405 --> 01:08:01.059 of what research is here.  
NOTE Confidence: 0.852755915

01:08:01.060 --> 01:08:01.379 And,  
NOTE Confidence: 0.852755915

01:08:01.379 --> 01:08:02.017 you know,  
NOTE Confidence: 0.852755915

01:08:02.017 --> 01:08:04.920 I think what research should be a Melanoma.

NOTE Confidence: 0.852755915

01:08:04.920 --> 01:08:06.810 So you know just to go to just to

NOTE Confidence: 0.852755915

01:08:06.810 --> 01:08:09.008 talk you through the human side of this.

NOTE Confidence: 0.852755915

01:08:09.010 --> 01:08:10.478 I mentioned basic research,

NOTE Confidence: 0.852755915

01:08:10.478 --> 01:08:12.313 translational research and clinical research

NOTE Confidence: 0.852755915

01:08:12.313 --> 01:08:14.428 and and how important these drugs were.

NOTE Confidence: 0.852755915

01:08:14.430 --> 01:08:14.656 Well,

NOTE Confidence: 0.852755915

01:08:14.656 --> 01:08:17.086 you know a lot of the people who are at

NOTE Confidence: 0.852755915

01:08:17.086 --> 01:08:19.114 Yale made critical contributions to this.

NOTE Confidence: 0.852755915

01:08:19.120 --> 01:08:21.586 So so Liping Chen is is,

NOTE Confidence: 0.852755915

01:08:21.590 --> 01:08:21.876 uh,

NOTE Confidence: 0.852755915

01:08:21.876 --> 01:08:22.448 you know,

NOTE Confidence: 0.852755915

01:08:22.448 --> 01:08:24.450 works on more on the basic side,

NOTE Confidence: 0.852755915

01:08:24.450 --> 01:08:26.472 but did some of the fundamental

NOTE Confidence: 0.852755915

01:08:26.472 --> 01:08:28.194 research that helped identify the

NOTE Confidence: 0.852755915

01:08:28.194 --> 01:08:29.744 basic pathway and immune cells

NOTE Confidence: 0.852755915

01:08:29.744 --> 01:08:31.649 recognize in the very early days,  
NOTE Confidence: 0.852755915

01:08:31.650 --> 01:08:34.538 decades ago that it could be important for.  
NOTE Confidence: 0.852755915

01:08:34.540 --> 01:08:35.900 Cancer Marcus Bosenberg helped  
NOTE Confidence: 0.852755915

01:08:35.900 --> 01:08:37.940 to define some of the genetics,  
NOTE Confidence: 0.852755915

01:08:37.940 --> 01:08:40.515 and was built preclinical models  
NOTE Confidence: 0.852755915

01:08:40.515 --> 01:08:42.220 and and research infrastructure  
NOTE Confidence: 0.852755915

01:08:42.220 --> 01:08:44.565 here that has provided a basis for  
NOTE Confidence: 0.852755915

01:08:44.565 --> 01:08:46.316 studying a lot of these therapies  
NOTE Confidence: 0.852755915

01:08:46.316 --> 01:08:47.404 and moving them forward.  
NOTE Confidence: 0.852755915

01:08:47.410 --> 01:08:48.835 The animal models David Rim  
NOTE Confidence: 0.852755915

01:08:48.835 --> 01:08:50.260 is one of the most  
NOTE Confidence: 0.906007502857143

01:08:50.328 --> 01:08:51.880 kind of prominent people.  
NOTE Confidence: 0.906007502857143

01:08:51.880 --> 01:08:53.776 The field also here at Yale  
NOTE Confidence: 0.906007502857143

01:08:53.776 --> 01:08:55.566 as a pathologist to you know,  
NOTE Confidence: 0.906007502857143

01:08:55.566 --> 01:08:57.144 has been leading the search for  
NOTE Confidence: 0.906007502857143

01:08:57.144 --> 01:08:58.680 biomarkers in patient populations,

NOTE Confidence: 0.906007502857143  
01:08:58.680 --> 01:09:00.648 who who will benefit is, you know,  
NOTE Confidence: 0.906007502857143  
01:09:00.648 --> 01:09:02.286 one of the most world renowned people  
NOTE Confidence: 0.906007502857143  
01:09:02.286 --> 01:09:04.956 at this and then Harriet and Mario.  
NOTE Confidence: 0.906007502857143  
01:09:04.956 --> 01:09:07.302 Who are hosting tonight really played  
NOTE Confidence: 0.906007502857143  
01:09:07.302 --> 01:09:09.798 a leadership role in the clinical  
NOTE Confidence: 0.906007502857143  
01:09:09.798 --> 01:09:12.376 development of these drugs and you know,  
NOTE Confidence: 0.906007502857143  
01:09:12.380 --> 01:09:15.370 did so really in collaboration,  
NOTE Confidence: 0.906007502857143  
01:09:15.370 --> 01:09:17.030 collaboration with yellow patients,  
NOTE Confidence: 0.906007502857143  
01:09:17.030 --> 01:09:20.738 and so you know just to talk a little  
NOTE Confidence: 0.906007502857143  
01:09:20.738 --> 01:09:23.018 bit more about clinical research and  
NOTE Confidence: 0.906007502857143  
01:09:23.018 --> 01:09:26.009 the role that it has played in can play.  
NOTE Confidence: 0.906007502857143  
01:09:26.010 --> 01:09:27.718 You know, I wanted to address this  
NOTE Confidence: 0.906007502857143  
01:09:27.718 --> 01:09:29.621 issue of why you might participate  
NOTE Confidence: 0.906007502857143  
01:09:29.621 --> 01:09:31.640 in clinical research, and you know,  
NOTE Confidence: 0.906007502857143  
01:09:31.640 --> 01:09:32.540 as already mentioned,  
NOTE Confidence: 0.906007502857143

01:09:32.540 --> 01:09:33.724 a lot of you don't need this answered.  
NOTE Confidence: 0.906007502857143

01:09:33.730 --> 01:09:35.900 Many people actually have participated  
NOTE Confidence: 0.906007502857143

01:09:35.900 --> 01:09:38.070 here already and played this  
NOTE Confidence: 0.906007502857143

01:09:38.143 --> 01:09:40.477 important role in moving it forward.  
NOTE Confidence: 0.906007502857143

01:09:40.480 --> 01:09:41.986 But I think it's worth going  
NOTE Confidence: 0.906007502857143

01:09:41.986 --> 01:09:43.235 through because it's important and  
NOTE Confidence: 0.906007502857143

01:09:43.235 --> 01:09:44.607 I would say that there were there  
NOTE Confidence: 0.906007502857143

01:09:44.607 --> 01:09:45.940 are kind of three big reasons.  
NOTE Confidence: 0.906007502857143

01:09:45.940 --> 01:09:47.767 The first one is is the team and I've  
NOTE Confidence: 0.906007502857143

01:09:47.767 --> 01:09:49.497 talked about some of that team already,  
NOTE Confidence: 0.906007502857143

01:09:49.500 --> 01:09:51.147 but I I can expand on that a little  
NOTE Confidence: 0.906007502857143

01:09:51.147 --> 01:09:52.927 bit 'cause I think we have a great  
NOTE Confidence: 0.906007502857143

01:09:52.927 --> 01:09:54.327 team here that's able to provide  
NOTE Confidence: 0.906007502857143

01:09:54.327 --> 01:09:57.860 support and and do this the right way.  
NOTE Confidence: 0.906007502857143

01:09:57.860 --> 01:09:59.765 A really importantly because it  
NOTE Confidence: 0.906007502857143

01:09:59.765 --> 01:10:02.018 increases options for treatment and it

NOTE Confidence: 0.906007502857143

01:10:02.018 --> 01:10:04.048 it hopefully puts an option that makes

NOTE Confidence: 0.906007502857143

01:10:04.048 --> 01:10:06.190 an option available that is a better

NOTE Confidence: 0.906007502857143

01:10:06.190 --> 01:10:08.160 option than any other that we have.

NOTE Confidence: 0.906007502857143

01:10:08.160 --> 01:10:10.000 And then finally because it can help to

NOTE Confidence: 0.906007502857143

01:10:10.056 --> 01:10:11.976 speed the development of new treatments.

NOTE Confidence: 0.906007502857143

01:10:11.980 --> 01:10:13.708 And so I'll talk about each

NOTE Confidence: 0.906007502857143

01:10:13.708 --> 01:10:15.180 of these a little bit.

NOTE Confidence: 0.906007502857143

01:10:15.180 --> 01:10:16.065 So regarding team,

NOTE Confidence: 0.906007502857143

01:10:16.065 --> 01:10:17.835 I've already mentioned a lot of

NOTE Confidence: 0.906007502857143

01:10:17.835 --> 01:10:19.655 the people on the top row here,

NOTE Confidence: 0.906007502857143

01:10:19.660 --> 01:10:21.781 so you know these are some of

NOTE Confidence: 0.906007502857143

01:10:21.781 --> 01:10:23.601 the senior people who have have

NOTE Confidence: 0.906007502857143

01:10:23.601 --> 01:10:25.918 laid the foundation for a lot of

NOTE Confidence: 0.906007502857143

01:10:25.918 --> 01:10:27.878 the therapies that we have today.

NOTE Confidence: 0.906007502857143

01:10:27.880 --> 01:10:30.200 Provided a research infrastructure for

NOTE Confidence: 0.906007502857143

01:10:30.200 --> 01:10:32.520 understanding what trials might be  
NOTE Confidence: 0.906007502857143

01:10:32.591 --> 01:10:34.841 the most beneficial for patients and  
NOTE Confidence: 0.906007502857143

01:10:34.841 --> 01:10:37.660 and and might be the most helpful and  
NOTE Confidence: 0.906007502857143

01:10:37.660 --> 01:10:40.164 and I have to say that the experience  
NOTE Confidence: 0.906007502857143

01:10:40.164 --> 01:10:43.187 and expertise that that this group brings,  
NOTE Confidence: 0.906007502857143

01:10:43.190 --> 01:10:44.520 you know is, I think,  
NOTE Confidence: 0.906007502857143

01:10:44.520 --> 01:10:46.236 a really important part of why  
NOTE Confidence: 0.906007502857143

01:10:46.236 --> 01:10:47.380 doing clinical trials here.  
NOTE Confidence: 0.906007502857143

01:10:47.380 --> 01:10:49.044 It may make sense.  
NOTE Confidence: 0.906007502857143

01:10:49.044 --> 01:10:51.540 I will say that you know,  
NOTE Confidence: 0.906007502857143

01:10:51.540 --> 01:10:53.910 for myself or my family,  
NOTE Confidence: 0.906007502857143

01:10:53.910 --> 01:10:56.052 I would want people like the leadership  
NOTE Confidence: 0.906007502857143

01:10:56.052 --> 01:10:57.799 of this clinical research team,  
NOTE Confidence: 0.906007502857143

01:10:57.800 --> 01:10:58.450 sort of.  
NOTE Confidence: 0.906007502857143

01:10:58.450 --> 01:11:00.400 Helping to select the trials and  
NOTE Confidence: 0.906007502857143

01:11:00.400 --> 01:11:02.270 decide which ones are the most

NOTE Confidence: 0.906007502857143  
01:11:02.270 --> 01:11:03.736 likely to lead to benefit.  
NOTE Confidence: 0.906007502857143  
01:11:03.736 --> 01:11:06.150 We you met some of us tonight.  
NOTE Confidence: 0.906007502857143  
01:11:06.150 --> 01:11:06.926 Some of the other.  
NOTE Confidence: 0.906007502857143  
01:11:06.926 --> 01:11:09.035 Some of the folks who are also or are  
NOTE Confidence: 0.906007502857143  
01:11:09.035 --> 01:11:10.525 active in participating clinical research,  
NOTE Confidence: 0.906007502857143  
01:11:10.530 --> 01:11:11.782 bringing trials forward or  
NOTE Confidence: 0.906007502857143  
01:11:11.782 --> 01:11:13.034 helping to enact them.  
NOTE Confidence: 0.906007502857143  
01:11:13.040 --> 01:11:14.972 But usually it's not just the  
NOTE Confidence: 0.906007502857143  
01:11:14.972 --> 01:11:16.790 people on this side either,  
NOTE Confidence: 0.906007502857143  
01:11:16.790 --> 01:11:18.980 it's it's an entire research staff,  
NOTE Confidence: 0.906007502857143  
01:11:18.980 --> 01:11:20.624 and any of you have participated  
NOTE Confidence: 0.906007502857143  
01:11:20.624 --> 01:11:21.446 in clinical trials.  
NOTE Confidence: 0.906007502857143  
01:11:21.450 --> 01:11:23.990 Know this, but research nurses,  
NOTE Confidence: 0.906007502857143  
01:11:23.990 --> 01:11:24.714 you know,  
NOTE Confidence: 0.906007502857143  
01:11:24.714 --> 01:11:26.524 dedicated research staff that helped  
NOTE Confidence: 0.906007502857143

01:11:26.524 --> 01:11:28.817 the trials to to open the tracks.  
NOTE Confidence: 0.906007502857143

01:11:28.820 --> 01:11:30.302 Safety that are,  
NOTE Confidence: 0.906007502857143

01:11:30.302 --> 01:11:31.290 you know,  
NOTE Confidence: 0.906007502857143

01:11:31.290 --> 01:11:33.335 patient facing that may provide  
NOTE Confidence: 0.906007502857143

01:11:33.335 --> 01:11:35.380 additional care or do safety  
NOTE Confidence: 0.922542611666667

01:11:35.456 --> 01:11:37.976 labs and make sure that we can do this  
NOTE Confidence: 0.922542611666667

01:11:37.976 --> 01:11:40.712 in a way that that maximizes safety and  
NOTE Confidence: 0.922542611666667

01:11:40.712 --> 01:11:43.940 the chance of having a good outcome.  
NOTE Confidence: 0.922542611666667

01:11:43.940 --> 01:11:46.244 So I think the team here is one reason,  
NOTE Confidence: 0.922542611666667

01:11:46.250 --> 01:11:48.310 but ultimately I think you  
NOTE Confidence: 0.922542611666667

01:11:48.310 --> 01:11:50.870 know as you think about this.  
NOTE Confidence: 0.922542611666667

01:11:50.870 --> 01:11:52.570 Participation in clinical trials is  
NOTE Confidence: 0.922542611666667

01:11:52.570 --> 01:11:54.875 always just a choice and a personal  
NOTE Confidence: 0.922542611666667

01:11:54.875 --> 01:11:56.779 choice that has to be made with  
NOTE Confidence: 0.922542611666667

01:11:56.779 --> 01:11:58.527 input from from your physician.  
NOTE Confidence: 0.922542611666667

01:11:58.530 --> 01:12:00.490 But and also your family,

NOTE Confidence: 0.922542611666667

01:12:00.490 --> 01:12:02.688 and every trial isn't right for everyone.

NOTE Confidence: 0.922542611666667

01:12:02.690 --> 01:12:04.130 It's true that not all trials

NOTE Confidence: 0.922542611666667

01:12:04.130 --> 01:12:06.008 succeed in that new drugs can have

NOTE Confidence: 0.922542611666667

01:12:06.008 --> 01:12:07.448 new toxicities and side effects.

NOTE Confidence: 0.922542611666667

01:12:07.450 --> 01:12:09.646 That's always a risk and a reason that we

NOTE Confidence: 0.922542611666667

01:12:09.646 --> 01:12:12.069 do extra lab tests and have extra visits,

NOTE Confidence: 0.922542611666667

01:12:12.070 --> 01:12:14.470 which is again a potential challenge

NOTE Confidence: 0.922542611666667

01:12:14.470 --> 01:12:16.987 in participating even the best drugs

NOTE Confidence: 0.922542611666667

01:12:16.987 --> 01:12:19.107 don't always benefit every patient.

NOTE Confidence: 0.922542611666667

01:12:19.110 --> 01:12:20.860 In fact, they don't generally benefit all.

NOTE Confidence: 0.922542611666667

01:12:20.860 --> 01:12:23.608 Patients, but you know, I think.

NOTE Confidence: 0.922542611666667

01:12:23.610 --> 01:12:26.739 I think as you think about this

NOTE Confidence: 0.922542611666667

01:12:26.739 --> 01:12:28.080 with your physician.

NOTE Confidence: 0.922542611666667

01:12:28.080 --> 01:12:30.082 Your physician will only put in front

NOTE Confidence: 0.922542611666667

01:12:30.082 --> 01:12:32.378 of you trial options that they think are

NOTE Confidence: 0.922542611666667

01:12:32.378 --> 01:12:34.577 at least as good and hopefully better  
NOTE Confidence: 0.922542611666667

01:12:34.577 --> 01:12:36.875 than the alternative options that you  
NOTE Confidence: 0.922542611666667

01:12:36.875 --> 01:12:40.828 may consider and and you know as an example,  
NOTE Confidence: 0.922542611666667

01:12:40.830 --> 01:12:43.410 I'd return to the development of  
NOTE Confidence: 0.922542611666667

01:12:43.410 --> 01:12:45.130 immunotherapy for Melanoma patients  
NOTE Confidence: 0.922542611666667

01:12:45.197 --> 01:12:46.580 at Yale were receiving these drugs  
NOTE Confidence: 0.922542611666667

01:12:46.580 --> 01:12:48.297 and had access to them years before  
NOTE Confidence: 0.922542611666667

01:12:48.297 --> 01:12:49.839 they were approved for general use.  
NOTE Confidence: 0.922542611666667

01:12:49.840 --> 01:12:52.272 So you know potentially had an option in  
NOTE Confidence: 0.922542611666667

01:12:52.272 --> 01:12:54.988 front of them that that could be valuable,  
NOTE Confidence: 0.922542611666667

01:12:54.990 --> 01:12:57.294 and it's one of the major reasons to  
NOTE Confidence: 0.922542611666667

01:12:57.294 --> 01:12:59.497 pursue care at a tertiary care center.  
NOTE Confidence: 0.922542611666667

01:12:59.500 --> 01:13:02.878 The larger care center likes Milo,  
NOTE Confidence: 0.922542611666667

01:13:02.880 --> 01:13:04.836 so increasing options is an important  
NOTE Confidence: 0.922542611666667

01:13:04.836 --> 01:13:07.080 reason to think about clinical trials.  
NOTE Confidence: 0.922542611666667

01:13:07.080 --> 01:13:09.502 And then finally that we think this

NOTE Confidence: 0.922542611666667  
01:13:09.502 --> 01:13:11.511 can help dispute the development  
NOTE Confidence: 0.922542611666667  
01:13:11.511 --> 01:13:12.867 of new treatments.  
NOTE Confidence: 0.922542611666667  
01:13:12.870 --> 01:13:14.270 And I know that in some ways  
NOTE Confidence: 0.922542611666667  
01:13:14.270 --> 01:13:15.797 that's a lot to to think about.  
NOTE Confidence: 0.922542611666667  
01:13:15.800 --> 01:13:17.809 For you know you're facing a cancer  
NOTE Confidence: 0.922542611666667  
01:13:17.809 --> 01:13:19.938 diagnosis and now all of a sudden  
NOTE Confidence: 0.922542611666667  
01:13:19.938 --> 01:13:21.756 you're fighting that cancer for everyone  
NOTE Confidence: 0.922542611666667  
01:13:21.814 --> 01:13:23.704 else who has or may one day get it.  
NOTE Confidence: 0.922542611666667  
01:13:23.710 --> 01:13:26.490 And yet many, many patients.  
NOTE Confidence: 0.922542611666667  
01:13:26.490 --> 01:13:27.558 Many of you do,  
NOTE Confidence: 0.922542611666667  
01:13:27.558 --> 01:13:30.183 and I guess the the way that I think  
NOTE Confidence: 0.922542611666667  
01:13:30.183 --> 01:13:32.388 about it is that this thing we're  
NOTE Confidence: 0.922542611666667  
01:13:32.466 --> 01:13:34.866 trying to move cancer and Melanoma,  
NOTE Confidence: 0.922542611666667  
01:13:34.870 --> 01:13:36.622 so it's so big and implacable  
NOTE Confidence: 0.922542611666667  
01:13:36.622 --> 01:13:38.835 that that none of the you know  
NOTE Confidence: 0.922542611666667

01:13:38.835 --> 01:13:40.465 people I've presented to you.  
NOTE Confidence: 0.922542611666667

01:13:40.470 --> 01:13:42.481 None of us could do it alone, but.  
NOTE Confidence: 0.922542611666667

01:13:42.481 --> 01:13:44.227 You know everyone is sort of  
NOTE Confidence: 0.922542611666667

01:13:44.227 --> 01:13:46.080 shoulder up to it and pushing,  
NOTE Confidence: 0.922542611666667

01:13:46.080 --> 01:13:47.874 and it's not good enough or  
NOTE Confidence: 0.922542611666667

01:13:47.874 --> 01:13:49.925 fast enough by half, but it is.  
NOTE Confidence: 0.922542611666667

01:13:49.925 --> 01:13:51.782 It is moving and it's moving  
NOTE Confidence: 0.922542611666667

01:13:51.782 --> 01:13:53.118 because because of you,  
NOTE Confidence: 0.922542611666667

01:13:53.120 --> 01:13:55.560 and because everyone pushes together  
NOTE Confidence: 0.922542611666667

01:13:55.560 --> 01:13:58.449 so you know always has to be the right  
NOTE Confidence: 0.922542611666667

01:13:58.449 --> 01:14:00.816 choice in that you know personal decision.  
NOTE Confidence: 0.922542611666667

01:14:00.816 --> 01:14:02.881 Depending on the clinical context  
NOTE Confidence: 0.922542611666667

01:14:02.881 --> 01:14:04.918 and the availability of an option,  
NOTE Confidence: 0.922542611666667

01:14:04.920 --> 01:14:06.558 that is the best option available.  
NOTE Confidence: 0.922542611666667

01:14:06.560 --> 01:14:08.246 But you know,  
NOTE Confidence: 0.922542611666667

01:14:08.246 --> 01:14:11.618 I think collectively also moves forward.

NOTE Confidence: 0.922542611666667

01:14:11.620 --> 01:14:14.305 And and I wanted to just wrap up a

NOTE Confidence: 0.922542611666667

01:14:14.305 --> 01:14:16.211 little bit by by talking about some

NOTE Confidence: 0.922542611666667

01:14:16.211 --> 01:14:18.311 of the clinical trials that were

NOTE Confidence: 0.922542611666667

01:14:18.311 --> 01:14:19.851 particularly excited about some of

NOTE Confidence: 0.922542611666667

01:14:19.851 --> 01:14:21.685 the areas of focus that are either

NOTE Confidence: 0.882329164

01:14:21.690 --> 01:14:24.280 active trials or you know,

NOTE Confidence: 0.882329164

01:14:24.280 --> 01:14:26.947 areas that we are are have studies

NOTE Confidence: 0.882329164

01:14:26.947 --> 01:14:29.679 opening up in in the near future,

NOTE Confidence: 0.882329164

01:14:29.680 --> 01:14:32.280 and the first is this idea of CD40,

NOTE Confidence: 0.882329164

01:14:32.280 --> 01:14:34.480 agonism and and, you know,

NOTE Confidence: 0.882329164

01:14:34.480 --> 01:14:36.853 Doctor Krueger and Doctor Lino and others

NOTE Confidence: 0.882329164

01:14:36.853 --> 01:14:39.220 have done really interesting work here,

NOTE Confidence: 0.882329164

01:14:39.220 --> 01:14:40.990 and the basic question here is.

NOTE Confidence: 0.882329164

01:14:40.990 --> 01:14:43.150 OK, so I told you that T cells are

NOTE Confidence: 0.882329164

01:14:43.150 --> 01:14:45.063 important cells for attacking tumors and

NOTE Confidence: 0.882329164

01:14:45.063 --> 01:14:47.442 that you can block receptors and kind of  
NOTE Confidence: 0.882329164

01:14:47.442 --> 01:14:49.333 get them fired up to attack the tumor.  
NOTE Confidence: 0.882329164

01:14:49.333 --> 01:14:50.791 But what about the rest of  
NOTE Confidence: 0.882329164

01:14:50.791 --> 01:14:51.791 the immune system, right?  
NOTE Confidence: 0.882329164

01:14:51.791 --> 01:14:54.583 And so CD 40 is sort of a receptor that  
NOTE Confidence: 0.882329164

01:14:54.583 --> 01:14:57.487 is present on a number of a number of cell  
NOTE Confidence: 0.882329164

01:14:57.487 --> 01:15:00.135 types at a number of other immune cells,  
NOTE Confidence: 0.882329164

01:15:00.140 --> 01:15:02.340 and it was found that actually by stimulating  
NOTE Confidence: 0.882329164

01:15:02.340 --> 01:15:04.060 rather than blocking this receptor,  
NOTE Confidence: 0.882329164

01:15:04.060 --> 01:15:05.948 that you can kind of get the rest  
NOTE Confidence: 0.882329164

01:15:05.948 --> 01:15:07.837 of the immune system fired up and  
NOTE Confidence: 0.882329164

01:15:07.837 --> 01:15:10.021 so one of the hopes is that by  
NOTE Confidence: 0.882329164

01:15:10.021 --> 01:15:11.799 adding this type of drug to the.  
NOTE Confidence: 0.882329164

01:15:11.800 --> 01:15:13.792 Drugs that are currently available to  
NOTE Confidence: 0.882329164

01:15:13.792 --> 01:15:16.070 take the brakes off the immune system  
NOTE Confidence: 0.882329164

01:15:16.070 --> 01:15:18.149 that you may get a better effect.

NOTE Confidence: 0.882329164

01:15:18.150 --> 01:15:20.350 So that's an area of active study here.

NOTE Confidence: 0.882329164

01:15:20.350 --> 01:15:21.022 Another one.

NOTE Confidence: 0.882329164

01:15:21.022 --> 01:15:23.374 Are there other ways the Union system

NOTE Confidence: 0.882329164

01:15:23.374 --> 01:15:26.067 is controlled and suppressed in tumors,

NOTE Confidence: 0.882329164

01:15:26.070 --> 01:15:27.820 and so this is another discovery that's

NOTE Confidence: 0.882329164

01:15:27.820 --> 01:15:29.179 really taken place here at Yale,

NOTE Confidence: 0.882329164

01:15:29.180 --> 01:15:30.510 and this is Erin Ring,

NOTE Confidence: 0.882329164

01:15:30.510 --> 01:15:32.330 who is a scientist here.

NOTE Confidence: 0.882329164

01:15:32.330 --> 01:15:34.148 Also a physician, although not practicing,

NOTE Confidence: 0.882329164

01:15:34.150 --> 01:15:36.418 but a scientist who really made this

NOTE Confidence: 0.882329164

01:15:36.418 --> 01:15:38.260 discovery and and really what he

NOTE Confidence: 0.882329164

01:15:38.260 --> 01:15:40.540 found out is there are are are kind

NOTE Confidence: 0.882329164

01:15:40.540 --> 01:15:42.371 of molecules that are secreted by

NOTE Confidence: 0.882329164

01:15:42.371 --> 01:15:44.201 immune cells that have the potential

NOTE Confidence: 0.882329164

01:15:44.201 --> 01:15:46.553 to activate the immune system and make

NOTE Confidence: 0.882329164

01:15:46.553 --> 01:15:48.278 it more effective against cancer.

NOTE Confidence: 0.882329164

01:15:48.280 --> 01:15:48.635 However,

NOTE Confidence: 0.882329164

01:15:48.635 --> 01:15:50.765 there are also mechanisms that are

NOTE Confidence: 0.882329164

01:15:50.765 --> 01:15:52.470 built into those molecules that

NOTE Confidence: 0.882329164

01:15:52.470 --> 01:15:54.790 shut them down so that and I think

NOTE Confidence: 0.882329164

01:15:54.849 --> 01:15:56.979 probably you know if you're trying

NOTE Confidence: 0.882329164

01:15:56.979 --> 01:15:58.922 to provide an explanation for that.

NOTE Confidence: 0.882329164

01:15:58.922 --> 01:16:01.010 The reason is to avoid kind of over

NOTE Confidence: 0.882329164

01:16:01.074 --> 01:16:02.989 activation of the immune system

NOTE Confidence: 0.882329164

01:16:02.989 --> 01:16:04.904 and different types of situations,

NOTE Confidence: 0.882329164

01:16:04.910 --> 01:16:08.309 but what what Aaron did is he found

NOTE Confidence: 0.882329164

01:16:08.309 --> 01:16:10.889 out that if you get rid of those

NOTE Confidence: 0.882329164

01:16:10.889 --> 01:16:12.257 kind of inhibitory interactions

NOTE Confidence: 0.882329164

01:16:12.257 --> 01:16:14.218 on these secreted molecules,

NOTE Confidence: 0.882329164

01:16:14.220 --> 01:16:15.780 that you actually get a better

NOTE Confidence: 0.882329164

01:16:15.780 --> 01:16:16.820 immune response against cancer,

NOTE Confidence: 0.882329164

01:16:16.820 --> 01:16:19.028 and actually in the preclinical models.

NOTE Confidence: 0.882329164

01:16:19.030 --> 01:16:20.966 That you don't get a lot of toxicity

NOTE Confidence: 0.882329164

01:16:20.966 --> 01:16:22.549 that it appears to be safe,

NOTE Confidence: 0.882329164

01:16:22.550 --> 01:16:24.517 and so this is some another kind

NOTE Confidence: 0.882329164

01:16:24.517 --> 01:16:26.262 of approach that looks incredibly

NOTE Confidence: 0.882329164

01:16:26.262 --> 01:16:27.938 promising for stimulating immune

NOTE Confidence: 0.882329164

01:16:27.938 --> 01:16:29.614 system to fight cancer.

NOTE Confidence: 0.882329164

01:16:29.620 --> 01:16:31.654 That is kind of being developed

NOTE Confidence: 0.882329164

01:16:31.654 --> 01:16:33.010 into clinical trials here.

NOTE Confidence: 0.885624846

01:16:34.500 --> 01:16:35.430 And then the last one

NOTE Confidence: 0.910909916

01:16:35.440 --> 01:16:37.180 I'll highlight is is this,

NOTE Confidence: 0.910909916

01:16:37.180 --> 01:16:40.450 which is a tumor infiltrating lymphocytes.

NOTE Confidence: 0.910909916

01:16:40.450 --> 01:16:42.637 And so this is a little bit more complicated

NOTE Confidence: 0.910909916

01:16:42.637 --> 01:16:44.896 as a therapeutic paradigm for the others.

NOTE Confidence: 0.910909916

01:16:44.900 --> 01:16:47.244 We might just give something through an Ivy.

NOTE Confidence: 0.910909916

01:16:47.250 --> 01:16:48.755 And even if the immunology and the  
NOTE Confidence: 0.910909916

01:16:48.755 --> 01:16:50.500 science is a little bit complicated,  
NOTE Confidence: 0.910909916

01:16:50.500 --> 01:16:52.740 the delivery is pretty straightforward.  
NOTE Confidence: 0.910909916

01:16:52.740 --> 01:16:54.511 In this case the delivery is actually  
NOTE Confidence: 0.910909916

01:16:54.511 --> 01:16:56.140 a little bit complicated too,  
NOTE Confidence: 0.910909916

01:16:56.140 --> 01:16:58.228 but what it all aims at is this question  
NOTE Confidence: 0.910909916

01:16:58.228 --> 01:17:00.555 of what if we don't have enough activated  
NOTE Confidence: 0.910909916

01:17:00.555 --> 01:17:02.409 immune cells to attack the tumor?  
NOTE Confidence: 0.910909916

01:17:02.410 --> 01:17:05.218 And in this case, one of the potential.  
NOTE Confidence: 0.910909916

01:17:05.220 --> 01:17:07.270 Approaches that looks very promising.  
NOTE Confidence: 0.910909916

01:17:07.270 --> 01:17:09.238 This actually take out the tumor,  
NOTE Confidence: 0.910909916

01:17:09.240 --> 01:17:10.878 and we've realized that if you take  
NOTE Confidence: 0.910909916

01:17:10.878 --> 01:17:12.577 the immune cells from that tumor and  
NOTE Confidence: 0.910909916

01:17:12.577 --> 01:17:14.005 you stimulate them the right way,  
NOTE Confidence: 0.910909916

01:17:14.010 --> 01:17:14.844 you give them,  
NOTE Confidence: 0.910909916

01:17:14.844 --> 01:17:16.790 you know you bathe them in substances

NOTE Confidence: 0.910909916

01:17:16.846 --> 01:17:19.038 that help them to grow and get activated,

NOTE Confidence: 0.910909916

01:17:19.040 --> 01:17:20.564 that they they multiply and you

NOTE Confidence: 0.910909916

01:17:20.564 --> 01:17:22.069 get a whole lot of that.

NOTE Confidence: 0.910909916

01:17:22.070 --> 01:17:24.622 And then what you can do is actually

NOTE Confidence: 0.910909916

01:17:24.622 --> 01:17:27.068 infuse these back into the patient, right?

NOTE Confidence: 0.910909916

01:17:27.068 --> 01:17:28.856 So to give these cells back

NOTE Confidence: 0.910909916

01:17:28.856 --> 01:17:30.356 once they're more multitudinous,

NOTE Confidence: 0.910909916

01:17:30.356 --> 01:17:31.700 they're they've expanded,

NOTE Confidence: 0.910909916

01:17:31.700 --> 01:17:33.292 and they're more activated,

NOTE Confidence: 0.910909916

01:17:33.292 --> 01:17:36.105 and by doing so, you may increase

NOTE Confidence: 0.910909916

01:17:36.105 --> 01:17:38.130 the chance of controlling cancers.

NOTE Confidence: 0.910909916

01:17:38.130 --> 01:17:38.826 And I, you know,

NOTE Confidence: 0.910909916

01:17:38.826 --> 01:17:40.361 yeah was one of the the early centers

NOTE Confidence: 0.910909916

01:17:40.361 --> 01:17:42.137 to be involved in this type of trial.

NOTE Confidence: 0.910909916

01:17:42.140 --> 01:17:44.186 It still remains very active here.

NOTE Confidence: 0.910909916

01:17:44.190 --> 01:17:44.918 It's a.  
NOTE Confidence: 0.910909916

01:17:44.918 --> 01:17:47.466 It's a kind of a another exciting  
NOTE Confidence: 0.910909916

01:17:47.466 --> 01:17:49.948 approach that's being developed here.  
NOTE Confidence: 0.910909916

01:17:49.950 --> 01:17:52.230 So for the last two slides,  
NOTE Confidence: 0.910909916

01:17:52.230 --> 01:17:54.327 I promise I won't go go on and on.  
NOTE Confidence: 0.910909916

01:17:54.330 --> 01:17:56.410 I do want to share just one vignette.  
NOTE Confidence: 0.910909916

01:17:56.410 --> 01:17:58.462 This is recent research from our  
NOTE Confidence: 0.910909916

01:17:58.462 --> 01:18:00.631 laboratory in which we've been able  
NOTE Confidence: 0.910909916

01:18:00.631 --> 01:18:02.857 to take small samples from surgically  
NOTE Confidence: 0.910909916

01:18:02.857 --> 01:18:04.581 resected tumors and directly study  
NOTE Confidence: 0.910909916

01:18:04.581 --> 01:18:07.090 the effects of drugs on the tumor and  
NOTE Confidence: 0.910909916

01:18:07.090 --> 01:18:09.250 immune cells. Within these small pieces.  
NOTE Confidence: 0.910909916

01:18:09.250 --> 01:18:12.100 This approach allows us to actually  
NOTE Confidence: 0.910909916

01:18:12.100 --> 01:18:14.038 study single cells and measure the  
NOTE Confidence: 0.910909916

01:18:14.038 --> 01:18:16.568 expression of all the genes within them  
NOTE Confidence: 0.910909916

01:18:16.568 --> 01:18:18.528 and the cellular behavior following

NOTE Confidence: 0.910909916

01:18:18.528 --> 01:18:20.878 treatment with drugs outside of the body.

NOTE Confidence: 0.910909916

01:18:20.880 --> 01:18:21.133 Uhm?

NOTE Confidence: 0.910909916

01:18:21.133 --> 01:18:23.157 And So what do you get when you

NOTE Confidence: 0.910909916

01:18:23.157 --> 01:18:24.650 do these experiments?

NOTE Confidence: 0.910909916

01:18:24.650 --> 01:18:26.906 So so you get back what looked like

NOTE Confidence: 0.910909916

01:18:26.906 --> 01:18:28.264 pointless paintings on the left

NOTE Confidence: 0.910909916

01:18:28.264 --> 01:18:29.734 and starry nights on the right.

NOTE Confidence: 0.910909916

01:18:29.740 --> 01:18:30.892 But but what each?

NOTE Confidence: 0.910909916

01:18:30.892 --> 01:18:32.965 What these represent are really all of

NOTE Confidence: 0.910909916

01:18:32.965 --> 01:18:34.693 thousands of immune cells and tumor

NOTE Confidence: 0.910909916

01:18:34.693 --> 01:18:37.107 cells that each can be studied individually,

NOTE Confidence: 0.910909916

01:18:37.110 --> 01:18:39.190 and each of the kind of stars in

NOTE Confidence: 0.910909916

01:18:39.190 --> 01:18:41.360 the kind of right hand side here

NOTE Confidence: 0.910909916

01:18:41.360 --> 01:18:43.340 represents a cell with its position

NOTE Confidence: 0.910909916

01:18:43.340 --> 01:18:45.314 kind of determined by the average

NOTE Confidence: 0.910909916

01:18:45.314 --> 01:18:47.327 of all of its cellular behaviors.  
NOTE Confidence: 0.910909916

01:18:47.327 --> 01:18:48.683 The gene expression that's  
NOTE Confidence: 0.910909916

01:18:48.683 --> 01:18:49.990 occurring within the cell.  
NOTE Confidence: 0.910909916

01:18:49.990 --> 01:18:51.058 And because of this,  
NOTE Confidence: 0.910909916

01:18:51.058 --> 01:18:52.660 we can perform kind of analysis.  
NOTE Confidence: 0.910909916

01:18:52.660 --> 01:18:54.784 And understand some of the deepest  
NOTE Confidence: 0.910909916

01:18:54.784 --> 01:18:56.200 aspects of cellular behavior.  
NOTE Confidence: 0.910909916

01:18:56.200 --> 01:18:57.750 Identify new pathways of response  
NOTE Confidence: 0.910909916

01:18:57.750 --> 01:18:59.300 and resistance to therapy and  
NOTE Confidence: 0.910909916

01:18:59.358 --> 01:19:00.688 and that's that's our hope.  
NOTE Confidence: 0.910909916

01:19:00.690 --> 01:19:02.283 Our hope is to one day be able to  
NOTE Confidence: 0.910909916

01:19:02.283 --> 01:19:03.957 use approaches like this as a guy.  
NOTE Confidence: 0.910909916

01:19:03.960 --> 01:19:06.865 If not, you know individual therapy choice,  
NOTE Confidence: 0.910909916

01:19:06.870 --> 01:19:08.946 at least for the development of  
NOTE Confidence: 0.910909916

01:19:08.946 --> 01:19:10.757 therapies that are most likely  
NOTE Confidence: 0.910909916

01:19:10.757 --> 01:19:12.941 to work and to reprogram the

NOTE Confidence: 0.910909916  
01:19:12.941 --> 01:19:14.033 interactions of immune  
NOTE Confidence: 0.891596484444445  
01:19:14.104 --> 01:19:15.880 and tumor cells in a fruitful  
NOTE Confidence: 0.891596484444445  
01:19:15.880 --> 01:19:17.224 way to understand the mechanisms  
NOTE Confidence: 0.891596484444445  
01:19:17.224 --> 01:19:19.112 by which the drugs we are using  
NOTE Confidence: 0.891596484444445  
01:19:19.112 --> 01:19:21.288 and testing fundamentally act.  
NOTE Confidence: 0.891596484444445  
01:19:21.288 --> 01:19:25.165 So with that, I want to thank everybody  
NOTE Confidence: 0.891596484444445  
01:19:25.165 --> 01:19:26.938 for staying all the way through  
NOTE Confidence: 0.891596484444445  
01:19:26.938 --> 01:19:29.122 and for listening to to all of us,  
NOTE Confidence: 0.891596484444445  
01:19:29.130 --> 01:19:31.920 and I want to thank the MRF for hosting  
NOTE Confidence: 0.891596484444445  
01:19:31.920 --> 01:19:33.963 tonight if you want to hear more  
NOTE Confidence: 0.891596484444445  
01:19:33.963 --> 01:19:36.219 about our work or the Melanoma program  
NOTE Confidence: 0.891596484444445  
01:19:36.219 --> 01:19:38.672 at Yale Cancer Center or the work.  
NOTE Confidence: 0.891596484444445  
01:19:38.672 --> 01:19:40.716 The kind of web links in Twitter  
NOTE Confidence: 0.891596484444445  
01:19:40.716 --> 01:19:42.582 handles are there and I'm also  
NOTE Confidence: 0.891596484444445  
01:19:42.582 --> 01:19:44.107 happy to take any questions.  
NOTE Confidence: 0.90818587

01:19:46.310 --> 01:19:47.610 Thank you so much, Jeff.  
NOTE Confidence: 0.90818587

01:19:47.610 --> 01:19:50.378 I think we're running two minutes over.  
NOTE Confidence: 0.90818587

01:19:50.378 --> 01:19:53.450 Uhm, I think this.  
NOTE Confidence: 0.90818587

01:19:53.450 --> 01:19:56.593 Maybe we can put this question to  
NOTE Confidence: 0.90818587

01:19:56.593 --> 01:19:59.653 Jonathan 'cause it's about us automated  
NOTE Confidence: 0.90818587

01:19:59.653 --> 01:20:02.358 scanning tools to avoid biopsies,  
NOTE Confidence: 0.90818587

01:20:02.360 --> 01:20:03.841 so it's a German question, John,  
NOTE Confidence: 0.90818587

01:20:03.841 --> 01:20:05.827 if you wouldn't mind responding in  
NOTE Confidence: 0.90818587

01:20:05.827 --> 01:20:08.090 the chat while we while we wrap up,  
NOTE Confidence: 0.90818587

01:20:08.090 --> 01:20:09.460 and I'm going to actually turn to  
NOTE Confidence: 0.90818587

01:20:09.460 --> 01:20:11.758 Doctor Schnoll for some closing remarks.  
NOTE Confidence: 0.853805717777778

01:20:20.360 --> 01:20:21.287 Jonathan's on mute.  
NOTE Confidence: 0.853805717777778

01:20:21.287 --> 01:20:23.450 I believe you know he's gonna respond  
NOTE Confidence: 0.853805717777778

01:20:23.507 --> 01:20:25.459 in the in the chat 'cause it's late,  
NOTE Confidence: 0.853805717777778

01:20:25.460 --> 01:20:27.446 so yeah, if you wanna just  
NOTE Confidence: 0.853805717777778

01:20:27.446 --> 01:20:28.770 make some closing remarks.

NOTE Confidence: 0.853805717777778  
01:20:28.770 --> 01:20:30.500 Of course, I thought he was  
NOTE Confidence: 0.853805717777778  
01:20:30.500 --> 01:20:31.925 gonna respond by I was.  
NOTE Confidence: 0.853805717777778  
01:20:31.930 --> 01:20:33.146 So first of all,  
NOTE Confidence: 0.853805717777778  
01:20:33.146 --> 01:20:35.130 I want to thank first thank you  
NOTE Confidence: 0.853805717777778  
01:20:35.130 --> 01:20:37.310 Harriet for leading the meeting  
NOTE Confidence: 0.853805717777778  
01:20:37.310 --> 01:20:38.580 and and I want to thank all  
NOTE Confidence: 0.853805717777778  
01:20:38.580 --> 01:20:41.477 the speakers are teammates for  
NOTE Confidence: 0.853805717777778  
01:20:41.477 --> 01:20:42.846 providing this wonderful update  
NOTE Confidence: 0.853805717777778  
01:20:42.846 --> 01:20:44.894 on on the treatment of management  
NOTE Confidence: 0.853805717777778  
01:20:44.894 --> 01:20:46.568 of Melanoma all the way from  
NOTE Confidence: 0.851213913333333  
01:20:46.970 --> 01:20:49.080 the additional diagnosis from  
NOTE Confidence: 0.787928402  
01:20:49.090 --> 01:20:49.942 the dermatologist.  
NOTE Confidence: 0.787928402  
01:20:49.942 --> 01:20:51.884 Other way to surgical management  
NOTE Confidence: 0.787928402  
01:20:51.884 --> 01:20:55.019 all the way to oncology treatment  
NOTE Confidence: 0.787928402  
01:20:55.020 --> 01:20:58.595 and and to research as you've heard.  
NOTE Confidence: 0.787928402

01:20:58.595 --> 01:21:01.230 Uhm, we've been involved in the

NOTE Confidence: 0.787928402

01:21:01.230 --> 01:21:02.304 management treatment research

NOTE Confidence: 0.787928402

01:21:02.304 --> 01:21:03.879 of Eleanor for many years.

NOTE Confidence: 0.787928402

01:21:03.880 --> 01:21:07.105 We we are very committed to

NOTE Confidence: 0.787928402

01:21:07.105 --> 01:21:08.648 improving the standard of care this

NOTE Confidence: 0.787928402

01:21:08.648 --> 01:21:10.088 disease and providing the best

NOTE Confidence: 0.787928402

01:21:10.088 --> 01:21:12.808 possible care that we can for our

NOTE Confidence: 0.93894982

01:21:12.820 --> 01:21:14.860 patients. I think there's a

NOTE Confidence: 0.893743714285714

01:21:14.870 --> 01:21:17.294 great deal of opportunity for further

NOTE Confidence: 0.893743714285714

01:21:17.294 --> 01:21:20.288 advancement here and for further

NOTE Confidence: 0.893743714285714

01:21:20.288 --> 01:21:23.523 advancement in the field altogether.

NOTE Confidence: 0.893743714285714

01:21:23.530 --> 01:21:25.422 We appreciate our patients.

NOTE Confidence: 0.893743714285714

01:21:25.422 --> 01:21:27.370 We appreciate your attention

NOTE Confidence: 0.893743714285714

01:21:27.370 --> 01:21:28.955 and your willingness to join

NOTE Confidence: 0.893743714285714

01:21:28.955 --> 01:21:30.628 the chat and we hope that we can

NOTE Confidence: 0.893743714285714

01:21:30.630 --> 01:21:34.320 provide answers to your questions.

NOTE Confidence: 0.893743714285714  
01:21:34.320 --> 01:21:35.216 Either during this meeting  
NOTE Confidence: 0.893743714285714  
01:21:35.216 --> 01:21:36.803 or we see you in in clinic.  
NOTE Confidence: 0.893743714285714  
01:21:36.803 --> 01:21:39.540 I also want to thank the Melanoma  
NOTE Confidence: 0.893743714285714  
01:21:39.540 --> 01:21:42.488 Research Foundation for their sponsorship  
NOTE Confidence: 0.893743714285714  
01:21:42.490 --> 01:21:46.000 of of this and their cooperation  
NOTE Confidence: 0.893743714285714  
01:21:46.000 --> 01:21:48.860 with setting up this this meeting.  
NOTE Confidence: 0.893743714285714  
01:21:48.860 --> 01:21:50.940 Let me turn this back over to you Harriet.  
NOTE Confidence: 0.893743714285714  
01:21:50.940 --> 01:21:54.489 It's always a pleasure to be involved  
NOTE Confidence: 0.893743714285714  
01:21:54.489 --> 01:21:56.452 in these. Educational activities.  
NOTE Confidence: 0.893743714285714  
01:21:56.452 --> 01:21:58.864 Yeah, thank you so much Mario.  
NOTE Confidence: 0.893743714285714  
01:21:58.870 --> 01:22:00.816 And actually I just wanted to thank  
NOTE Confidence: 0.893743714285714  
01:22:00.816 --> 01:22:03.063 everybody for calling in and staying  
NOTE Confidence: 0.893743714285714  
01:22:03.063 --> 01:22:05.440 with us for for such a long time.  
NOTE Confidence: 0.893743714285714  
01:22:05.440 --> 01:22:08.360 And before all your attention we've I  
NOTE Confidence: 0.893743714285714  
01:22:08.360 --> 01:22:11.346 think have a huge number of attendees  
NOTE Confidence: 0.893743714285714

01:22:11.346 --> 01:22:14.024 for a video event and all we can

NOTE Confidence: 0.893743714285714

01:22:14.024 --> 01:22:15.975 hope for is that the next one is

NOTE Confidence: 0.893743714285714

01:22:15.975 --> 01:22:18.080 in person in that tech auditorium.

NOTE Confidence: 0.893743714285714

01:22:18.080 --> 01:22:20.395 We've had some good times there in the past,

NOTE Confidence: 0.893743714285714

01:22:20.395 --> 01:22:22.660 so stay healthy and stay safe.

NOTE Confidence: 0.893743714285714

01:22:22.660 --> 01:22:24.168 Everyone and thank you so much

NOTE Confidence: 0.893743714285714

01:22:24.168 --> 01:22:27.590 for staying with us, goodnight.

NOTE Confidence: 0.893743714285714

01:22:27.590 --> 01:22:30.000 Thank you.