

WEBVTT

NOTE duration:"01:10:25"

NOTE recognizability:0.798

NOTE language:en-us

NOTE Confidence: 0.860774371428571

00:00:00.000 --> 00:00:02.874 Good afternoon and.

NOTE Confidence: 0.860774371428571

00:00:02.874 --> 00:00:09.338 For everyone here and over the zoom.

NOTE Confidence: 0.860774371428571

00:00:09.340 --> 00:00:13.210 Welcome to the pathology ground round.

NOTE Confidence: 0.860774371428571

00:00:13.210 --> 00:00:15.478 Is my great?

NOTE Confidence: 0.860774371428571

00:00:15.480 --> 00:00:18.795 Honours and privileges to introduce

NOTE Confidence: 0.860774371428571

00:00:18.795 --> 00:00:21.447 today's grand rounds speaker,

NOTE Confidence: 0.860774371428571

00:00:21.450 --> 00:00:24.450 doctor Lazano.

NOTE Confidence: 0.860774371428571

00:00:24.450 --> 00:00:27.238 Whatever Asano complete completed

NOTE Confidence: 0.860774371428571

00:00:27.238 --> 00:00:31.875 for medical education in the early 90.

NOTE Confidence: 0.860774371428571

00:00:31.875 --> 00:00:36.910 In the University of Navarra, Spain.

NOTE Confidence: 0.860774371428571

00:00:36.910 --> 00:00:40.466 The university is located in the northern

NOTE Confidence: 0.860774371428571

00:00:40.470 --> 00:00:45.084 Spain in the city of the Pamplona.

NOTE Confidence: 0.860774371428571

00:00:45.090 --> 00:00:48.070 Which is the famous for

NOTE Confidence: 0.860774371428571

00:00:48.070 --> 00:00:51.830 Annual full fighting festivals.  
NOTE Confidence: 0.860774371428571

00:00:51.830 --> 00:00:55.512 And it is such a beautiful city and  
NOTE Confidence: 0.860774371428571

00:00:55.512 --> 00:00:58.730 you can appreciate through Doctor  
NOTE Confidence: 0.860774371428571

00:00:58.730 --> 00:01:02.830 Lozano's many social media posts.  
NOTE Confidence: 0.860774371428571

00:01:02.830 --> 00:01:05.090 And it's things Doctor Rodano  
NOTE Confidence: 0.860774371428571

00:01:05.090 --> 00:01:07.850 likes the city so much so  
NOTE Confidence: 0.860774371428571

00:01:07.850 --> 00:01:09.400 she never left the city.  
NOTE Confidence: 0.76707834

00:01:11.330 --> 00:01:12.518 So she is currently  
NOTE Confidence: 0.842470802142857

00:01:12.530 --> 00:01:15.374 a professor of pathology and the  
NOTE Confidence: 0.842470802142857

00:01:15.374 --> 00:01:19.078 chair of the Anatomic Pathology in the  
NOTE Confidence: 0.842470802142857

00:01:19.078 --> 00:01:23.210 university at the University of Navarra.  
NOTE Confidence: 0.842470802142857

00:01:23.210 --> 00:01:27.020 Daughter Rosanna is renowned sociologist  
NOTE Confidence: 0.842470802142857

00:01:27.020 --> 00:01:30.068 with expertise in cytopathology,  
NOTE Confidence: 0.842470802142857

00:01:30.070 --> 00:01:34.210 molecular pathology and. Thoracic pathology.  
NOTE Confidence: 0.88739050875

00:01:36.260 --> 00:01:39.879 She is a current president of the  
NOTE Confidence: 0.88739050875

00:01:39.879 --> 00:01:43.568 Spanish Society of Science.

NOTE Confidence: 0.88739050875

00:01:43.570 --> 00:01:47.707. Over the years,

NOTE Confidence: 0.88739050875

00:01:47.707 --> 00:01:50.581 Doctor Rodano has been invited to

NOTE Confidence: 0.88739050875

00:01:50.581 --> 00:01:54.090 give presentation at pathology meetings.

NOTE Confidence: 0.88739050875

00:01:54.090 --> 00:01:58.430 And seminars and tutorials worldwide.

NOTE Confidence: 0.717285985384615

00:02:00.630 --> 00:02:05.348 And this morning we have great unknown

NOTE Confidence: 0.717285985384615

00:02:05.348 --> 00:02:10.069 session with the resident and fellows.

NOTE Confidence: 0.717285985384615

00:02:10.070 --> 00:02:13.592 Daughter Rosanna has been recognized as

NOTE Confidence: 0.717285985384615

00:02:13.592 --> 00:02:17.049 an expert in using psychological

NOTE Confidence: 0.717285985384615

00:02:17.049 --> 00:02:20.990 specimens for the N 3 testing like

NOTE Confidence: 0.717285985384615

00:02:21.091 --> 00:02:24.446 molecular test and biomarker test.

NOTE Confidence: 0.717285985384615

00:02:24.450 --> 00:02:29.550 And which is the important for?

NOTE Confidence: 0.717285985384615

00:02:29.550 --> 00:02:32.678 Titering uh therapy for

NOTE Confidence: 0.717285985384615

00:02:32.678 --> 00:02:35.806 patient with lung cancer.

NOTE Confidence: 0.717285985384615

00:02:35.810 --> 00:02:38.082 She has published more than

NOTE Confidence: 0.717285985384615

00:02:38.082 --> 00:02:40.306 100 peer review articles,

NOTE Confidence: 0.717285985384615

00:02:40.310 --> 00:02:44.520 reviews and editorials in the  
NOTE Confidence: 0.717285985384615

00:02:44.520 --> 00:02:48.730 passage and Medical College journals.  
NOTE Confidence: 0.717285985384615

00:02:48.730 --> 00:02:50.362 As we know,  
NOTE Confidence: 0.717285985384615

00:02:50.362 --> 00:02:53.626 Cytologic specimens are the important for  
NOTE Confidence: 0.717285985384615

00:02:53.626 --> 00:02:56.620 diagnosis and tumor classifications.  
NOTE Confidence: 0.717285985384615

00:02:56.620 --> 00:03:01.636 And does he have sometimes the only specimen  
NOTE Confidence: 0.717285985384615

00:03:01.636 --> 00:03:06.028 available for diagnosis diagnostic workup?  
NOTE Confidence: 0.717285985384615

00:03:06.030 --> 00:03:10.122 However, we face this challenge in using  
NOTE Confidence: 0.717285985384615

00:03:10.122 --> 00:03:13.040 psychological specimen for entry tests.  
NOTE Confidence: 0.717285985384615

00:03:13.040 --> 00:03:17.317 And due to inherent issues of psychology  
NOTE Confidence: 0.717285985384615

00:03:17.317 --> 00:03:20.400 specimen including low cellularity,  
NOTE Confidence: 0.717285985384615

00:03:20.400 --> 00:03:23.262 low tumor burden,  
NOTE Confidence: 0.717285985384615

00:03:23.262 --> 00:03:27.078 and variable cytological preparations.  
NOTE Confidence: 0.717285985384615

00:03:27.080 --> 00:03:31.200 So we hope today's ground run by Doctor  
NOTE Confidence: 0.717285985384615

00:03:31.200 --> 00:03:35.050 Rodano will help us learn the best  
NOTE Confidence: 0.717285985384615

00:03:35.050 --> 00:03:38.518 approach how to tackle these issues.

NOTE Confidence: 0.717285985384615  
00:03:38.520 --> 00:03:39.972 Without the further ado.  
NOTE Confidence: 0.717285985384615  
00:03:39.972 --> 00:03:42.659 I would like to give the floor  
NOTE Confidence: 0.717285985384615  
00:03:42.659 --> 00:03:43.940 to doctor Rodano.  
NOTE Confidence: 0.717285985384615  
00:03:43.940 --> 00:03:44.706 That's Romano.  
NOTE Confidence: 0.717285985384615  
00:03:44.706 --> 00:03:45.089 Face.  
NOTE Confidence: 0.855778428181818  
00:03:50.710 --> 00:03:52.534 Well, thank you so much doctor  
NOTE Confidence: 0.855778428181818  
00:03:52.534 --> 00:03:54.510 Kai for your kind invitation.  
NOTE Confidence: 0.855778428181818  
00:03:54.510 --> 00:03:56.940 It's a absolutely a privilege and  
NOTE Confidence: 0.855778428181818  
00:03:56.940 --> 00:03:59.807 an honor for me to be in here.  
NOTE Confidence: 0.855778428181818  
00:03:59.810 --> 00:04:01.658 And I'm happy and I'm very  
NOTE Confidence: 0.855778428181818  
00:04:01.658 --> 00:04:03.240 thankful to all of you,  
NOTE Confidence: 0.855778428181818  
00:04:03.240 --> 00:04:05.886 especially Doctor Kai and Doctor Levy.  
NOTE Confidence: 0.855778428181818  
00:04:05.890 --> 00:04:09.770 Levy. So I want to just start with my dog.  
NOTE Confidence: 0.855778428181818  
00:04:09.770 --> 00:04:12.785 Probably you, most of you or many of you  
NOTE Confidence: 0.855778428181818  
00:04:12.785 --> 00:04:15.724 know more than me about all this world.  
NOTE Confidence: 0.855778428181818

00:04:15.730 --> 00:04:18.718 But I'm gonna tell you something  
NOTE Confidence: 0.855778428181818

00:04:18.718 --> 00:04:21.387 based on mainly on. Experience.  
NOTE Confidence: 0.855778428181818

00:04:21.387 --> 00:04:26.126 So let's start with my talk and.  
NOTE Confidence: 0.855778428181818

00:04:26.130 --> 00:04:30.626 OK, I don't have any conflict of interest.  
NOTE Confidence: 0.855778428181818

00:04:30.630 --> 00:04:33.750 So this talk is going to be focused  
NOTE Confidence: 0.855778428181818

00:04:33.750 --> 00:04:35.809 especially in into two parts.  
NOTE Confidence: 0.855778428181818

00:04:35.810 --> 00:04:38.540 So first one I I want to give a practical  
NOTE Confidence: 0.855778428181818

00:04:38.615 --> 00:04:40.979 overview of the types of psychological  
NOTE Confidence: 0.855778428181818

00:04:40.979 --> 00:04:43.763 samples and the ways to obtain them  
NOTE Confidence: 0.855778428181818

00:04:43.763 --> 00:04:46.423 and to manage them for biomarker analysis.  
NOTE Confidence: 0.855778428181818

00:04:46.430 --> 00:04:49.454 And the second part of the talk is  
NOTE Confidence: 0.855778428181818

00:04:49.454 --> 00:04:52.033 going to be a around the possibilities,  
NOTE Confidence: 0.855778428181818

00:04:52.033 --> 00:04:53.877 advantage and limitations of  
NOTE Confidence: 0.855778428181818

00:04:53.877 --> 00:04:56.269 psychology for all the techniques.  
NOTE Confidence: 0.855778428181818

00:04:56.270 --> 00:04:57.938 What do you use for biomarkers,  
NOTE Confidence: 0.855778428181818

00:04:57.940 --> 00:05:00.838 especially in the field of non small

NOTE Confidence: 0.855778428181818  
00:05:00.838 --> 00:05:03.142 cell lung cancer and we start,  
NOTE Confidence: 0.855778428181818  
00:05:03.142 --> 00:05:05.620 I want to invite all to you,  
NOTE Confidence: 0.855778428181818  
00:05:05.620 --> 00:05:06.900 all of you to Spain.  
NOTE Confidence: 0.855778428181818  
00:05:06.900 --> 00:05:08.496 But because we are not going  
NOTE Confidence: 0.855778428181818  
00:05:08.496 --> 00:05:09.560 to Spain right now,  
NOTE Confidence: 0.855778428181818  
00:05:09.560 --> 00:05:11.653 I will not try to show many  
NOTE Confidence: 0.855778428181818  
00:05:11.653 --> 00:05:13.240 parts of my country.  
NOTE Confidence: 0.855778428181818  
00:05:13.240 --> 00:05:15.655 It's a small country but very different.  
NOTE Confidence: 0.855778428181818  
00:05:15.660 --> 00:05:17.478 This is starting for the North,  
NOTE Confidence: 0.855778428181818  
00:05:17.480 --> 00:05:20.280 this is the north and we have many  
NOTE Confidence: 0.855778428181818  
00:05:20.280 --> 00:05:22.253 fishing villages in the Northeast  
NOTE Confidence: 0.855778428181818  
00:05:22.253 --> 00:05:24.248 region is called Cantabria and  
NOTE Confidence: 0.855778428181818  
00:05:24.248 --> 00:05:26.488 it's where the Atlantic Oceans.  
NOTE Confidence: 0.855778428181818  
00:05:26.490 --> 00:05:28.165 Entered into Spain and it's  
NOTE Confidence: 0.855778428181818  
00:05:28.165 --> 00:05:29.170 called Mark Cantabrica.  
NOTE Confidence: 0.855778428181818

00:05:29.170 --> 00:05:29.566 Cantabrica.  
NOTE Confidence: 0.855778428181818

00:05:29.566 --> 00:05:32.126 So this is a beautiful, beautiful place.  
NOTE Confidence: 0.855778428181818

00:05:32.126 --> 00:05:34.430 You are invited and explain there is a  
NOTE Confidence: 0.855778428181818

00:05:34.490 --> 00:05:36.380 lot of art and this is in the north.  
NOTE Confidence: 0.855778428181818

00:05:36.380 --> 00:05:38.312 This is Bilbao, the city of Bilbao  
NOTE Confidence: 0.855778428181818

00:05:38.312 --> 00:05:40.530 and this is the Guggenheim Museum.  
NOTE Confidence: 0.855778428181818

00:05:40.530 --> 00:05:43.415 The Guggenheim Museum is very  
NOTE Confidence: 0.855778428181818

00:05:43.415 --> 00:05:45.723 poor while known museum,  
NOTE Confidence: 0.855778428181818

00:05:45.730 --> 00:05:48.397 especially this huge doggy who is at  
NOTE Confidence: 0.855778428181818

00:05:48.397 --> 00:05:50.989 the entrance and is made of flowers.  
NOTE Confidence: 0.855778428181818

00:05:50.990 --> 00:05:54.016 The whole year is like this but I'm  
NOTE Confidence: 0.855778428181818

00:05:54.016 --> 00:05:57.000 not here to talk about Spain and the.  
NOTE Confidence: 0.855778428181818

00:05:57.000 --> 00:05:58.365 Very beautiful things that we  
NOTE Confidence: 0.855778428181818

00:05:58.365 --> 00:05:59.184 have with Spain.  
NOTE Confidence: 0.855778428181818

00:05:59.190 --> 00:06:01.800 I'm here to talk about.  
NOTE Confidence: 0.855778428181818

00:06:01.800 --> 00:06:03.258 Cytopathology and biomarkers

NOTE Confidence: 0.855778428181818  
00:06:03.258 --> 00:06:06.660 especially in the field of lung cancer,  
NOTE Confidence: 0.855778428181818  
00:06:06.660 --> 00:06:08.500 non small cell lung cancer.  
NOTE Confidence: 0.855778428181818  
00:06:08.500 --> 00:06:10.380 So and the first one,  
NOTE Confidence: 0.855778428181818  
00:06:10.380 --> 00:06:12.641 one thing that I have to share  
NOTE Confidence: 0.855778428181818  
00:06:12.641 --> 00:06:15.688 with you is that the impact of the  
NOTE Confidence: 0.855778428181818  
00:06:15.688 --> 00:06:18.181 new W WHO classifications and the  
NOTE Confidence: 0.855778428181818  
00:06:18.181 --> 00:06:20.256 advance that supposed compared to  
NOTE Confidence: 0.855778428181818  
00:06:20.256 --> 00:06:24.056 the old one that is dating from 2015.  
NOTE Confidence: 0.855778428181818  
00:06:24.056 --> 00:06:28.520 So basically the new admin say new things,  
NOTE Confidence: 0.855778428181818  
00:06:28.520 --> 00:06:30.584 some of them are not very new because  
NOTE Confidence: 0.855778428181818  
00:06:30.584 --> 00:06:32.318 the first thing they authorize.  
NOTE Confidence: 0.855778428181818  
00:06:32.320 --> 00:06:35.308 This is this one morphology first  
NOTE Confidence: 0.855778428181818  
00:06:35.308 --> 00:06:37.300 remember morphology first supported  
NOTE Confidence: 0.855778428181818  
00:06:37.376 --> 00:06:39.110 by immunohistochemistry,  
NOTE Confidence: 0.855778428181818  
00:06:39.110 --> 00:06:41.448 and then and then in this order,  
NOTE Confidence: 0.855778428181818

00:06:41.450 --> 00:06:42.338 molecular studies.  
NOTE Confidence: 0.855778428181818

00:06:42.338 --> 00:06:44.558 In the new classification the  
NOTE Confidence: 0.855778428181818

00:06:44.558 --> 00:06:46.630 there is an emphasis,  
NOTE Confidence: 0.855778428181818

00:06:46.630 --> 00:06:49.246 a great emphasis on genetic testing,  
NOTE Confidence: 0.855778428181818

00:06:49.250 --> 00:06:51.250 and it's a section entirely  
NOTE Confidence: 0.855778428181818

00:06:51.250 --> 00:06:52.850 dedicated to the classification  
NOTE Confidence: 0.855778428181818

00:06:52.850 --> 00:06:54.930 of small diagnostic samples.  
NOTE Confidence: 0.855778428181818

00:06:54.930 --> 00:06:56.379 This is important.  
NOTE Confidence: 0.855778428181818

00:06:56.379 --> 00:06:59.760 There are more new things that are  
NOTE Confidence: 0.855778428181818

00:06:59.853 --> 00:07:01.912 mainly dedicated to surgical pathology.  
NOTE Confidence: 0.855778428181818

00:07:01.912 --> 00:07:04.823 But one important thing to me is that  
NOTE Confidence: 0.855778428181818

00:07:04.823 --> 00:07:07.119 and we saw this morning in the seminar,  
NOTE Confidence: 0.635401610909091

00:07:07.120 --> 00:07:09.940 there is a recognition of a  
NOTE Confidence: 0.635401610909091

00:07:09.940 --> 00:07:12.590 smart C for deficient tumors,  
NOTE Confidence: 0.635401610909091

00:07:12.590 --> 00:07:15.698 thoracic deficient tumors as a new entity.  
NOTE Confidence: 0.635401610909091

00:07:15.700 --> 00:07:18.521 So we have to think always that

NOTE Confidence: 0.635401610909091  
00:07:18.521 --> 00:07:20.197 cytopathology and surgical pathology  
NOTE Confidence: 0.635401610909091  
00:07:20.197 --> 00:07:22.579 are going always hand by hand.  
NOTE Confidence: 0.635401610909091  
00:07:22.580 --> 00:07:24.400 We cannot, you know,  
NOTE Confidence: 0.635401610909091  
00:07:24.400 --> 00:07:26.675 forget surgical and do only.  
NOTE Confidence: 0.635401610909091  
00:07:26.680 --> 00:07:29.794 Mythology so we we worked together  
NOTE Confidence: 0.635401610909091  
00:07:29.794 --> 00:07:31.870 and we enriched together.  
NOTE Confidence: 0.635401610909091  
00:07:31.870 --> 00:07:35.326 So this is the the script of my job.  
NOTE Confidence: 0.635401610909091  
00:07:35.330 --> 00:07:37.540 First, what is a biomarker?  
NOTE Confidence: 0.635401610909091  
00:07:37.540 --> 00:07:39.871 Then I'm going to talk just briefly  
NOTE Confidence: 0.635401610909091  
00:07:39.871 --> 00:07:42.563 about the rationale for the need of  
NOTE Confidence: 0.635401610909091  
00:07:42.563 --> 00:07:44.195 biomarkers using ancillary techniques,  
NOTE Confidence: 0.635401610909091  
00:07:44.200 --> 00:07:44.846 of course.  
NOTE Confidence: 0.635401610909091  
00:07:44.846 --> 00:07:46.784 Then I'm going to talk about  
NOTE Confidence: 0.635401610909091  
00:07:46.784 --> 00:07:48.893 the rationale for the use of  
NOTE Confidence: 0.635401610909091  
00:07:48.893 --> 00:07:50.521 psychological markers for symbols.  
NOTE Confidence: 0.635401610909091

00:07:50.521 --> 00:07:54.007 Sorry for biomarker testing and then.  
NOTE Confidence: 0.635401610909091

00:07:54.010 --> 00:07:57.826 And move to the future related  
NOTE Confidence: 0.635401610909091

00:07:57.826 --> 00:07:58.840 with the samples,  
NOTE Confidence: 0.635401610909091

00:07:58.840 --> 00:08:00.196 the pre analytics,  
NOTE Confidence: 0.635401610909091

00:08:00.196 --> 00:08:02.004 the processing techniques advantages  
NOTE Confidence: 0.635401610909091

00:08:02.004 --> 00:08:03.969 and limitation of different  
NOTE Confidence: 0.635401610909091

00:08:03.969 --> 00:08:06.149 samples from different techniques.  
NOTE Confidence: 0.635401610909091

00:08:06.150 --> 00:08:08.845 So let's start from the beginning and  
NOTE Confidence: 0.635401610909091

00:08:08.845 --> 00:08:11.485 what happened with biomarkers in the  
NOTE Confidence: 0.635401610909091

00:08:11.485 --> 00:08:13.845 field of pathology and cytopathology.  
NOTE Confidence: 0.635401610909091

00:08:13.850 --> 00:08:16.925 Of course even the biomarkers  
NOTE Confidence: 0.635401610909091

00:08:16.925 --> 00:08:18.770 have many functions.  
NOTE Confidence: 0.635401610909091

00:08:18.770 --> 00:08:21.710 I would say we are more focused  
NOTE Confidence: 0.635401610909091

00:08:21.710 --> 00:08:24.023 into into into advantage.  
NOTE Confidence: 0.635401610909091

00:08:24.023 --> 00:08:24.654 Biomarkers,  
NOTE Confidence: 0.635401610909091

00:08:24.654 --> 00:08:28.440 one is directly related with the

NOTE Confidence: 0.635401610909091  
00:08:28.544 --> 00:08:30.836 diagnosis with biomarkers can  
NOTE Confidence: 0.635401610909091  
00:08:30.836 --> 00:08:34.274 help us to define the subtype  
NOTE Confidence: 0.635401610909091  
00:08:34.374 --> 00:08:38.334 of lung cancer so we can give a  
NOTE Confidence: 0.635401610909091  
00:08:38.334 --> 00:08:40.410 confident diagnosis using specific  
NOTE Confidence: 0.635401610909091  
00:08:40.410 --> 00:08:42.570 biomarkers and another biomarkers  
NOTE Confidence: 0.635401610909091  
00:08:42.570 --> 00:08:45.822 are predictive if this is important  
NOTE Confidence: 0.635401610909091  
00:08:45.822 --> 00:08:49.320 because they inform us and the  
NOTE Confidence: 0.635401610909091  
00:08:49.320 --> 00:08:51.712 oncologist about the treatment  
NOTE Confidence: 0.635401610909091  
00:08:51.712 --> 00:08:54.940 for this particular patient.  
NOTE Confidence: 0.635401610909091  
00:08:54.940 --> 00:08:57.677 Quickly the rationale for the need of  
NOTE Confidence: 0.635401610909091  
00:08:57.677 --> 00:08:59.240 biomarkers using ancillary Chinese  
NOTE Confidence: 0.635401610909091  
00:08:59.240 --> 00:09:00.860 what is why biomarkers because  
NOTE Confidence: 0.635401610909091  
00:09:00.860 --> 00:09:03.468 we live in the in the world of  
NOTE Confidence: 0.635401610909091  
00:09:03.468 --> 00:09:05.340 personalized medicine and if you go  
NOTE Confidence: 0.635401610909091  
00:09:05.340 --> 00:09:08.434 to the FDA definition the FDA says  
NOTE Confidence: 0.635401610909091

00:09:08.434 --> 00:09:10.794 precision medicine is providing the  
NOTE Confidence: 0.635401610909091

00:09:10.794 --> 00:09:13.638 right treatment at the right time,  
NOTE Confidence: 0.635401610909091

00:09:13.640 --> 00:09:15.860 every time to the right patient.  
NOTE Confidence: 0.635401610909091

00:09:15.860 --> 00:09:18.135 But I think they forgot one important,  
NOTE Confidence: 0.635401610909091

00:09:18.140 --> 00:09:20.215 very very important aspect is  
NOTE Confidence: 0.635401610909091

00:09:20.215 --> 00:09:21.875 precision medicine is providing  
NOTE Confidence: 0.635401610909091

00:09:21.875 --> 00:09:23.889 the right diagnosis to make.  
NOTE Confidence: 0.635401610909091

00:09:23.890 --> 00:09:26.501 Possible the rest of the sentence, right?  
NOTE Confidence: 0.635401610909091

00:09:26.501 --> 00:09:29.147 Because with the right diagnosis we  
NOTE Confidence: 0.635401610909091

00:09:29.147 --> 00:09:32.621 what we do is an accurate diagnosis  
NOTE Confidence: 0.635401610909091

00:09:32.621 --> 00:09:35.717 that allows for a specific treatment.  
NOTE Confidence: 0.635401610909091

00:09:35.720 --> 00:09:37.988 So at the end it would benefit the patient,  
NOTE Confidence: 0.635401610909091

00:09:37.990 --> 00:09:41.130 which is our main goal.  
NOTE Confidence: 0.635401610909091

00:09:41.130 --> 00:09:43.758 I want to represent this in  
NOTE Confidence: 0.635401610909091

00:09:43.758 --> 00:09:45.510 this in this slide.  
NOTE Confidence: 0.635401610909091

00:09:45.510 --> 00:09:49.675 In fairly all these patients with yellow.

NOTE Confidence: 0.635401610909091  
00:09:49.680 --> 00:09:52.004 A few years I have the same  
NOTE Confidence: 0.635401610909091  
00:09:52.004 --> 00:09:54.278 diagnosis at the same stage non  
NOTE Confidence: 0.635401610909091  
00:09:54.278 --> 00:09:56.278 small cell lung cancer stage  
NOTE Confidence: 0.635401610909091  
00:09:56.278 --> 00:09:58.739 four same disease more or less.  
NOTE Confidence: 0.635401610909091  
00:09:58.740 --> 00:10:02.450 But if you see this red mark patients  
NOTE Confidence: 0.635401610909091  
00:10:02.450 --> 00:10:05.775 this is a 61 male smokers squamous  
NOTE Confidence: 0.635401610909091  
00:10:05.775 --> 00:10:08.579 with a curious mutations male,  
NOTE Confidence: 0.635401610909091  
00:10:08.580 --> 00:10:10.608 54 non-smoker adenocarcinoma,  
NOTE Confidence: 0.635401610909091  
00:10:10.608 --> 00:10:11.960 ALK translocation,  
NOTE Confidence: 0.635401610909091  
00:10:11.960 --> 00:10:14.030 female non-smoker adenocarcinoma,  
NOTE Confidence: 0.635401610909091  
00:10:14.030 --> 00:10:16.100 Egypt permutation etcetera.  
NOTE Confidence: 0.635401610909091  
00:10:16.100 --> 00:10:19.565 So we all agree pathologists are oncologists.  
NOTE Confidence: 0.635401610909091  
00:10:19.570 --> 00:10:20.352 These people,  
NOTE Confidence: 0.635401610909091  
00:10:20.352 --> 00:10:22.307 these patients have a different  
NOTE Confidence: 0.635401610909091  
00:10:22.307 --> 00:10:24.468 tumors and then they have to  
NOTE Confidence: 0.635401610909091

00:10:24.468 --> 00:10:26.304 be treated in a different way.  
NOTE Confidence: 0.635401610909091

00:10:26.310 --> 00:10:30.615 So that's their representation of the A  
NOTE Confidence: 0.635401610909091

00:10:30.615 --> 00:10:34.780 targeted medicine and personalized medicine.  
NOTE Confidence: 0.635401610909091

00:10:34.780 --> 00:10:37.468 Third Point of my dog is the rationale  
NOTE Confidence: 0.635401610909091

00:10:37.468 --> 00:10:39.810 for the use of psychological  
NOTE Confidence: 0.635401610909091

00:10:39.810 --> 00:10:41.938 samples for biomarker testing.  
NOTE Confidence: 0.635401610909091

00:10:41.940 --> 00:10:43.100 And what is the rationale?  
NOTE Confidence: 0.635401610909091

00:10:43.100 --> 00:10:45.428 The rationale is easy to understand  
NOTE Confidence: 0.635401610909091

00:10:45.428 --> 00:10:46.980 especially in advanced stages.  
NOTE Confidence: 0.635401610909091

00:10:46.980 --> 00:10:49.500 It what is the role of psychology  
NOTE Confidence: 0.635401610909091

00:10:49.500 --> 00:10:50.580 and precision medicine.  
NOTE Confidence: 0.635401610909091

00:10:50.580 --> 00:10:54.162 First is the the the less  
NOTE Confidence: 0.635401610909091

00:10:54.162 --> 00:10:56.550 invasive invasive method for  
NOTE Confidence: 0.786906016153846

00:10:56.668 --> 00:11:00.670 for getting tumor. Many times.  
NOTE Confidence: 0.786906016153846

00:11:00.670 --> 00:11:03.568 In some cases it's the only method  
NOTE Confidence: 0.786906016153846

00:11:03.570 --> 00:11:06.048 to get tumor for example pancreas,

NOTE Confidence: 0.786906016153846  
00:11:06.050 --> 00:11:09.296 advanced lung tumors or thyroid or  
NOTE Confidence: 0.786906016153846  
00:11:09.296 --> 00:11:12.517 other locations importantly in no need  
NOTE Confidence: 0.786906016153846  
00:11:12.517 --> 00:11:15.415 for the calcification where the tumor  
NOTE Confidence: 0.786906016153846  
00:11:15.415 --> 00:11:18.470 is diagnosed through bone metastasis.  
NOTE Confidence: 0.786906016153846  
00:11:18.470 --> 00:11:21.844 You know that in the the calcification  
NOTE Confidence: 0.786906016153846  
00:11:21.844 --> 00:11:24.682 procedures damage the tissue and some  
NOTE Confidence: 0.786906016153846  
00:11:24.682 --> 00:11:28.020 immunos etcetera don't work and if you if  
NOTE Confidence: 0.786906016153846  
00:11:28.020 --> 00:11:30.907 if we do a good finding the last spiration.  
NOTE Confidence: 0.786906016153846  
00:11:30.910 --> 00:11:32.938 We can get a pure population,  
NOTE Confidence: 0.786906016153846  
00:11:32.940 --> 00:11:35.470 more or less pure population  
NOTE Confidence: 0.786906016153846  
00:11:35.470 --> 00:11:36.988 of neoplastic cells.  
NOTE Confidence: 0.786906016153846  
00:11:36.990 --> 00:11:40.030 And this is the scenario we face everyday,  
NOTE Confidence: 0.786906016153846  
00:11:40.030 --> 00:11:40.964 everyday, everywhere.  
NOTE Confidence: 0.786906016153846  
00:11:40.964 --> 00:11:44.233 Now there are some challenges in the  
NOTE Confidence: 0.786906016153846  
00:11:44.233 --> 00:11:46.427 diagnosis of non Marcel and cancer  
NOTE Confidence: 0.786906016153846

00:11:46.427 --> 00:11:48.630 and also other types of cancer.  
NOTE Confidence: 0.786906016153846

00:11:48.630 --> 00:11:50.898 There is a they they are there is a  
NOTE Confidence: 0.786906016153846

00:11:50.898 --> 00:11:53.532 demand of for comprehensive and complex  
NOTE Confidence: 0.786906016153846

00:11:53.532 --> 00:11:55.847 diagnosis using minimal invasive procedures.  
NOTE Confidence: 0.786906016153846

00:11:55.850 --> 00:11:57.710 We live with that every day.  
NOTE Confidence: 0.786906016153846

00:11:57.710 --> 00:12:00.090 We live in the world of personalized  
NOTE Confidence: 0.786906016153846

00:12:00.090 --> 00:12:02.350 therapies and we have to integrate  
NOTE Confidence: 0.786906016153846

00:12:02.350 --> 00:12:04.305 biomarkers in in the clinical  
NOTE Confidence: 0.786906016153846

00:12:04.305 --> 00:12:06.264 management of the Council patient  
NOTE Confidence: 0.786906016153846

00:12:06.264 --> 00:12:08.109 not only in the diagnosis.  
NOTE Confidence: 0.786906016153846

00:12:08.110 --> 00:12:11.358 But also in the clinical management during  
NOTE Confidence: 0.786906016153846

00:12:11.358 --> 00:12:15.865 the whole disease and so far is is too bad.  
NOTE Confidence: 0.786906016153846

00:12:15.870 --> 00:12:19.056 But so far many more than 50% of non  
NOTE Confidence: 0.786906016153846

00:12:19.056 --> 00:12:21.037 small cell lung cancer patient came to  
NOTE Confidence: 0.786906016153846

00:12:21.037 --> 00:12:23.228 the hospital with advanced diseases.  
NOTE Confidence: 0.786906016153846

00:12:23.230 --> 00:12:26.030 So in these patients we only have

NOTE Confidence: 0.786906016153846  
00:12:26.030 --> 00:12:28.614 psychological or or small biopsy for  
NOTE Confidence: 0.786906016153846  
00:12:28.614 --> 00:12:30.770 making the diagnosis are all the  
NOTE Confidence: 0.786906016153846  
00:12:30.770 --> 00:12:32.960 biomarker analysis at the same times  
NOTE Confidence: 0.786906016153846  
00:12:32.960 --> 00:12:34.985 fortunately there is a development  
NOTE Confidence: 0.786906016153846  
00:12:34.985 --> 00:12:36.920 of imaging techniques and new.  
NOTE Confidence: 0.786906016153846  
00:12:36.920 --> 00:12:39.860 Details and excited at that allows for  
NOTE Confidence: 0.786906016153846  
00:12:39.860 --> 00:12:42.878 not invasive approach but we get the  
NOTE Confidence: 0.786906016153846  
00:12:42.878 --> 00:12:44.978 same type of material psychological  
NOTE Confidence: 0.786906016153846  
00:12:44.978 --> 00:12:47.506 materials and are small small biopsies.  
NOTE Confidence: 0.786906016153846  
00:12:47.510 --> 00:12:49.374 So if I need aspiration at the end  
NOTE Confidence: 0.786906016153846  
00:12:49.374 --> 00:12:51.291 and if I need an aspiration biopsy  
NOTE Confidence: 0.786906016153846  
00:12:51.291 --> 00:12:53.667 are in the first line in the diagnosis  
NOTE Confidence: 0.786906016153846  
00:12:53.667 --> 00:12:55.509 and in the management of patient  
NOTE Confidence: 0.786906016153846  
00:12:55.509 --> 00:12:58.560 with non small cell lung cancer.  
NOTE Confidence: 0.786906016153846  
00:12:58.560 --> 00:13:00.905 And remember neoadjuvant therapy is  
NOTE Confidence: 0.786906016153846

00:13:00.905 --> 00:13:04.159 coming and it's really coming so when  
NOTE Confidence: 0.786906016153846

00:13:04.159 --> 00:13:07.078 adjuvant therapy non small cell lung cancer.  
NOTE Confidence: 0.786906016153846

00:13:07.080 --> 00:13:09.640 Grayson is a reality is gonna be soon.  
NOTE Confidence: 0.786906016153846

00:13:09.640 --> 00:13:11.705 We will need to to deal with  
NOTE Confidence: 0.786906016153846

00:13:11.705 --> 00:13:14.108 more type of these small samples,  
NOTE Confidence: 0.786906016153846

00:13:14.110 --> 00:13:14.626 biopsies,  
NOTE Confidence: 0.786906016153846

00:13:14.626 --> 00:13:17.206 final respiration etcetera to study  
NOTE Confidence: 0.786906016153846

00:13:17.206 --> 00:13:21.032 the tumor and then to the native ANSI  
NOTE Confidence: 0.786906016153846

00:13:21.032 --> 00:13:24.280 and etcetera like in pancreas for example.  
NOTE Confidence: 0.786906016153846

00:13:24.280 --> 00:13:27.269 There are many papers in the literature  
NOTE Confidence: 0.786906016153846

00:13:27.269 --> 00:13:29.708 that prove that these biomarkers  
NOTE Confidence: 0.786906016153846

00:13:29.708 --> 00:13:32.720 can be tested successfully in small  
NOTE Confidence: 0.786906016153846

00:13:32.807 --> 00:13:35.837 biopsies and in psychological samples.  
NOTE Confidence: 0.786906016153846

00:13:35.840 --> 00:13:36.900 These are three I love.  
NOTE Confidence: 0.786906016153846

00:13:36.900 --> 00:13:38.916 This paper published in New England  
NOTE Confidence: 0.786906016153846

00:13:38.916 --> 00:13:41.090 Journal of Medicine in 2017 is

NOTE Confidence: 0.786906016153846  
00:13:41.090 --> 00:13:41.920 very informative,  
NOTE Confidence: 0.786906016153846  
00:13:41.920 --> 00:13:43.995 especially for for young people,  
NOTE Confidence: 0.786906016153846  
00:13:44.000 --> 00:13:45.494 very very clear.  
NOTE Confidence: 0.786906016153846  
00:13:45.494 --> 00:13:48.482 And these are other other studies  
NOTE Confidence: 0.786906016153846  
00:13:48.482 --> 00:13:51.387 that said that biomarkers can be  
NOTE Confidence: 0.786906016153846  
00:13:51.387 --> 00:13:55.059 applied to this type of small samples.  
NOTE Confidence: 0.786906016153846  
00:13:55.060 --> 00:13:56.584 Also in 2018,  
NOTE Confidence: 0.786906016153846  
00:13:56.584 --> 00:13:59.632 the guidelines change the the big  
NOTE Confidence: 0.786906016153846  
00:13:59.632 --> 00:14:02.780 groups of pathology from the United  
NOTE Confidence: 0.786906016153846  
00:14:02.780 --> 00:14:06.456 States and very quick the the the  
NOTE Confidence: 0.786906016153846  
00:14:06.456 --> 00:14:09.046 Society of Medical Oncology join  
NOTE Confidence: 0.786906016153846  
00:14:09.046 --> 00:14:11.434 and agree with the pathologist  
NOTE Confidence: 0.786906016153846  
00:14:11.434 --> 00:14:14.774 in the sense that before in 2013  
NOTE Confidence: 0.786906016153846  
00:14:14.774 --> 00:14:18.110 only cellblock was considered.  
NOTE Confidence: 0.786906016153846  
00:14:18.110 --> 00:14:20.948 An option for biomarkers using in  
NOTE Confidence: 0.786906016153846

00:14:20.948 --> 00:14:23.610 in psychology or small samples.  
NOTE Confidence: 0.786906016153846

00:14:23.610 --> 00:14:25.790 But now since 2018 pathologist  
NOTE Confidence: 0.786906016153846

00:14:25.790 --> 00:14:28.641 says that either cellblock or other  
NOTE Confidence: 0.786906016153846

00:14:28.641 --> 00:14:30.997 psychological preparation are suitable  
NOTE Confidence: 0.786906016153846

00:14:30.997 --> 00:14:33.942 specimens for lung cancer biomarkers  
NOTE Confidence: 0.834741372

00:14:34.022 --> 00:14:36.158 molecular testing and if you look  
NOTE Confidence: 0.834741372

00:14:36.158 --> 00:14:38.626 at the what the oncology community  
NOTE Confidence: 0.834741372

00:14:38.626 --> 00:14:41.216 says they say pathologists may  
NOTE Confidence: 0.834741372

00:14:41.216 --> 00:14:44.129 use either cell block or smears.  
NOTE Confidence: 0.834741372

00:14:44.130 --> 00:14:47.007 They forgot all kind of other preparation,  
NOTE Confidence: 0.834741372

00:14:47.010 --> 00:14:48.550 but I agree with that.  
NOTE Confidence: 0.834741372

00:14:48.550 --> 00:14:49.522 Because he's there.  
NOTE Confidence: 0.834741372

00:14:49.522 --> 00:14:52.180 The cell block and smears is the more  
NOTE Confidence: 0.834741372

00:14:52.180 --> 00:14:54.469 common sample we deal with every day.  
NOTE Confidence: 0.834741372

00:14:54.470 --> 00:14:57.310 So the question is that the the that  
NOTE Confidence: 0.834741372

00:14:57.310 --> 00:14:59.665 any sample with adequate cellularity

NOTE Confidence: 0.834741372

00:14:59.665 --> 00:15:02.265 and preservation may be best,

NOTE Confidence: 0.834741372

00:15:02.270 --> 00:15:06.790 and this is a huge agreement about that.

NOTE Confidence: 0.834741372

00:15:06.790 --> 00:15:08.764 But what is true is that is,

NOTE Confidence: 0.834741372

00:15:08.770 --> 00:15:10.922 is it at this I feel like this

NOTE Confidence: 0.834741372

00:15:10.922 --> 00:15:12.903 probably you you feel the same

NOTE Confidence: 0.834741372

00:15:12.903 --> 00:15:14.623 that I feeling that cytopathology

NOTE Confidence: 0.834741372

00:15:14.623 --> 00:15:16.593 and land cytopathology especially

NOTE Confidence: 0.834741372

00:15:16.593 --> 00:15:18.669 is in continuous revolution.

NOTE Confidence: 0.834741372

00:15:18.670 --> 00:15:21.106 There is the need of implementation

NOTE Confidence: 0.834741372

00:15:21.106 --> 00:15:22.730 of new diagnostic tests.

NOTE Confidence: 0.834741372

00:15:22.730 --> 00:15:24.010 We face new challenge,

NOTE Confidence: 0.834741372

00:15:24.010 --> 00:15:26.825 there are new tools in the market around

NOTE Confidence: 0.834741372

00:15:26.825 --> 00:15:29.297 a new elements of necessary incorporation

NOTE Confidence: 0.834741372

00:15:29.297 --> 00:15:32.148 and all this is happened very quickly.

NOTE Confidence: 0.834741372

00:15:32.150 --> 00:15:34.460 So probably as in this

NOTE Confidence: 0.834741372

00:15:34.460 --> 00:15:36.191 paper published in 2018.  
NOTE Confidence: 0.834741372

00:15:36.191 --> 00:15:38.237 And they say that probably time  
NOTE Confidence: 0.834741372

00:15:38.237 --> 00:15:40.970 for a next generation pathologist.  
NOTE Confidence: 0.834741372

00:15:40.970 --> 00:15:42.848 I think we have the next  
NOTE Confidence: 0.834741372

00:15:42.848 --> 00:15:43.787 generation pathologist here.  
NOTE Confidence: 0.834741372

00:15:43.790 --> 00:15:48.238 So it's our duty to try to to  
NOTE Confidence: 0.834741372

00:15:48.238 --> 00:15:50.830 encourage them because yes,  
NOTE Confidence: 0.834741372

00:15:50.830 --> 00:15:51.183 it's,  
NOTE Confidence: 0.834741372

00:15:51.183 --> 00:15:53.301 it's pathology has changed for for  
NOTE Confidence: 0.834741372

00:15:53.301 --> 00:15:55.457 those who yeah who are a little  
NOTE Confidence: 0.834741372

00:15:55.457 --> 00:15:57.422 bit older not all but a little  
NOTE Confidence: 0.834741372

00:15:57.422 --> 00:15:59.570 bit pathology has changed a lot.  
NOTE Confidence: 0.834741372

00:15:59.570 --> 00:16:01.811 So we have to be ready for all the  
NOTE Confidence: 0.834741372

00:16:01.811 --> 00:16:05.340 changes and to to adapt very, very quickly.  
NOTE Confidence: 0.834741372

00:16:05.340 --> 00:16:07.500 So it's important subtyping  
NOTE Confidence: 0.834741372

00:16:07.500 --> 00:16:10.200 non small cell lung cancer.

NOTE Confidence: 0.834741372  
00:16:10.200 --> 00:16:10.574 Yes,  
NOTE Confidence: 0.834741372  
00:16:10.574 --> 00:16:13.192 the new Double H WHO classification said  
NOTE Confidence: 0.834741372  
00:16:13.192 --> 00:16:16.520 that we need to subtype nurse Marcel and  
NOTE Confidence: 0.834741372  
00:16:16.520 --> 00:16:19.319 cancer regardless the type of the samples.  
NOTE Confidence: 0.834741372  
00:16:19.320 --> 00:16:20.101 Why?  
NOTE Confidence: 0.834741372  
00:16:20.101 --> 00:16:24.006 Because regardless this subtyping the  
NOTE Confidence: 0.834741372  
00:16:24.006 --> 00:16:27.928 oncologist without any biomarker oncologist  
NOTE Confidence: 0.834741372  
00:16:27.928 --> 00:16:31.606 would give a different usual chemotherapy,  
NOTE Confidence: 0.834741372  
00:16:31.606 --> 00:16:32.532 so squamous.  
NOTE Confidence: 0.834741372  
00:16:32.532 --> 00:16:34.847 A tumor with the scammers  
NOTE Confidence: 0.834741372  
00:16:34.847 --> 00:16:37.175 features will receive a different  
NOTE Confidence: 0.834741372  
00:16:37.175 --> 00:16:39.420 chemotherapy that that tumors that  
NOTE Confidence: 0.834741372  
00:16:39.420 --> 00:16:41.528 don't have squamous features.  
NOTE Confidence: 0.834741372  
00:16:41.530 --> 00:16:42.790 So this is very important.  
NOTE Confidence: 0.834741372  
00:16:42.790 --> 00:16:44.530 So at the end morphology  
NOTE Confidence: 0.834741372

00:16:44.530 --> 00:16:45.922 is the first biomarker.  
NOTE Confidence: 0.834741372

00:16:45.930 --> 00:16:48.051 We cannot forget this because in the  
NOTE Confidence: 0.834741372

00:16:48.051 --> 00:16:50.483 world of NGS and all these fancy  
NOTE Confidence: 0.834741372

00:16:50.483 --> 00:16:52.673 techniques we can forgot and morphology  
NOTE Confidence: 0.834741372

00:16:52.735 --> 00:16:55.033 still is the first biomarker it's  
NOTE Confidence: 0.834741372

00:16:55.033 --> 00:16:57.452 important for especially for young people.  
NOTE Confidence: 0.834741372

00:16:57.452 --> 00:17:00.098 But not always is is easy.  
NOTE Confidence: 0.834741372

00:17:00.100 --> 00:17:03.537 We saw many cases this morning because  
NOTE Confidence: 0.834741372

00:17:03.537 --> 00:17:08.360 who is able to subtype these three cases?  
NOTE Confidence: 0.834741372

00:17:08.360 --> 00:17:09.250 It's impossible,  
NOTE Confidence: 0.834741372

00:17:09.250 --> 00:17:10.140 almost impossible.  
NOTE Confidence: 0.834741372

00:17:10.140 --> 00:17:12.810 So the recommendation of the big  
NOTE Confidence: 0.834741372

00:17:12.883 --> 00:17:15.007 societies is to reduce the diagnosis  
NOTE Confidence: 0.834741372

00:17:15.007 --> 00:17:18.093 of non small cell lung cancer and OS to  
NOTE Confidence: 0.834741372

00:17:18.093 --> 00:17:20.488 the low level possible less than 10%.  
NOTE Confidence: 0.834741372

00:17:20.488 --> 00:17:23.640 So we need help and we need and

NOTE Confidence: 0.834741372

00:17:23.737 --> 00:17:26.614 we need help and we need help.

NOTE Confidence: 0.834741372

00:17:26.620 --> 00:17:28.240 It is very, very well.

NOTE Confidence: 0.834741372

00:17:28.240 --> 00:17:30.772 Explain I think I love this

NOTE Confidence: 0.834741372

00:17:30.772 --> 00:17:32.038 paper is published.

NOTE Confidence: 0.834741372

00:17:32.040 --> 00:17:37.260 And some months ago in June 2020.

NOTE Confidence: 0.834741372

00:17:37.260 --> 00:17:39.540 It's a it's a working group.

NOTE Confidence: 0.834741372

00:17:39.540 --> 00:17:41.886 It's a survey that you 2

NOTE Confidence: 0.834741372

00:17:41.886 --> 00:17:43.450 dinner determine specific sites

NOTE Confidence: 0.834741372

00:17:43.523 --> 00:17:45.338 for motorcycle morphology.

NOTE Confidence: 0.834741372

00:17:45.340 --> 00:17:47.920 Sorry criteria for site type,

NOTE Confidence: 0.834741372

00:17:47.920 --> 00:17:50.979 nonsocial and concept into adeno or squamous.

NOTE Confidence: 0.834741372

00:17:50.980 --> 00:17:55.130 This paper they they involves

NOTE Confidence: 0.834741372

00:17:55.130 --> 00:17:57.710 313 experts cytopathologist and

NOTE Confidence: 0.834741372

00:17:57.710 --> 00:18:00.290 they should satisfy 1.

NOTE Confidence: 0.8415642533333333

00:18:02.800 --> 00:18:05.740 119 non small cell lung cancer.

NOTE Confidence: 0.8415642533333333

00:18:05.740 --> 00:18:09.478 This expert group of pathology selected  
NOTE Confidence: 0.8415642533333333

00:18:09.480 --> 00:18:12.380 23 predefined cycle morphological feature  
NOTE Confidence: 0.8415642533333333

00:18:12.380 --> 00:18:16.475 to classify and then data were analyzed  
NOTE Confidence: 0.8415642533333333

00:18:16.475 --> 00:18:18.691 using machine learning algorithms  
NOTE Confidence: 0.8415642533333333

00:18:18.691 --> 00:18:22.899 develop so to to see what is happening.  
NOTE Confidence: 0.8415642533333333

00:18:22.900 --> 00:18:26.736 OK the results are here the concordant  
NOTE Confidence: 0.8415642533333333

00:18:26.740 --> 00:18:32.270 cytology results or succeed in close to 54%.  
NOTE Confidence: 0.8415642533333333

00:18:32.270 --> 00:18:34.160 Of the cases.  
NOTE Confidence: 0.8415642533333333

00:18:34.160 --> 00:18:37.030 Misclassification rates were higher in  
NOTE Confidence: 0.8415642533333333

00:18:37.030 --> 00:18:40.616 lung squamous cell carcinoma and the  
NOTE Confidence: 0.8415642533333333

00:18:40.616 --> 00:18:43.140 important point was keratinization.  
NOTE Confidence: 0.8415642533333333

00:18:43.140 --> 00:18:45.268 Keratinization when when present  
NOTE Confidence: 0.8415642533333333

00:18:45.268 --> 00:18:47.396 recognized squamous cell carcinoma.  
NOTE Confidence: 0.8415642533333333

00:18:47.400 --> 00:18:50.718 Very easy. Everybody agrees with that.  
NOTE Confidence: 0.8415642533333333

00:18:50.720 --> 00:18:54.280 But in absence of Keratinization,  
NOTE Confidence: 0.8415642533333333

00:18:54.280 --> 00:18:56.284 the machine learning algorithms

NOTE Confidence: 0.8415642533333333  
00:18:56.284 --> 00:18:59.290 developed on the basis of expert  
NOTE Confidence: 0.8415642533333333  
00:18:59.368 --> 00:19:01.833 choices were unable to reduce  
NOTE Confidence: 0.8415642533333333  
00:19:01.833 --> 00:19:04.298 psychology and a waste diagnosis.  
NOTE Confidence: 0.8415642533333333  
00:19:04.300 --> 00:19:06.328 Rate without increasing  
NOTE Confidence: 0.8415642533333333  
00:19:06.328 --> 00:19:07.680 misclassification rates.  
NOTE Confidence: 0.8415642533333333  
00:19:07.680 --> 00:19:11.090 So what I mean what I wanna say that in  
NOTE Confidence: 0.8415642533333333  
00:19:11.181 --> 00:19:14.416 the world of artificial intelligence,  
NOTE Confidence: 0.8415642533333333  
00:19:14.420 --> 00:19:16.880 please don't forget human intelligence,  
NOTE Confidence: 0.8415642533333333  
00:19:16.880 --> 00:19:18.416 human intelligence and  
NOTE Confidence: 0.8415642533333333  
00:19:18.416 --> 00:19:19.440 artificial intelligence,  
NOTE Confidence: 0.8415642533333333  
00:19:19.440 --> 00:19:22.648 how to go hand by hand because one  
NOTE Confidence: 0.8415642533333333  
00:19:22.648 --> 00:19:25.497 benefit from the other and the other  
NOTE Confidence: 0.8415642533333333  
00:19:25.500 --> 00:19:28.398 benefit for from the from from what?  
NOTE Confidence: 0.8415642533333333  
00:19:28.400 --> 00:19:30.096 So that's very important.  
NOTE Confidence: 0.8415642533333333  
00:19:30.096 --> 00:19:32.216 So the conclusion of this,  
NOTE Confidence: 0.8415642533333333

00:19:32.220 --> 00:19:34.370 of this study is that.  
NOTE Confidence: 0.8415642533333333

00:19:34.370 --> 00:19:37.571 It says suboptimal recognition as cell  
NOTE Confidence: 0.8415642533333333

00:19:37.571 --> 00:19:40.026 carcinoma in absence of keratinization.  
NOTE Confidence: 0.8415642533333333

00:19:40.030 --> 00:19:42.200 So we need help at the first.  
NOTE Confidence: 0.8415642533333333

00:19:42.200 --> 00:19:45.830 Help we need is the immunohistochemistry  
NOTE Confidence: 0.8415642533333333

00:19:45.830 --> 00:19:47.906 immunocytochemistry in pathology.  
NOTE Confidence: 0.8415642533333333

00:19:47.906 --> 00:19:50.919 Especially in pathology banning all  
NOTE Confidence: 0.8415642533333333

00:19:50.919 --> 00:19:54.177 cancer first is used for diagnosis  
NOTE Confidence: 0.8415642533333333

00:19:54.177 --> 00:19:57.684 in case of non small cell lung  
NOTE Confidence: 0.8415642533333333

00:19:57.684 --> 00:20:00.250 cancer to subtyping this tumor.  
NOTE Confidence: 0.8415642533333333

00:20:00.250 --> 00:20:02.595 Second to to find out the primary  
NOTE Confidence: 0.8415642533333333

00:20:02.595 --> 00:20:04.670 tumor in case of metastasis.  
NOTE Confidence: 0.8415642533333333

00:20:04.670 --> 00:20:06.542 And then for biomarkers,  
NOTE Confidence: 0.8415642533333333

00:20:06.542 --> 00:20:08.414 you remember this picture,  
NOTE Confidence: 0.8415642533333333

00:20:08.420 --> 00:20:11.262 city one is positive so it favors  
NOTE Confidence: 0.8415642533333333

00:20:11.262 --> 00:20:13.510 adenocarcinoma and the panel of

NOTE Confidence: 0.8415642533333333  
00:20:13.510 --> 00:20:14.944 immunohistochemistry of antibodies  
NOTE Confidence: 0.8415642533333333  
00:20:14.944 --> 00:20:17.920 in lung cancer is very simple,  
NOTE Confidence: 0.8415642533333333  
00:20:17.920 --> 00:20:21.184 very easy TD1 cytokeratin 7 and  
NOTE Confidence: 0.8415642533333333  
00:20:21.184 --> 00:20:23.740 naps in Paladino carcinoma and  
NOTE Confidence: 0.8415642533333333  
00:20:23.740 --> 00:20:25.800 P40P63 for squamous cell carcinoma.  
NOTE Confidence: 0.8415642533333333  
00:20:25.800 --> 00:20:29.032 But don't forget these two new not really  
NOTE Confidence: 0.8415642533333333  
00:20:29.032 --> 00:20:31.332 new antibodies smart support efficient  
NOTE Confidence: 0.8415642533333333  
00:20:31.332 --> 00:20:34.170 tumors are not one positive tumors.  
NOTE Confidence: 0.8415642533333333  
00:20:34.170 --> 00:20:35.510 So we had to.  
NOTE Confidence: 0.8415642533333333  
00:20:35.510 --> 00:20:37.520 Keep in mind these two possibilities,  
NOTE Confidence: 0.8415642533333333  
00:20:37.520 --> 00:20:40.445 as we saw this morning in the in the.  
NOTE Confidence: 0.8415642533333333  
00:20:40.450 --> 00:20:41.402 In decision.  
NOTE Confidence: 0.8415642533333333  
00:20:41.402 --> 00:20:44.258 So yes to remain that precision  
NOTE Confidence: 0.8415642533333333  
00:20:44.258 --> 00:20:46.531 medicine starts with an  
NOTE Confidence: 0.8415642533333333  
00:20:46.531 --> 00:20:48.388 accurate morphological defense.  
NOTE Confidence: 0.8415642533333333

00:20:48.390 --> 00:20:51.288 Second utility of immunohistochemistry is  
NOTE Confidence: 0.8415642533333333

00:20:51.288 --> 00:20:54.788 to determine the origin of metastatic tumors.  
NOTE Confidence: 0.8415642533333333

00:20:54.790 --> 00:20:55.910 This is a real case,  
NOTE Confidence: 0.8415642533333333

00:20:55.910 --> 00:20:57.590 sorry because this is in Spanish.  
NOTE Confidence: 0.8415642533333333

00:20:57.590 --> 00:20:59.830 It does is pericardial fluid.  
NOTE Confidence: 0.8415642533333333

00:20:59.830 --> 00:21:01.846 We don't know anything,  
NOTE Confidence: 0.8415642533333333

00:21:01.846 --> 00:21:02.350 anything,  
NOTE Confidence: 0.8415642533333333

00:21:02.350 --> 00:21:03.114 nothing, nothing,  
NOTE Confidence: 0.8415642533333333

00:21:03.114 --> 00:21:05.788 nothing I think is that happened everywhere  
NOTE Confidence: 0.8415642533333333

00:21:05.788 --> 00:21:08.019 in the world is pericardial fluid and  
NOTE Confidence: 0.8415642533333333

00:21:08.019 --> 00:21:10.530 this is the the pericardial fluid is.  
NOTE Confidence: 0.8415642533333333

00:21:10.530 --> 00:21:13.200 Tumor of course is an adenocarcinoma.  
NOTE Confidence: 0.8415642533333333

00:21:13.200 --> 00:21:14.900 We go to the clinical.  
NOTE Confidence: 0.8415642533333333

00:21:14.900 --> 00:21:16.340 We went to the clinical records  
NOTE Confidence: 0.8415642533333333

00:21:16.340 --> 00:21:17.060 of the patient.  
NOTE Confidence: 0.8415642533333333

00:21:17.060 --> 00:21:19.410 We we knew that the patient had a lung mass,

NOTE Confidence: 0.8415642533333333  
00:21:19.410 --> 00:21:21.240 so we did.  
NOTE Confidence: 0.8415642533333333  
00:21:21.240 --> 00:21:22.416 T1T1 is positive.  
NOTE Confidence: 0.8415642533333333  
00:21:22.416 --> 00:21:24.768 We confirm that the origin of  
NOTE Confidence: 0.8415642533333333  
00:21:24.768 --> 00:21:26.801 this pericardial effusion is  
NOTE Confidence: 0.8415642533333333  
00:21:26.801 --> 00:21:29.396 the adenocarcinoma of the lung.  
NOTE Confidence: 0.8415642533333333  
00:21:29.400 --> 00:21:30.710 I know the real case.  
NOTE Confidence: 0.8415642533333333  
00:21:30.710 --> 00:21:32.480 This is a very young lady,  
NOTE Confidence: 0.8415642533333333  
00:21:32.480 --> 00:21:32.934 32,  
NOTE Confidence: 0.8415642533333333  
00:21:32.934 --> 00:21:35.204 female only smoker with very  
NOTE Confidence: 0.8415642533333333  
00:21:35.204 --> 00:21:37.580 disseminating disease of unknown origin.  
NOTE Confidence: 0.8415642533333333  
00:21:37.580 --> 00:21:40.328 We did a direct financial aspiration  
NOTE Confidence: 0.8415642533333333  
00:21:40.328 --> 00:21:42.533 of our supraclavicular live now  
NOTE Confidence: 0.8415642533333333  
00:21:42.533 --> 00:21:44.933 and if if we didn't have know that  
NOTE Confidence: 0.8415642533333333  
00:21:44.933 --> 00:21:47.099 the basement have a landmass,  
NOTE Confidence: 0.8415642533333333  
00:21:47.100 --> 00:21:48.928 we were thinking in.  
NOTE Confidence: 0.8415642533333333

00:21:48.928 --> 00:21:52.300 A gastric tumor or even breast right,  
NOTE Confidence: 0.8415642533333333

00:21:52.300 --> 00:21:54.676 but if one was positive so  
NOTE Confidence: 0.8415642533333333

00:21:54.676 --> 00:21:56.260 the the origin of  
NOTE Confidence: 0.805703449285714

00:21:56.350 --> 00:21:59.308 this tumor is slack but besides of  
NOTE Confidence: 0.805703449285714

00:21:59.308 --> 00:22:01.804 that is mandatory the integration of  
NOTE Confidence: 0.805703449285714

00:22:01.804 --> 00:22:03.800 biomarkers in the clinical management  
NOTE Confidence: 0.805703449285714

00:22:03.800 --> 00:22:06.418 of lung cancer patient and as said  
NOTE Confidence: 0.805703449285714

00:22:06.418 --> 00:22:08.730 before so this is nice to have this  
NOTE Confidence: 0.805703449285714

00:22:08.730 --> 00:22:11.680 we know that this the the last case  
NOTE Confidence: 0.805703449285714

00:22:11.680 --> 00:22:14.061 only the pericardial fluid is origin  
NOTE Confidence: 0.805703449285714

00:22:14.061 --> 00:22:16.383 in adenocarcinoma of the lung but  
NOTE Confidence: 0.805703449285714

00:22:16.383 --> 00:22:19.149 this patient have a mutation of EGFR.  
NOTE Confidence: 0.805703449285714

00:22:19.150 --> 00:22:21.684 So it's a simple way to do  
NOTE Confidence: 0.805703449285714

00:22:21.684 --> 00:22:22.408 precision medicine.  
NOTE Confidence: 0.805703449285714

00:22:22.410 --> 00:22:25.050 The other lady is is nice,  
NOTE Confidence: 0.805703449285714

00:22:25.050 --> 00:22:27.762 is better to know that the lady have

NOTE Confidence: 0.805703449285714  
00:22:27.762 --> 00:22:30.016 an alt translocation to support  
NOTE Confidence: 0.805703449285714  
00:22:30.016 --> 00:22:33.495 patients can go to a specific therapy.  
NOTE Confidence: 0.805703449285714  
00:22:33.500 --> 00:22:36.699 So is that we call day-to-day routine  
NOTE Confidence: 0.805703449285714  
00:22:36.699 --> 00:22:39.380 precision medicine based on psychological  
NOTE Confidence: 0.805703449285714  
00:22:39.380 --> 00:22:41.840 samples without any complication,  
NOTE Confidence: 0.805703449285714  
00:22:41.840 --> 00:22:44.368 but very helpful for the patients, OK.  
NOTE Confidence: 0.805703449285714  
00:22:44.368 --> 00:22:48.670 And I can't resist to show you these cases.  
NOTE Confidence: 0.805703449285714  
00:22:48.670 --> 00:22:50.826 These cases motivate a lot to me.  
NOTE Confidence: 0.805703449285714  
00:22:50.830 --> 00:22:56.196 That case is dates from 2009 and I really  
NOTE Confidence: 0.805703449285714  
00:22:56.196 --> 00:22:59.076 discovered the value that psychopathologies  
NOTE Confidence: 0.805703449285714  
00:22:59.076 --> 00:23:02.484 have in in the in in this world.  
NOTE Confidence: 0.805703449285714  
00:23:02.490 --> 00:23:03.816 Let me let me show you.  
NOTE Confidence: 0.805703449285714  
00:23:03.820 --> 00:23:06.868 This is this lady came from a second  
NOTE Confidence: 0.805703449285714  
00:23:06.868 --> 00:23:09.460 opinion from another city in Spain is  
NOTE Confidence: 0.805703449285714  
00:23:09.460 --> 00:23:11.908 a female is 72 years old at that time.  
NOTE Confidence: 0.805703449285714

00:23:11.910 --> 00:23:12.978 non-smoker disseminate disease.  
NOTE Confidence: 0.805703449285714

00:23:12.978 --> 00:23:15.114 Look at the pet even brain.  
NOTE Confidence: 0.805703449285714

00:23:15.120 --> 00:23:16.376 That's disease,  
NOTE Confidence: 0.805703449285714

00:23:16.376 --> 00:23:19.490 \*\* \*\*\* has been only offered  
NOTE Confidence: 0.805703449285714

00:23:19.490 --> 00:23:20.720 a palliative treatment,  
NOTE Confidence: 0.805703449285714

00:23:20.720 --> 00:23:23.275 so she decided to go to another  
NOTE Confidence: 0.805703449285714

00:23:23.275 --> 00:23:25.310 institution and we perform a  
NOTE Confidence: 0.805703449285714

00:23:25.310 --> 00:23:27.034 direct financial aspiration of  
NOTE Confidence: 0.805703449285714

00:23:27.034 --> 00:23:30.358 this note and it's easy to to know  
NOTE Confidence: 0.805703449285714

00:23:30.358 --> 00:23:32.263 that this is an adenocarcinoma.  
NOTE Confidence: 0.805703449285714

00:23:32.270 --> 00:23:35.534 Is the one nuclear cytokeratin cytokeratin  
NOTE Confidence: 0.805703449285714

00:23:35.534 --> 00:23:38.672 7 cytoplasmatic act even the patient  
NOTE Confidence: 0.805703449285714

00:23:38.672 --> 00:23:44.346 have a deletion of exon 19 and 85 so.  
NOTE Confidence: 0.805703449285714

00:23:44.350 --> 00:23:48.064 Theme so three months later with TK I  
NOTE Confidence: 0.805703449285714

00:23:48.064 --> 00:23:50.850 is inhibitor the patient was like that.  
NOTE Confidence: 0.805703449285714

00:23:50.850 --> 00:23:54.610 So to me it was like a before and after no.

NOTE Confidence: 0.805703449285714  
00:23:54.610 --> 00:23:57.578 So it's it's important with us so  
NOTE Confidence: 0.805703449285714  
00:23:57.578 --> 00:24:00.570 simple technique to to be to be able  
NOTE Confidence: 0.805703449285714  
00:24:00.570 --> 00:24:02.982 to help people like this like so.  
NOTE Confidence: 0.805703449285714  
00:24:02.982 --> 00:24:05.586 But it's important to do molecular and  
NOTE Confidence: 0.805703449285714  
00:24:05.586 --> 00:24:08.704 to do to inform about biomarkers of  
NOTE Confidence: 0.805703449285714  
00:24:08.704 --> 00:24:11.812 course is mandatory and there are the  
NOTE Confidence: 0.805703449285714  
00:24:11.812 --> 00:24:14.402 masks the shores the mask you know.  
NOTE Confidence: 0.805703449285714  
00:24:14.410 --> 00:24:17.710 Everybody knows you get park and  
NOTE Confidence: 0.805703449285714  
00:24:17.710 --> 00:24:21.088 grass and exon skipping next of 14  
NOTE Confidence: 0.805703449285714  
00:24:21.088 --> 00:24:24.640 and met Ralph Al Rose and Jack Red.  
NOTE Confidence: 0.805703449285714  
00:24:24.640 --> 00:24:27.447 Of course PDL one and metabolic fication  
NOTE Confidence: 0.805703449285714  
00:24:27.447 --> 00:24:29.898 is coming into this group also.  
NOTE Confidence: 0.805703449285714  
00:24:29.900 --> 00:24:32.702 And all this happened in adenocarcinomas  
NOTE Confidence: 0.805703449285714  
00:24:32.702 --> 00:24:35.610 and squamous of course PDL one and  
NOTE Confidence: 0.805703449285714  
00:24:35.610 --> 00:24:37.843 now in track is getting with is  
NOTE Confidence: 0.805703449285714

00:24:37.920 --> 00:24:39.480 indeed into the room.  
NOTE Confidence: 0.805703449285714

00:24:39.480 --> 00:24:42.322 But if if the patient with schemas  
NOTE Confidence: 0.805703449285714

00:24:42.322 --> 00:24:44.818 Histology is not a light smoker.  
NOTE Confidence: 0.805703449285714

00:24:44.820 --> 00:24:49.108 Or is younger than 50 goes through the  
NOTE Confidence: 0.805703449285714

00:24:49.108 --> 00:24:52.398 adenocarcinoma site in terms of biomarkers?  
NOTE Confidence: 0.805703449285714

00:24:52.400 --> 00:24:55.800 Unless moved to another part of my talk,  
NOTE Confidence: 0.805703449285714

00:24:55.800 --> 00:24:58.887 but before I went to stop in Barcelona and  
NOTE Confidence: 0.805703449285714

00:24:58.887 --> 00:25:02.118 I want to stop in the Sagrada Familia.  
NOTE Confidence: 0.805703449285714

00:25:02.120 --> 00:25:05.011 Some of you know but Sagrada Familia  
NOTE Confidence: 0.805703449285714

00:25:05.011 --> 00:25:07.534 is impressive from outside but I can  
NOTE Confidence: 0.805703449285714

00:25:07.534 --> 00:25:10.434 tell you to me is more impressive from  
NOTE Confidence: 0.805703449285714

00:25:10.434 --> 00:25:13.271 the inside. It's absolutely gorgeous.  
NOTE Confidence: 0.805703449285714

00:25:13.271 --> 00:25:17.520 So you have the the opportunity I  
NOTE Confidence: 0.805703449285714

00:25:17.520 --> 00:25:20.624 I would like to invite you to see  
NOTE Confidence: 0.805703449285714

00:25:20.624 --> 00:25:22.456 this wonderful so the the third,  
NOTE Confidence: 0.805703449285714

00:25:22.456 --> 00:25:24.559 the 4th part of my talk is yes,

NOTE Confidence: 0.805703449285714  
00:25:24.560 --> 00:25:26.485 the management and the advantages  
NOTE Confidence: 0.805703449285714  
00:25:26.485 --> 00:25:28.410 and limitation of the psychological  
NOTE Confidence: 0.825571521538461  
00:25:28.474 --> 00:25:29.758 samples for biomarkers.  
NOTE Confidence: 0.825571521538461  
00:25:29.760 --> 00:25:32.660 I want to make a stop and this is Valencia.  
NOTE Confidence: 0.825571521538461  
00:25:32.660 --> 00:25:35.330 Valencia, little bit S in the  
NOTE Confidence: 0.825571521538461  
00:25:35.330 --> 00:25:37.110 Mediterranean coast and Valencia.  
NOTE Confidence: 0.825571521538461  
00:25:37.110 --> 00:25:39.819 This is called the City of Art  
NOTE Confidence: 0.825571521538461  
00:25:39.819 --> 00:25:42.329 and Science and it's wonderful.  
NOTE Confidence: 0.825571521538461  
00:25:42.330 --> 00:25:44.148 Valencia is a very nice city,  
NOTE Confidence: 0.825571521538461  
00:25:44.150 --> 00:25:47.050 so you are welcome also.  
NOTE Confidence: 0.825571521538461  
00:25:47.050 --> 00:25:48.480 So to talk about this,  
NOTE Confidence: 0.825571521538461  
00:25:48.480 --> 00:25:50.250 we have to ask us,  
NOTE Confidence: 0.825571521538461  
00:25:50.250 --> 00:25:53.798 or at least I I make myself, two questions.  
NOTE Confidence: 0.825571521538461  
00:25:53.798 --> 00:25:56.668 How to ensure adequate diagnosis  
NOTE Confidence: 0.825571521538461  
00:25:56.668 --> 00:25:59.035 using minimally invasive methods  
NOTE Confidence: 0.825571521538461

00:25:59.035 --> 00:26:01.825 and therefore using small samples.  
NOTE Confidence: 0.825571521538461

00:26:01.830 --> 00:26:03.490 And the most important question,  
NOTE Confidence: 0.825571521538461

00:26:03.490 --> 00:26:06.010 how to provide all patients,  
NOTE Confidence: 0.825571521538461

00:26:06.010 --> 00:26:08.885 all everyone with the benefit  
NOTE Confidence: 0.825571521538461

00:26:08.885 --> 00:26:10.610 of effective therapies.  
NOTE Confidence: 0.825571521538461

00:26:10.610 --> 00:26:12.522 So with adequate samples,  
NOTE Confidence: 0.825571521538461

00:26:12.522 --> 00:26:14.912 with inadequate management of these  
NOTE Confidence: 0.825571521538461

00:26:14.912 --> 00:26:17.750 samples to be able to do anything we need  
NOTE Confidence: 0.825571521538461

00:26:17.750 --> 00:26:20.406 and something that is very helpful it grows.  
NOTE Confidence: 0.825571521538461

00:26:20.410 --> 00:26:23.218 I want to stop in this part because  
NOTE Confidence: 0.825571521538461

00:26:23.218 --> 00:26:25.926 we all know the value of rows.  
NOTE Confidence: 0.825571521538461

00:26:25.930 --> 00:26:29.506 Rows is I would say mandatory  
NOTE Confidence: 0.825571521538461

00:26:29.510 --> 00:26:32.480 especially for two things for.  
NOTE Confidence: 0.825571521538461

00:26:32.480 --> 00:26:35.864 To to take care of the Preanalytical control  
NOTE Confidence: 0.825571521538461

00:26:35.864 --> 00:26:39.706 and to make a proper triage of the sample.  
NOTE Confidence: 0.825571521538461

00:26:39.710 --> 00:26:42.419 This is a paper that I like a lot

NOTE Confidence: 0.825571521538461  
00:26:42.419 --> 00:26:44.650 published in 2019 talking about the role  
NOTE Confidence: 0.825571521538461  
00:26:44.650 --> 00:26:47.889 of site to check in in the in the roles.  
NOTE Confidence: 0.825571521538461  
00:26:47.890 --> 00:26:50.428 Obviously they do a great job,  
NOTE Confidence: 0.825571521538461  
00:26:50.430 --> 00:26:51.994 but I love this.  
NOTE Confidence: 0.825571521538461  
00:26:51.994 --> 00:26:54.923 And we need a standardized protocol for  
NOTE Confidence: 0.825571521538461  
00:26:54.923 --> 00:26:57.443 tissue management and for psychological  
NOTE Confidence: 0.825571521538461  
00:26:57.443 --> 00:27:00.889 management and the this is very important  
NOTE Confidence: 0.825571521538461  
00:27:00.889 --> 00:27:03.595 in the era of personalized medicine,  
NOTE Confidence: 0.825571521538461  
00:27:03.600 --> 00:27:04.060 adequate,  
NOTE Confidence: 0.825571521538461  
00:27:04.060 --> 00:27:06.820 should they not sufficient tissue for  
NOTE Confidence: 0.825571521538461  
00:27:06.820 --> 00:27:09.738 diagnosis and for molecular are ancillary  
NOTE Confidence: 0.825571521538461  
00:27:09.738 --> 00:27:13.154 tests not only sufficient cells or diagnosis,  
NOTE Confidence: 0.825571521538461  
00:27:13.160 --> 00:27:15.704 but also it's mandatory to do  
NOTE Confidence: 0.825571521538461  
00:27:15.704 --> 00:27:17.400 molecular and ancillary tests.  
NOTE Confidence: 0.825571521538461  
00:27:17.400 --> 00:27:21.128 But one thing that we really is  
NOTE Confidence: 0.825571521538461

00:27:21.128 --> 00:27:22.756 a limitation of psychological.  
NOTE Confidence: 0.825571521538461

00:27:22.760 --> 00:27:25.560 Numbers is the lack of architecture and this  
NOTE Confidence: 0.825571521538461

00:27:25.560 --> 00:27:28.689 is true it's a limitation even cell blocks,  
NOTE Confidence: 0.825571521538461

00:27:28.690 --> 00:27:31.670 regular cell blocks block architecture.  
NOTE Confidence: 0.825571521538461

00:27:31.670 --> 00:27:32.954 OK so my my,  
NOTE Confidence: 0.825571521538461

00:27:32.954 --> 00:27:35.809 my my question is what do you think?  
NOTE Confidence: 0.825571521538461

00:27:35.810 --> 00:27:38.358 Can we preserve the architecture of the  
NOTE Confidence: 0.825571521538461

00:27:38.358 --> 00:27:40.649 samples doing fine needle aspiration?  
NOTE Confidence: 0.825571521538461

00:27:40.650 --> 00:27:44.094 Yes, no, it depends how how you,  
NOTE Confidence: 0.825571521538461

00:27:44.100 --> 00:27:47.284 how we approach the yes or the no.  
NOTE Confidence: 0.825571521538461

00:27:47.290 --> 00:27:48.970 But they will say maybe,  
NOTE Confidence: 0.825571521538461

00:27:48.970 --> 00:27:50.050 maybe why not,  
NOTE Confidence: 0.825571521538461

00:27:50.050 --> 00:27:53.006 let's give the doubt a chance and why  
NOTE Confidence: 0.825571521538461

00:27:53.006 --> 00:27:56.190 because we are all the time using the  
NOTE Confidence: 0.825571521538461

00:27:56.286 --> 00:27:59.826 the term NGS next generation sequencing.  
NOTE Confidence: 0.825571521538461

00:27:59.830 --> 00:28:02.672 We can add two more terms NGN

NOTE Confidence: 0.825571521538461

00:28:02.672 --> 00:28:05.048 like generation needles and NGP

NOTE Confidence: 0.825571521538461

00:28:05.048 --> 00:28:06.659 NEXT generation procedures.

NOTE Confidence: 0.825571521538461

00:28:06.660 --> 00:28:09.901 In the market you know there are

NOTE Confidence: 0.825571521538461

00:28:09.901 --> 00:28:12.880 a huge development on new needles

NOTE Confidence: 0.825571521538461

00:28:12.880 --> 00:28:16.068 that allow to directly obtain thin

NOTE Confidence: 0.825571521538461

00:28:16.068 --> 00:28:20.196 film Anders regardless of the needle

NOTE Confidence: 0.825571521538461

00:28:20.200 --> 00:28:23.280 G and this is a real examples.

NOTE Confidence: 0.825571521538461

00:28:23.280 --> 00:28:25.350 And there are another technique that

NOTE Confidence: 0.825571521538461

00:28:25.350 --> 00:28:27.400 is called next generation procedures,

NOTE Confidence: 0.825571521538461

00:28:27.400 --> 00:28:29.428 although it's not at all new

NOTE Confidence: 0.825571521538461

00:28:29.428 --> 00:28:31.313 because it's published in 2015,

NOTE Confidence: 0.825571521538461

00:28:31.313 --> 00:28:33.978 is called wet suction technique.

NOTE Confidence: 0.825571521538461

00:28:33.980 --> 00:28:36.374 That and the the only thing that

NOTE Confidence: 0.825571521538461

00:28:36.374 --> 00:28:39.632 they do is just to put a little bit

NOTE Confidence: 0.825571521538461

00:28:39.632 --> 00:28:42.020 of physiologic in the syringer to

NOTE Confidence: 0.825571521538461

00:28:42.102 --> 00:28:44.967 increase the pressure of aspiration.  
NOTE Confidence: 0.825571521538461

00:28:44.970 --> 00:28:46.346 So we get these.  
NOTE Confidence: 0.825571521538461

00:28:46.346 --> 00:28:48.410 These are real example from institution.  
NOTE Confidence: 0.825571521538461

00:28:48.410 --> 00:28:50.610 We get dieted cell blocks,  
NOTE Confidence: 0.825571521538461

00:28:50.610 --> 00:28:52.930 dieted thin, thin cylinders.  
NOTE Confidence: 0.825571521538461

00:28:52.930 --> 00:28:55.635 So the architecture is preserved.  
NOTE Confidence: 0.825571521538461

00:28:55.635 --> 00:28:57.945 What is what is important is  
NOTE Confidence: 0.825571521538461

00:28:57.945 --> 00:28:59.905 to introduce very the sample  
NOTE Confidence: 0.825571521538461

00:28:59.905 --> 00:29:01.740 very very very very slowly,  
NOTE Confidence: 0.825571521538461

00:29:01.740 --> 00:29:02.163 informally,  
NOTE Confidence: 0.825571521538461

00:29:02.163 --> 00:29:05.970 because as as atheist is very thing it fixes  
NOTE Confidence: 0.741364271153846

00:29:06.049 --> 00:29:09.298 at the end. We got like a very thin  
NOTE Confidence: 0.741364271153846

00:29:09.298 --> 00:29:12.000 cylinder with well preserved architecture,  
NOTE Confidence: 0.741364271153846

00:29:12.000 --> 00:29:14.681 cells, cell block we put in formally  
NOTE Confidence: 0.741364271153846

00:29:14.681 --> 00:29:17.143 in paraffin and we want the and  
NOTE Confidence: 0.741364271153846

00:29:17.143 --> 00:29:19.520 we can do whatever we want to do.

NOTE Confidence: 0.741364271153846  
00:29:19.520 --> 00:29:22.060 So that techniques, both needles  
NOTE Confidence: 0.741364271153846  
00:29:22.060 --> 00:29:24.600 and procedure have many advantages.  
NOTE Confidence: 0.741364271153846  
00:29:24.600 --> 00:29:26.700 We we can have a psychologist.  
NOTE Confidence: 0.741364271153846  
00:29:26.700 --> 00:29:28.200 Logical correlation like in this  
NOTE Confidence: 0.741364271153846  
00:29:28.200 --> 00:29:30.151 case we can choose the most  
NOTE Confidence: 0.741364271153846  
00:29:30.151 --> 00:29:32.106 appropriate sample for each technique.  
NOTE Confidence: 0.741364271153846  
00:29:32.110 --> 00:29:34.477 For example, with a good cell blocks we can  
NOTE Confidence: 0.741364271153846  
00:29:34.477 --> 00:29:37.086 do without any problem any many antibodies,  
NOTE Confidence: 0.741364271153846  
00:29:37.090 --> 00:29:39.182 immunohistochemistry and in in  
NOTE Confidence: 0.741364271153846  
00:29:39.182 --> 00:29:41.797 particular in our institution we  
NOTE Confidence: 0.741364271153846  
00:29:41.797 --> 00:29:44.266 prefer to use smears to do fits.  
NOTE Confidence: 0.741364271153846  
00:29:44.270 --> 00:29:47.147 Many pacing can benefit for clinical trials.  
NOTE Confidence: 0.741364271153846  
00:29:47.150 --> 00:29:48.338 You know cellblock,  
NOTE Confidence: 0.741364271153846  
00:29:48.338 --> 00:29:51.110 regular cell blocks and smear don't allow  
NOTE Confidence: 0.741364271153846  
00:29:51.180 --> 00:29:53.644 this patient to go to clinical trials,  
NOTE Confidence: 0.741364271153846

00:29:53.650 --> 00:29:56.065 but these are biopsies and  
NOTE Confidence: 0.741364271153846

00:29:56.065 --> 00:29:57.514 some clinical trials.  
NOTE Confidence: 0.741364271153846

00:29:57.520 --> 00:29:58.750 But yeah, yeah,  
NOTE Confidence: 0.741364271153846

00:29:58.750 --> 00:30:01.620 they can accept these type of samples  
NOTE Confidence: 0.741364271153846

00:30:01.704 --> 00:30:04.567 because at the end this small biopsy.  
NOTE Confidence: 0.741364271153846

00:30:04.570 --> 00:30:06.873 And we can do many molecular analysis  
NOTE Confidence: 0.741364271153846

00:30:06.873 --> 00:30:09.796 of course and even we can do studies  
NOTE Confidence: 0.741364271153846

00:30:09.796 --> 00:30:11.292 of the immune microenvironment  
NOTE Confidence: 0.741364271153846

00:30:11.292 --> 00:30:13.670 with these nowadays very important,  
NOTE Confidence: 0.741364271153846

00:30:13.670 --> 00:30:15.966 this is a a schematic representation of  
NOTE Confidence: 0.741364271153846

00:30:15.966 --> 00:30:18.246 the different type of samples we can get.  
NOTE Confidence: 0.741364271153846

00:30:18.250 --> 00:30:20.230 This is a very,  
NOTE Confidence: 0.741364271153846

00:30:20.230 --> 00:30:22.210 very recent paper published  
NOTE Confidence: 0.741364271153846

00:30:22.210 --> 00:30:23.810 with Fernando Smith,  
NOTE Confidence: 0.741364271153846

00:30:23.810 --> 00:30:25.650 actually is published in September.  
NOTE Confidence: 0.741364271153846

00:30:25.650 --> 00:30:28.546 And this is an algorithm just to remind

NOTE Confidence: 0.741364271153846  
00:30:28.546 --> 00:30:31.767 you that if we have enough material to do  
NOTE Confidence: 0.741364271153846  
00:30:31.770 --> 00:30:34.800 a morphological diagnosis and biomarkers.  
NOTE Confidence: 0.741364271153846  
00:30:34.800 --> 00:30:36.876 Everything is OK because we can  
NOTE Confidence: 0.741364271153846  
00:30:36.876 --> 00:30:38.260 go and do anything.  
NOTE Confidence: 0.741364271153846  
00:30:38.260 --> 00:30:41.540 They must biomarkers that we have to do.  
NOTE Confidence: 0.741364271153846  
00:30:41.540 --> 00:30:45.236 But what happened if we don't have  
NOTE Confidence: 0.741364271153846  
00:30:45.236 --> 00:30:48.080 enough material to we have only  
NOTE Confidence: 0.741364271153846  
00:30:48.080 --> 00:30:50.180 material to do morphological diagnosis,  
NOTE Confidence: 0.741364271153846  
00:30:50.180 --> 00:30:52.688 but we cannot repeat the procedure  
NOTE Confidence: 0.741364271153846  
00:30:52.688 --> 00:30:55.300 to get material for biomarkers.  
NOTE Confidence: 0.741364271153846  
00:30:55.300 --> 00:30:57.160 So we have to take,  
NOTE Confidence: 0.741364271153846  
00:30:57.160 --> 00:30:59.446 we have to be in and mind to we  
NOTE Confidence: 0.741364271153846  
00:30:59.446 --> 00:31:01.967 have to keep in mind that this  
NOTE Confidence: 0.741364271153846  
00:31:01.967 --> 00:31:03.431 is a incomplete diagnosis.  
NOTE Confidence: 0.741364271153846  
00:31:03.440 --> 00:31:05.110 Morphology is good, but this.  
NOTE Confidence: 0.741364271153846

00:31:05.110 --> 00:31:07.710 Nowadays is an incomplete diagnosis,  
NOTE Confidence: 0.741364271153846

00:31:07.710 --> 00:31:09.710 OK.  
NOTE Confidence: 0.741364271153846

00:31:09.710 --> 00:31:12.270 So yes practical issue about  
NOTE Confidence: 0.741364271153846

00:31:12.270 --> 00:31:14.318 Minister chemistry considered an  
NOTE Confidence: 0.741364271153846

00:31:14.318 --> 00:31:17.641 also PDL one fees NGS yes some words  
NOTE Confidence: 0.741364271153846

00:31:17.641 --> 00:31:19.629 about tumor microenvironment you  
NOTE Confidence: 0.741364271153846

00:31:19.629 --> 00:31:22.134 thinking So what are the the pre  
NOTE Confidence: 0.741364271153846

00:31:22.134 --> 00:31:23.470 analytical factors important for  
NOTE Confidence: 0.741364271153846

00:31:23.536 --> 00:31:25.576 the minister chemistry or or know  
NOTE Confidence: 0.741364271153846

00:31:25.576 --> 00:31:27.622 very well the important message of  
NOTE Confidence: 0.741364271153846

00:31:27.622 --> 00:31:29.792 this slide is this one cell blocks  
NOTE Confidence: 0.741364271153846

00:31:29.792 --> 00:31:32.450 should be fixed informally none in  
NOTE Confidence: 0.741364271153846

00:31:32.450 --> 00:31:34.790 other fixative just informally what  
NOTE Confidence: 0.741364271153846

00:31:34.874 --> 00:31:37.328 happened if we don't have Sylvia.  
NOTE Confidence: 0.741364271153846

00:31:37.330 --> 00:31:41.145 The basin has not option to anything.  
NOTE Confidence: 0.741364271153846

00:31:41.150 --> 00:31:43.950 I think the patient should have any option.

NOTE Confidence: 0.741364271153846  
00:31:43.950 --> 00:31:46.990 So it's a way that swimming  
NOTE Confidence: 0.741364271153846  
00:31:46.990 --> 00:31:49.474 against the flow when we try to  
NOTE Confidence: 0.741364271153846  
00:31:49.474 --> 00:31:51.450 do immunohistochemistry on smears.  
NOTE Confidence: 0.741364271153846  
00:31:51.450 --> 00:31:54.348 There is a lot of contradictory results  
NOTE Confidence: 0.741364271153846  
00:31:54.348 --> 00:31:56.500 in the literature because mainly  
NOTE Confidence: 0.741364271153846  
00:31:56.500 --> 00:31:59.398 because there is a lack of optimization  
NOTE Confidence: 0.741364271153846  
00:31:59.398 --> 00:32:00.975 of immunohistochemistry protocols  
NOTE Confidence: 0.741364271153846  
00:32:00.975 --> 00:32:04.221 for psychology slides and there is  
NOTE Confidence: 0.741364271153846  
00:32:04.221 --> 00:32:07.428 a lack of quality controls and validation.  
NOTE Confidence: 0.741364271153846  
00:32:07.430 --> 00:32:09.428 This is the main problems when  
NOTE Confidence: 0.741364271153846  
00:32:09.428 --> 00:32:12.787 you we use non cell block samples  
NOTE Confidence: 0.741364271153846  
00:32:12.787 --> 00:32:14.089 for immunohistochemistry.  
NOTE Confidence: 0.741364271153846  
00:32:14.090 --> 00:32:16.729 This is a table comparing based on  
NOTE Confidence: 0.741364271153846  
00:32:16.729 --> 00:32:19.010 the publication in the literature.  
NOTE Confidence: 0.741364271153846  
00:32:19.010 --> 00:32:19.958 Cellblock Papanicolaou stain  
NOTE Confidence: 0.741364271153846

00:32:19.958 --> 00:32:22.170 at the smear and stain a deep,  
NOTE Confidence: 0.741364271153846

00:32:22.170 --> 00:32:25.474 quick and liquid base with the results  
NOTE Confidence: 0.741364271153846

00:32:25.474 --> 00:32:28.365 and if we consider it non cell block,  
NOTE Confidence: 0.741364271153846

00:32:28.370 --> 00:32:31.292 the best results are obtained using  
NOTE Confidence: 0.741364271153846

00:32:31.292 --> 00:32:33.240 performing ministry chemistry on  
NOTE Confidence: 0.581764112307692

00:32:33.321 --> 00:32:35.328 Papanicolaou stained smears.  
NOTE Confidence: 0.581764112307692

00:32:35.330 --> 00:32:39.170 And the wars only with base preparation  
NOTE Confidence: 0.581764112307692

00:32:39.170 --> 00:32:41.620 because the fixative is methanol.  
NOTE Confidence: 0.581764112307692

00:32:41.620 --> 00:32:44.580 And as we as we all know methanol  
NOTE Confidence: 0.581764112307692

00:32:44.580 --> 00:32:46.612 give some problems, blocks,  
NOTE Confidence: 0.581764112307692

00:32:46.612 --> 00:32:49.660 some antibodies and many other things.  
NOTE Confidence: 0.581764112307692

00:32:49.660 --> 00:32:52.692 But the the the truth is that psychological  
NOTE Confidence: 0.581764112307692

00:32:52.692 --> 00:32:56.196 specimen non cell blocks are under used  
NOTE Confidence: 0.581764112307692

00:32:56.196 --> 00:32:57.798 for predictive immunohistochemistry.  
NOTE Confidence: 0.581764112307692

00:32:57.800 --> 00:33:00.125 There are practical difficulties and  
NOTE Confidence: 0.581764112307692

00:33:00.125 --> 00:33:02.450 lack of standardization for performing

NOTE Confidence: 0.581764112307692  
00:33:02.512 --> 00:33:04.930 ministry chemistry on null cell blocks.  
NOTE Confidence: 0.581764112307692  
00:33:04.930 --> 00:33:07.655 Provincial preparation and we need  
NOTE Confidence: 0.581764112307692  
00:33:07.655 --> 00:33:09.277 validation, we need controls,  
NOTE Confidence: 0.581764112307692  
00:33:09.277 --> 00:33:12.292 we need protocols to be able to get  
NOTE Confidence: 0.581764112307692  
00:33:12.292 --> 00:33:14.842 good results and made them these  
NOTE Confidence: 0.581764112307692  
00:33:14.842 --> 00:33:16.780 results comparable to celebra.  
NOTE Confidence: 0.581764112307692  
00:33:16.780 --> 00:33:19.356 So we have a lot to do.  
NOTE Confidence: 0.581764112307692  
00:33:19.360 --> 00:33:23.154 Regarding the Minister commissary,  
NOTE Confidence: 0.581764112307692  
00:33:23.154 --> 00:33:24.408 practically minister chemistry,  
NOTE Confidence: 0.581764112307692  
00:33:24.410 --> 00:33:26.615 these are the pre analytical in psychology.  
NOTE Confidence: 0.581764112307692  
00:33:26.620 --> 00:33:28.095 These are the pre analytical  
NOTE Confidence: 0.581764112307692  
00:33:28.095 --> 00:33:30.349 factors we have to take care of  
NOTE Confidence: 0.581764112307692  
00:33:30.349 --> 00:33:31.785 fixatives type of preparation,  
NOTE Confidence: 0.581764112307692  
00:33:31.790 --> 00:33:32.878 psychological preparation,  
NOTE Confidence: 0.581764112307692  
00:33:32.878 --> 00:33:34.510 stain, coverless, cover,  
NOTE Confidence: 0.581764112307692

00:33:34.510 --> 00:33:36.310 sleeping and antigen retrieval.  
NOTE Confidence: 0.581764112307692

00:33:36.310 --> 00:33:39.860 And this is simply summarize our experience.  
NOTE Confidence: 0.581764112307692

00:33:39.860 --> 00:33:42.394 So if we do perform in Ministry,  
NOTE Confidence: 0.581764112307692

00:33:42.400 --> 00:33:44.928 Commission, cellblock it's easy,  
NOTE Confidence: 0.581764112307692

00:33:44.928 --> 00:33:47.828 it's a formal in fixation in this  
NOTE Confidence: 0.581764112307692

00:33:47.828 --> 00:33:50.379 abnormal paraffin OK there is no problem.  
NOTE Confidence: 0.581764112307692

00:33:50.380 --> 00:33:52.354 But what happened if we are trying?  
NOTE Confidence: 0.581764112307692

00:33:52.360 --> 00:33:54.817 We don't have cell block and we want to  
NOTE Confidence: 0.581764112307692

00:33:54.817 --> 00:33:57.054 give some information for this particular  
NOTE Confidence: 0.581764112307692

00:33:57.054 --> 00:33:59.450 patient and we only have smears.  
NOTE Confidence: 0.581764112307692

00:33:59.450 --> 00:34:02.312 We do personally we do over  
NOTE Confidence: 0.581764112307692

00:34:02.312 --> 00:34:04.220 Papanicolaou stained desmarias we  
NOTE Confidence: 0.581764112307692

00:34:04.301 --> 00:34:06.785 use in our Department of Plastic  
NOTE Confidence: 0.581764112307692

00:34:06.785 --> 00:34:09.699 Coverslip is is good because you can  
NOTE Confidence: 0.581764112307692

00:34:09.700 --> 00:34:12.836 take it out in 2 minutes in acetone.  
NOTE Confidence: 0.581764112307692

00:34:12.840 --> 00:34:14.919 So it's very easy to get out

NOTE Confidence: 0.581764112307692

00:34:14.919 --> 00:34:17.420 and the the cells are perfect.

NOTE Confidence: 0.581764112307692

00:34:17.420 --> 00:34:19.298 And what about on teaching retrieval?

NOTE Confidence: 0.581764112307692

00:34:19.300 --> 00:34:22.270 Many. It probably you don't remember.

NOTE Confidence: 0.581764112307692

00:34:22.270 --> 00:34:24.430 Of course I hope you remember,

NOTE Confidence: 0.581764112307692

00:34:24.430 --> 00:34:27.720 but in case you don't remember alcohol

NOTE Confidence: 0.581764112307692

00:34:27.720 --> 00:34:31.057 based fixatives or by causing tissue

NOTE Confidence: 0.581764112307692

00:34:31.057 --> 00:34:33.509 dehydration and protein violation.

NOTE Confidence: 0.581764112307692

00:34:33.510 --> 00:34:37.317 So this is very gentle with the cells so

NOTE Confidence: 0.581764112307692

00:34:37.317 --> 00:34:41.305 the majority of antigens do not require.

NOTE Confidence: 0.581764112307692

00:34:41.310 --> 00:34:43.950 Any form of antigen retrieval or

NOTE Confidence: 0.581764112307692

00:34:43.950 --> 00:34:46.509 this antigen retrieval has to be

NOTE Confidence: 0.581764112307692

00:34:46.509 --> 00:34:49.015 modified and be gentle I would say

NOTE Confidence: 0.581764112307692

00:34:49.015 --> 00:34:51.944 because the type the intrinsic type of

NOTE Confidence: 0.581764112307692

00:34:51.944 --> 00:34:55.820 fixation of alcohol based fixatives.

NOTE Confidence: 0.581764112307692

00:34:55.820 --> 00:34:57.158 What would we have to do?

NOTE Confidence: 0.581764112307692

00:34:57.160 --> 00:34:59.566 When do we do anything? Fees.  
NOTE Confidence: 0.581764112307692

00:34:59.566 --> 00:35:02.996 Molecular or immuno on smears.  
NOTE Confidence: 0.581764112307692

00:35:03.000 --> 00:35:05.800 We have to immortalize in some way,  
NOTE Confidence: 0.581764112307692

00:35:05.800 --> 00:35:08.131 in some way in the the preparation  
NOTE Confidence: 0.581764112307692

00:35:08.131 --> 00:35:10.240 because we we will lose them.  
NOTE Confidence: 0.581764112307692

00:35:10.240 --> 00:35:11.950 We have problems, even medical,  
NOTE Confidence: 0.581764112307692

00:35:11.950 --> 00:35:12.620 legal problems.  
NOTE Confidence: 0.581764112307692

00:35:12.620 --> 00:35:15.980 So what we can take pictures or we can scan,  
NOTE Confidence: 0.581764112307692

00:35:15.980 --> 00:35:17.072 we scan the preparation.  
NOTE Confidence: 0.581764112307692

00:35:17.072 --> 00:35:19.217 This is a plural, a pericardial fluid,  
NOTE Confidence: 0.581764112307692

00:35:19.217 --> 00:35:19.566 sorry,  
NOTE Confidence: 0.581764112307692

00:35:19.566 --> 00:35:22.300 from a patient with squamous cell carcinoma,  
NOTE Confidence: 0.581764112307692

00:35:22.300 --> 00:35:24.106 the only group of cells in the  
NOTE Confidence: 0.581764112307692

00:35:24.106 --> 00:35:25.370 in all these smears.  
NOTE Confidence: 0.581764112307692

00:35:25.370 --> 00:35:26.358 Of course this one,  
NOTE Confidence: 0.581764112307692

00:35:26.358 --> 00:35:28.531 it's hard to say this is a squamous

NOTE Confidence: 0.581764112307692  
00:35:28.531 --> 00:35:30.106 cell carcinoma only by morphology  
NOTE Confidence: 0.581764112307692  
00:35:30.106 --> 00:35:32.120 at least to me it's very hard.  
NOTE Confidence: 0.581764112307692  
00:35:32.120 --> 00:35:35.276 But we we perform a P40,  
NOTE Confidence: 0.581764112307692  
00:35:35.280 --> 00:35:38.000 we scan the preparation and P40 same group.  
NOTE Confidence: 0.581764112307692  
00:35:38.000 --> 00:35:39.329 So it's positive.  
NOTE Confidence: 0.581764112307692  
00:35:39.329 --> 00:35:41.986 So it's a, it's a very,  
NOTE Confidence: 0.581764112307692  
00:35:41.986 --> 00:35:44.638 very good help in this case.  
NOTE Confidence: 0.581764112307692  
00:35:44.640 --> 00:35:47.538 Let's move to to talk about a little bit  
NOTE Confidence: 0.581764112307692  
00:35:47.538 --> 00:35:50.122 about biomarkers for immune checkpoint  
NOTE Confidence: 0.581764112307692  
00:35:50.122 --> 00:35:53.520 inhibitors and the star is PDL one,  
NOTE Confidence: 0.581764112307692  
00:35:53.520 --> 00:35:56.020 but so far immunohistochemistry.  
NOTE Confidence: 0.581764112307692  
00:35:56.020 --> 00:35:59.634 This only the available biomarker we  
NOTE Confidence: 0.581764112307692  
00:35:59.634 --> 00:36:03.180 have to determine the the positivity  
NOTE Confidence: 0.812056834375  
00:36:03.276 --> 00:36:05.808 of negativity of PD one in.  
NOTE Confidence: 0.812056834375  
00:36:05.810 --> 00:36:08.785 In for, for, in for decision a  
NOTE Confidence: 0.812056834375

00:36:08.785 --> 00:36:11.310 clinical decision on immunotherapy.  
NOTE Confidence: 0.812056834375

00:36:11.310 --> 00:36:14.852 So, so as they they sources pathologists  
NOTE Confidence: 0.812056834375

00:36:14.852 --> 00:36:17.791 have been challenged to perform many  
NOTE Confidence: 0.812056834375

00:36:17.791 --> 00:36:20.449 says with a very limited sample.  
NOTE Confidence: 0.812056834375

00:36:20.450 --> 00:36:22.389 I recommend to you these two papers,  
NOTE Confidence: 0.812056834375

00:36:22.390 --> 00:36:24.206 one is published by our group last year  
NOTE Confidence: 0.812056834375

00:36:24.206 --> 00:36:26.346 and the second one is published this year.  
NOTE Confidence: 0.812056834375

00:36:26.350 --> 00:36:28.467 But the group of Pantano and  
NOTE Confidence: 0.812056834375

00:36:28.467 --> 00:36:31.003 there is a good review of PDL one  
NOTE Confidence: 0.812056834375

00:36:31.003 --> 00:36:33.438 and and ministry chemistry and  
NOTE Confidence: 0.812056834375

00:36:33.438 --> 00:36:35.978 PDL one and cytological samples.  
NOTE Confidence: 0.812056834375

00:36:35.980 --> 00:36:38.840 These papers talk about briefly,  
NOTE Confidence: 0.812056834375

00:36:38.840 --> 00:36:40.765 I'm gonna just mention pre  
NOTE Confidence: 0.812056834375

00:36:40.765 --> 00:36:41.535 analytical consideration.  
NOTE Confidence: 0.812056834375

00:36:41.540 --> 00:36:44.726 Remember cell block speaks in formalin  
NOTE Confidence: 0.812056834375

00:36:44.726 --> 00:36:47.560 and smears in alcohol and 96.

NOTE Confidence: 0.812056834375  
00:36:47.560 --> 00:36:49.300 Analytical consideration,  
NOTE Confidence: 0.812056834375  
00:36:49.300 --> 00:36:51.910 control, sample adequacy,  
NOTE Confidence: 0.812056834375  
00:36:51.910 --> 00:36:54.916 interpretation, clinical correlation,  
NOTE Confidence: 0.812056834375  
00:36:54.916 --> 00:36:58.806 immortalizes smear, physical pathology,  
NOTE Confidence: 0.812056834375  
00:36:58.806 --> 00:36:59.749 etcetera.  
NOTE Confidence: 0.812056834375  
00:36:59.750 --> 00:37:01.735 Positive staying positive stain is  
NOTE Confidence: 0.812056834375  
00:37:01.735 --> 00:37:04.295 considered when there is a complete  
NOTE Confidence: 0.812056834375  
00:37:04.295 --> 00:37:06.319 or partial membranous staining  
NOTE Confidence: 0.812056834375  
00:37:06.319 --> 00:37:08.343 irrespective of the intensity.  
NOTE Confidence: 0.812056834375  
00:37:08.350 --> 00:37:12.841 So this is a smear with it's easy to  
NOTE Confidence: 0.812056834375  
00:37:12.841 --> 00:37:15.390 interpret because it's membranous.  
NOTE Confidence: 0.812056834375  
00:37:15.390 --> 00:37:17.310 Beautiful membranous staining,  
NOTE Confidence: 0.812056834375  
00:37:17.310 --> 00:37:18.590 negative stain,  
NOTE Confidence: 0.812056834375  
00:37:18.590 --> 00:37:22.034 negative stain for PDL one is when  
NOTE Confidence: 0.812056834375  
00:37:22.034 --> 00:37:26.029 we don't see this membrane staining.  
NOTE Confidence: 0.812056834375

00:37:26.030 --> 00:37:28.846 Ohh when we see this kind of granular  
NOTE Confidence: 0.812056834375

00:37:28.846 --> 00:37:31.170 or even nuclear staining anything  
NOTE Confidence: 0.812056834375

00:37:31.170 --> 00:37:34.248 that is not membrane is negative.  
NOTE Confidence: 0.812056834375

00:37:34.250 --> 00:37:36.527 OK, even in this case that seems to be,  
NOTE Confidence: 0.812056834375

00:37:36.530 --> 00:37:38.792 but now it's a granular cytoplasmic  
NOTE Confidence: 0.812056834375

00:37:38.792 --> 00:37:40.300 staining which is considered  
NOTE Confidence: 0.812056834375

00:37:40.359 --> 00:37:41.456 negative pitfalls.  
NOTE Confidence: 0.812056834375

00:37:41.456 --> 00:37:45.568 We have to avoid macrophages and all  
NOTE Confidence: 0.812056834375

00:37:45.568 --> 00:37:48.013 other inflammatory cells that can  
NOTE Confidence: 0.812056834375

00:37:48.013 --> 00:37:52.476 mimic to and can pretend to be a tumor cells.  
NOTE Confidence: 0.812056834375

00:37:52.480 --> 00:37:54.332 Sometimes macrophages are easy,  
NOTE Confidence: 0.812056834375

00:37:54.332 --> 00:37:56.184 but sometimes macrophages also.  
NOTE Confidence: 0.812056834375

00:37:56.190 --> 00:37:58.269 Staying at the membrane so this is  
NOTE Confidence: 0.812056834375

00:37:58.269 --> 00:38:00.592 this is a problem sometimes and  
NOTE Confidence: 0.812056834375

00:38:00.592 --> 00:38:03.310 these authors also talk about post  
NOTE Confidence: 0.812056834375

00:38:03.310 --> 00:38:05.353 analytical considerations such a

NOTE Confidence: 0.812056834375

00:38:05.353 --> 00:38:07.381 correlation with clinical outcomes

NOTE Confidence: 0.812056834375

00:38:07.381 --> 00:38:10.745 and stress the importance of external

NOTE Confidence: 0.812056834375

00:38:10.745 --> 00:38:13.600 quality controls and and validation

NOTE Confidence: 0.812056834375

00:38:13.684 --> 00:38:16.524 because we know that there is a draw

NOTE Confidence: 0.812056834375

00:38:16.524 --> 00:38:20.498 a drug behind all these all these tests.

NOTE Confidence: 0.812056834375

00:38:20.500 --> 00:38:22.378 So when we talk about Cellblock,

NOTE Confidence: 0.812056834375

00:38:22.380 --> 00:38:24.530 it's nothing different to biopsies.

NOTE Confidence: 0.812056834375

00:38:24.530 --> 00:38:26.798 But when we talk about smears,

NOTE Confidence: 0.812056834375

00:38:26.800 --> 00:38:29.008 be aware of the three dimensionality

NOTE Confidence: 0.812056834375

00:38:29.008 --> 00:38:30.112 of psychological smears.

NOTE Confidence: 0.812056834375

00:38:30.120 --> 00:38:32.008 So in this case this is a nice

NOTE Confidence: 0.812056834375

00:38:32.008 --> 00:38:33.998 staining of the membrane of the cells,

NOTE Confidence: 0.812056834375

00:38:34.000 --> 00:38:36.536 but here the the cells are more crowded,

NOTE Confidence: 0.812056834375

00:38:36.540 --> 00:38:39.480 so we can have a false impression

NOTE Confidence: 0.812056834375

00:38:39.480 --> 00:38:40.740 of cytoplasmic staining.

NOTE Confidence: 0.812056834375

00:38:40.740 --> 00:38:42.180 We see which is not real,  
NOTE Confidence: 0.812056834375

00:38:42.180 --> 00:38:45.768 it's because the cells are overlap.  
NOTE Confidence: 0.812056834375

00:38:45.770 --> 00:38:49.512 And and in the in the in the report  
NOTE Confidence: 0.812056834375

00:38:49.512 --> 00:38:52.081 is it recommended to specify the type  
NOTE Confidence: 0.812056834375

00:38:52.081 --> 00:38:54.091 of psychological sample cell blocks  
NOTE Confidence: 0.812056834375

00:38:54.091 --> 00:38:56.696 smear wherever the clone use and the  
NOTE Confidence: 0.812056834375

00:38:56.696 --> 00:38:59.740 controlled use at least we have to  
NOTE Confidence: 0.812056834375

00:38:59.740 --> 00:39:02.440 evaluate 10 evaluable tumor cells  
NOTE Confidence: 0.812056834375

00:39:02.440 --> 00:39:06.100 no sorry 100 cells not 100 cell,  
NOTE Confidence: 0.812056834375

00:39:06.100 --> 00:39:08.974 100 evaluable tumor cells and very  
NOTE Confidence: 0.812056834375

00:39:08.974 --> 00:39:11.370 important again pre analytics and  
NOTE Confidence: 0.812056834375

00:39:11.370 --> 00:39:13.752 we have to use appropriate controls  
NOTE Confidence: 0.812056834375

00:39:13.752 --> 00:39:16.218 of course for biopsies we use.  
NOTE Confidence: 0.812056834375

00:39:16.220 --> 00:39:17.600 Tonsil, placenta, whatever.  
NOTE Confidence: 0.812056834375

00:39:17.600 --> 00:39:20.820 But for a cell blocks we decide  
NOTE Confidence: 0.812056834375

00:39:20.902 --> 00:39:22.150 to use placenta.

NOTE Confidence: 0.812056834375

00:39:22.150 --> 00:39:24.202 So we take a placenta every

NOTE Confidence: 0.812056834375

00:39:24.202 --> 00:39:26.814 month and we make small pieces to

NOTE Confidence: 0.812056834375

00:39:26.814 --> 00:39:29.142 do cellblock and we make many,

NOTE Confidence: 0.812056834375

00:39:29.150 --> 00:39:32.000 many many imprints and we

NOTE Confidence: 0.812056834375

00:39:32.000 --> 00:39:33.710 stand with papanikolau.

NOTE Confidence: 0.812056834375

00:39:33.710 --> 00:39:37.274 So we use smear or smear

NOTE Confidence: 0.812056834375

00:39:37.274 --> 00:39:39.650 and cellblock or cellblock.

NOTE Confidence: 0.812056834375

00:39:39.650 --> 00:39:41.480 OK.

NOTE Confidence: 0.812056834375

00:39:41.480 --> 00:39:43.400 And these are some examples on

NOTE Confidence: 0.812056834375

00:39:43.400 --> 00:39:45.121 nice examples of period while

NOTE Confidence: 0.812056834375

00:39:45.121 --> 00:39:46.637 on smears the macrophages.

NOTE Confidence: 0.89073461125

00:39:46.640 --> 00:39:47.516 But for example,

NOTE Confidence: 0.89073461125

00:39:47.516 --> 00:39:48.976 what happened with this case?

NOTE Confidence: 0.89073461125

00:39:48.980 --> 00:39:50.280 Things are not easy.

NOTE Confidence: 0.89073461125

00:39:50.280 --> 00:39:51.580 This group is positive,

NOTE Confidence: 0.89073461125

00:39:51.580 --> 00:39:53.300 but what this weather ourselves?  
NOTE Confidence: 0.89073461125

00:39:53.300 --> 00:39:54.896 Macrophages probably,  
NOTE Confidence: 0.89073461125

00:39:54.896 --> 00:39:58.886 but stain membrane and cytoplasm  
NOTE Confidence: 0.89073461125

00:39:58.886 --> 00:40:02.752 pants everything but it be be aware  
NOTE Confidence: 0.89073461125

00:40:02.752 --> 00:40:04.672 that some normal bronchial cells  
NOTE Confidence: 0.89073461125

00:40:04.672 --> 00:40:07.258 can also be stained with PDL one.  
NOTE Confidence: 0.89073461125

00:40:07.260 --> 00:40:08.980 OK, so it's a.  
NOTE Confidence: 0.89073461125

00:40:08.980 --> 00:40:12.212 What is my recommendation when we use  
NOTE Confidence: 0.89073461125

00:40:12.212 --> 00:40:14.977 PDL one on psychological samples?  
NOTE Confidence: 0.89073461125

00:40:14.980 --> 00:40:15.472 Caution.  
NOTE Confidence: 0.89073461125

00:40:15.472 --> 00:40:18.916 Be cautious because it's an important issue.  
NOTE Confidence: 0.89073461125

00:40:18.920 --> 00:40:23.060 OK, we have to waste a lot of time  
NOTE Confidence: 0.89073461125

00:40:23.060 --> 00:40:26.369 interpreting video one and psychological.  
NOTE Confidence: 0.89073461125

00:40:26.370 --> 00:40:28.695 What happened in Europe regarding  
NOTE Confidence: 0.89073461125

00:40:28.695 --> 00:40:30.090 immunohistochemistry in general?  
NOTE Confidence: 0.89073461125

00:40:30.090 --> 00:40:37.210 This is a paper Paris 2020 about a survey.

NOTE Confidence: 0.89073461125

00:40:37.210 --> 00:40:38.287 Our Community subcommittee,

NOTE Confidence: 0.89073461125

00:40:38.287 --> 00:40:40.441 how you measure is performed in

NOTE Confidence: 0.89073461125

00:40:40.441 --> 00:40:42.269 different laboratories across Europe.

NOTE Confidence: 0.89073461125

00:40:42.270 --> 00:40:45.258 So they said that mother clinical

NOTE Confidence: 0.89073461125

00:40:45.258 --> 00:40:46.752 practice requires immunohistochemistry

NOTE Confidence: 0.89073461125

00:40:46.752 --> 00:40:49.588 more and more and psychological samples.

NOTE Confidence: 0.89073461125

00:40:49.590 --> 00:40:52.982 And to be to be able to do

NOTE Confidence: 0.89073461125

00:40:52.982 --> 00:40:55.189 immunohistochemistry in accurately way,

NOTE Confidence: 0.89073461125

00:40:55.190 --> 00:40:57.120 laboratories have to be able

NOTE Confidence: 0.89073461125

00:40:57.120 --> 00:40:59.050 to optimize and standardize the

NOTE Confidence: 0.89073461125

00:40:59.124 --> 00:41:01.508 preparation of psychological samples.

NOTE Confidence: 0.89073461125

00:41:01.510 --> 00:41:04.066 They have to optimize and validate

NOTE Confidence: 0.89073461125

00:41:04.066 --> 00:41:05.344 immunohistochemistry staining protocols

NOTE Confidence: 0.89073461125

00:41:05.344 --> 00:41:07.418 and they have to use appropriate.

NOTE Confidence: 0.89073461125

00:41:07.420 --> 00:41:09.836 The controls and of course they have to

NOTE Confidence: 0.89073461125

00:41:09.836 --> 00:41:11.868 follow external quality control problems.  
NOTE Confidence: 0.89073461125

00:41:11.870 --> 00:41:13.523 This is very,  
NOTE Confidence: 0.89073461125

00:41:13.523 --> 00:41:16.278 very difficult as you say.  
NOTE Confidence: 0.89073461125

00:41:16.280 --> 00:41:16.630 Is  
NOTE Confidence: 0.85407069375

00:41:19.170 --> 00:41:24.738 22145 to 45 laps participate in this survey?  
NOTE Confidence: 0.85407069375

00:41:24.740 --> 00:41:27.470 And look at the differences in fixatives.  
NOTE Confidence: 0.85407069375

00:41:27.470 --> 00:41:29.744 Cell block is fixed mainly informally  
NOTE Confidence: 0.85407069375

00:41:29.744 --> 00:41:32.200 but there are other fixed actors,  
NOTE Confidence: 0.85407069375

00:41:32.200 --> 00:41:34.500 cytopsin, smears and liquid based.  
NOTE Confidence: 0.85407069375

00:41:34.500 --> 00:41:38.077 There is a very variation in fixation.  
NOTE Confidence: 0.85407069375

00:41:38.080 --> 00:41:41.320 It's unbelievable but it is true.  
NOTE Confidence: 0.85407069375

00:41:41.320 --> 00:41:43.768 This is a lot of variation in in  
NOTE Confidence: 0.85407069375

00:41:43.768 --> 00:41:46.462 the staining the staining before  
NOTE Confidence: 0.85407069375

00:41:46.462 --> 00:41:47.798 perform immunohistochemistry.  
NOTE Confidence: 0.85407069375

00:41:47.800 --> 00:41:50.780 Some are in liquid base,  
NOTE Confidence: 0.85407069375

00:41:50.780 --> 00:41:51.926 cytopsin and smear.

NOTE Confidence: 0.85407069375

00:41:51.926 --> 00:41:53.836 There is variation in multiple

NOTE Confidence: 0.85407069375

00:41:53.836 --> 00:41:55.530 samples and also there is.

NOTE Confidence: 0.85407069375

00:41:55.530 --> 00:41:58.356 Variation and how the samples are

NOTE Confidence: 0.85407069375

00:41:58.356 --> 00:42:01.050 stored before doing amnestic chemistry.

NOTE Confidence: 0.85407069375

00:42:01.050 --> 00:42:03.129 So if that that happened in Europe,

NOTE Confidence: 0.85407069375

00:42:03.130 --> 00:42:05.245 I cannot think what happened

NOTE Confidence: 0.85407069375

00:42:05.245 --> 00:42:07.970 in the in the entire world.

NOTE Confidence: 0.85407069375

00:42:07.970 --> 00:42:11.093 But you know cell blocks are are the first

NOTE Confidence: 0.85407069375

00:42:11.093 --> 00:42:13.748 option for us as a cytopathologist to do

NOTE Confidence: 0.85407069375

00:42:13.748 --> 00:42:16.549 all kind of immune or whatever right.

NOTE Confidence: 0.85407069375

00:42:16.550 --> 00:42:18.920 But cell blocks also have some

NOTE Confidence: 0.85407069375

00:42:18.920 --> 00:42:21.368 problems because there is a regarding

NOTE Confidence: 0.85407069375

00:42:21.368 --> 00:42:23.750 PDL one there is atherogenic city

NOTE Confidence: 0.85407069375

00:42:23.750 --> 00:42:25.580 interpretations of course in their

NOTE Confidence: 0.85407069375

00:42:25.580 --> 00:42:28.210 crunch we know that inter pathologies.

NOTE Confidence: 0.85407069375

00:42:28.210 --> 00:42:30.506 So this is a reality and it's  
NOTE Confidence: 0.85407069375

00:42:30.506 --> 00:42:32.590 a reality in in every way.  
NOTE Confidence: 0.85407069375

00:42:32.590 --> 00:42:35.929 So can can what can we do  
NOTE Confidence: 0.85407069375

00:42:35.929 --> 00:42:38.620 to overcome this challenge.  
NOTE Confidence: 0.85407069375

00:42:38.620 --> 00:42:40.164 What we can do?  
NOTE Confidence: 0.85407069375

00:42:40.164 --> 00:42:42.094 Two things based on literature,  
NOTE Confidence: 0.85407069375

00:42:42.100 --> 00:42:44.488 but before that I want to.  
NOTE Confidence: 0.85407069375

00:42:44.490 --> 00:42:47.338 Go or let you go to the South  
NOTE Confidence: 0.85407069375

00:42:47.338 --> 00:42:49.649 of Spain this is Cordova.  
NOTE Confidence: 0.85407069375

00:42:49.650 --> 00:42:52.116 In the very South of Spain this is Neta  
NOTE Confidence: 0.85407069375

00:42:52.116 --> 00:42:54.487 de Cordova and this called patios.  
NOTE Confidence: 0.85407069375

00:42:54.490 --> 00:42:56.662 Patios plenty of flowers that are  
NOTE Confidence: 0.85407069375

00:42:56.662 --> 00:42:59.210 very famous and are very beautiful.  
NOTE Confidence: 0.85407069375

00:42:59.210 --> 00:43:01.576 And this is Granada appearing in Granada.  
NOTE Confidence: 0.85407069375

00:43:01.580 --> 00:43:03.868 I don't know this is the Alhambra of  
NOTE Confidence: 0.85407069375

00:43:03.868 --> 00:43:06.150 Granada is a wonderful place to visit,

NOTE Confidence: 0.85407069375

00:43:06.150 --> 00:43:08.990 so I'll invite all of you to them.

NOTE Confidence: 0.85407069375

00:43:08.990 --> 00:43:09.886 First solution,

NOTE Confidence: 0.85407069375

00:43:09.886 --> 00:43:12.574 first solution came from a paper

NOTE Confidence: 0.85407069375

00:43:12.574 --> 00:43:14.948 recently published is published is here.

NOTE Confidence: 0.85407069375

00:43:14.950 --> 00:43:19.660 Up in 2022, this year and they say.

NOTE Confidence: 0.85407069375

00:43:19.660 --> 00:43:22.228 Is true the impact of a pathologist

NOTE Confidence: 0.85407069375

00:43:22.228 --> 00:43:23.860 personality on the interior

NOTE Confidence: 0.85407069375

00:43:23.860 --> 00:43:25.716 server variability and diagnosis,

NOTE Confidence: 0.85407069375

00:43:25.720 --> 00:43:27.046 accuracy of predictivity.

NOTE Confidence: 0.85407069375

00:43:27.046 --> 00:43:29.256 We're one immunochemistry in Lancaster,

NOTE Confidence: 0.85407069375

00:43:29.260 --> 00:43:32.230 OK, it's very recent paper.

NOTE Confidence: 0.85407069375

00:43:32.230 --> 00:43:36.574 The authors make an hypothesis saying

NOTE Confidence: 0.85407069375

00:43:36.574 --> 00:43:40.176 that pathologists personality has a lot

NOTE Confidence: 0.85407069375

00:43:40.176 --> 00:43:42.294 to do in this interservice variability

NOTE Confidence: 0.85407069375

00:43:42.294 --> 00:43:44.691 and then in the diagnosis accuracy

NOTE Confidence: 0.85407069375

00:43:44.691 --> 00:43:47.127 of PDL 1 immunity immunity scoring.  
NOTE Confidence: 0.85407069375

00:43:47.130 --> 00:43:49.902 So they they they the paper is done in  
NOTE Confidence: 0.85407069375

00:43:49.902 --> 00:43:52.796 this way 17 pathologist for four people,  
NOTE Confidence: 0.85407069375

00:43:52.800 --> 00:43:55.306 one in my scoring in 50 resected  
NOTE Confidence: 0.85407069375

00:43:55.306 --> 00:43:58.021 resected a resection non small cell lung  
NOTE Confidence: 0.85407069375

00:43:58.021 --> 00:44:00.373 cancer and this pathology is completed  
NOTE Confidence: 0.85407069375

00:44:00.445 --> 00:44:02.609 that certified personality test.  
NOTE Confidence: 0.85407069375

00:44:02.610 --> 00:44:03.872 That assess.  
NOTE Confidence: 0.85407069375

00:44:03.872 --> 00:44:06.396 Different type of personality,  
NOTE Confidence: 0.85407069375

00:44:06.400 --> 00:44:07.720 neuroticism, extraversion,  
NOTE Confidence: 0.85407069375

00:44:07.720 --> 00:44:09.700 etcetera are here.  
NOTE Confidence: 0.85407069375

00:44:09.700 --> 00:44:13.285 So good concordance was obtained  
NOTE Confidence: 0.85407069375

00:44:13.285 --> 00:44:16.153 in cases entirely positive,  
NOTE Confidence: 0.85407069375

00:44:16.160 --> 00:44:19.560 so less than 1% or very high positive,  
NOTE Confidence: 0.85407069375

00:44:19.560 --> 00:44:20.958 negative or positive.  
NOTE Confidence: 0.85407069375

00:44:20.958 --> 00:44:23.754 But the problem was in the

NOTE Confidence: 0.85407069375

00:44:23.754 --> 00:44:26.310 middle for cases with PDR one

NOTE Confidence: 0.85407069375

00:44:26.310 --> 00:44:28.400 score around the cutoff value.

NOTE Confidence: 0.85407069375

00:44:28.400 --> 00:44:30.759 The conclusion of this paper look at

NOTE Confidence: 0.85407069375

00:44:30.759 --> 00:44:33.636 this is published in lung cancer in 2022.

NOTE Confidence: 0.85407069375

00:44:33.636 --> 00:44:36.580 Pathologists with higher score

NOTE Confidence: 0.85407069375

00:44:36.580 --> 00:44:39.620 get higher score pathologies with

NOTE Confidence: 0.85407069375

00:44:39.620 --> 00:44:42.052 a personality careful diligent

NOTE Confidence: 0.85407069375

00:44:42.052 --> 00:44:44.219 conscientious anness pathologies.

NOTE Confidence: 0.85407069375

00:44:44.220 --> 00:44:48.476 By contrast a lower score a big problems

NOTE Confidence: 0.85407069375

00:44:48.476 --> 00:44:52.209 came with a pathologist that have.

NOTE Confidence: 0.85407069375

00:44:52.210 --> 00:44:54.424 Notice, notice, personality.

NOTE Confidence: 0.85407069375

00:44:54.424 --> 00:44:57.376 I'm not inventing anything.

NOTE Confidence: 0.85407069375

00:44:57.380 --> 00:44:59.768 This is published.

NOTE Confidence: 0.85407069375

00:44:59.770 --> 00:45:01.900 And she was sensitive or whatever.

NOTE Confidence: 0.85407069375

00:45:01.900 --> 00:45:03.712 So I don't know what type

NOTE Confidence: 0.85407069375

00:45:03.712 --> 00:45:04.920 of personality you have,  
NOTE Confidence: 0.85241562125

00:45:04.920 --> 00:45:09.984 but. I I personally won't go through this  
NOTE Confidence: 0.85241562125

00:45:09.990 --> 00:45:13.386 certified personality test just in case  
NOTE Confidence: 0.85241562125

00:45:13.390 --> 00:45:17.604 the second solution I think more more.  
NOTE Confidence: 0.85241562125

00:45:17.610 --> 00:45:20.870 Real, I would say is to have help of the  
NOTE Confidence: 0.85241562125

00:45:20.960 --> 00:45:23.940 digital pathology because some digital  
NOTE Confidence: 0.85241562125

00:45:23.940 --> 00:45:27.443 pathology system have an algorithm for  
NOTE Confidence: 0.85241562125

00:45:27.443 --> 00:45:30.923 helping us in the interpretation of PDL one.  
NOTE Confidence: 0.85241562125

00:45:30.930 --> 00:45:36.430 We use this UDC 200 system from roads  
NOTE Confidence: 0.85241562125

00:45:36.430 --> 00:45:39.310 that has an algorithm to evaluate  
NOTE Confidence: 0.85241562125

00:45:39.310 --> 00:45:44.090 PDL one with the clone speed 263.  
NOTE Confidence: 0.85241562125

00:45:44.090 --> 00:45:46.185 A digital purchase pathology is  
NOTE Confidence: 0.85241562125

00:45:46.185 --> 00:45:48.280 very important also in psychology  
NOTE Confidence: 0.85241562125

00:45:48.349 --> 00:45:49.790 you have many many advantages.  
NOTE Confidence: 0.85241562125

00:45:49.790 --> 00:45:52.310 I would say we can use it as a  
NOTE Confidence: 0.85241562125

00:45:52.385 --> 00:45:54.595 telepathology consultation, discussion,

NOTE Confidence: 0.85241562125

00:45:54.595 --> 00:45:57.430 discussion of cases with some other expert.

NOTE Confidence: 0.85241562125

00:45:57.430 --> 00:46:00.629 We can do as a teaching tool.

NOTE Confidence: 0.85241562125

00:46:00.629 --> 00:46:03.501 And as you see before we can immortalize

NOTE Confidence: 0.85241562125

00:46:03.501 --> 00:46:05.768 the smear for do other ancillary

NOTE Confidence: 0.85241562125

00:46:05.768 --> 00:46:08.470 testing and we can use algorithms,

NOTE Confidence: 0.85241562125

00:46:08.470 --> 00:46:13.104 but but to use algorithms we don't.

NOTE Confidence: 0.85241562125

00:46:13.110 --> 00:46:14.400 We can use a smear.

NOTE Confidence: 0.85241562125

00:46:14.400 --> 00:46:17.060 We is mandatory to use cell blocks,

NOTE Confidence: 0.85241562125

00:46:17.060 --> 00:46:18.059 paraffin cell blocks.

NOTE Confidence: 0.85241562125

00:46:18.059 --> 00:46:20.390 So it is necessary to get adequate

NOTE Confidence: 0.85241562125

00:46:20.454 --> 00:46:22.995 cell cell blocks and if possible to

NOTE Confidence: 0.85241562125

00:46:22.995 --> 00:46:24.980 preserve the architecture of the sample.

NOTE Confidence: 0.85241562125

00:46:24.980 --> 00:46:27.020 So why is important the management

NOTE Confidence: 0.85241562125

00:46:27.020 --> 00:46:29.235 of the samples and the development

NOTE Confidence: 0.85241562125

00:46:29.235 --> 00:46:30.815 of these new needles?

NOTE Confidence: 0.85241562125

00:46:30.820 --> 00:46:32.392 And these new procedures,  
NOTE Confidence: 0.85241562125

00:46:32.392 --> 00:46:35.828 OK so this is a small study we  
NOTE Confidence: 0.85241562125

00:46:35.828 --> 00:46:38.298 perform in our laboratory using  
NOTE Confidence: 0.85241562125

00:46:38.298 --> 00:46:41.605 evaluating 32 cell blocks by eye in  
NOTE Confidence: 0.85241562125

00:46:41.605 --> 00:46:44.215 the microscope and scan these cases  
NOTE Confidence: 0.85241562125

00:46:44.220 --> 00:46:48.245 and and go through the algorithm from  
NOTE Confidence: 0.85241562125

00:46:48.245 --> 00:46:52.079 our system and see what happened.  
NOTE Confidence: 0.85241562125

00:46:52.080 --> 00:46:53.252 This is an example.  
NOTE Confidence: 0.85241562125

00:46:53.252 --> 00:46:55.780 You see the example of the cell block.  
NOTE Confidence: 0.85241562125

00:46:55.780 --> 00:46:57.996 We select this area,  
NOTE Confidence: 0.85241562125

00:46:57.996 --> 00:47:01.320 we teach the machine how to,  
NOTE Confidence: 0.85241562125

00:47:01.320 --> 00:47:02.256 how to interpret,  
NOTE Confidence: 0.85241562125

00:47:02.256 --> 00:47:03.816 how to select the cells.  
NOTE Confidence: 0.85241562125

00:47:03.820 --> 00:47:06.508 So we teach the machine and  
NOTE Confidence: 0.85241562125

00:47:06.508 --> 00:47:08.920 the machine teach teach us to.  
NOTE Confidence: 0.85241562125

00:47:08.920 --> 00:47:11.680 So in this particular area

NOTE Confidence: 0.85241562125

00:47:11.680 --> 00:47:13.030 region of interest,

NOTE Confidence: 0.85241562125

00:47:13.030 --> 00:47:16.628 the percentage of PDL one is here 39.8.

NOTE Confidence: 0.85241562125

00:47:16.628 --> 00:47:19.316 We can select many different areas,

NOTE Confidence: 0.85241562125

00:47:19.320 --> 00:47:20.648 we select another one

NOTE Confidence: 0.85241562125

00:47:20.648 --> 00:47:21.976 and here the percentage.

NOTE Confidence: 0.85241562125

00:47:21.980 --> 00:47:27.996 This is a I can see he's 34

NOTE Confidence: 0.85241562125

00:47:27.996 --> 00:47:31.010 something 3033.3 so at the end.

NOTE Confidence: 0.85241562125

00:47:31.010 --> 00:47:32.949 We can do with many many other

NOTE Confidence: 0.85241562125

00:47:32.949 --> 00:47:34.300 areas of the sample.

NOTE Confidence: 0.85241562125

00:47:34.300 --> 00:47:36.430 The the machine gives us a

NOTE Confidence: 0.85241562125

00:47:36.430 --> 00:47:37.850 like a medium results.

NOTE Confidence: 0.85241562125

00:47:37.850 --> 00:47:40.602 In this case the machine says that the

NOTE Confidence: 0.85241562125

00:47:40.602 --> 00:47:44.860 person is of positivity of 137.6 OK.

NOTE Confidence: 0.85241562125

00:47:44.860 --> 00:47:47.198 So at the end in this study,

NOTE Confidence: 0.85241562125

00:47:47.200 --> 00:47:50.200 what we did is.

NOTE Confidence: 0.85241562125

00:47:50.200 --> 00:47:52.528 Demonstrate is a very short number  
NOTE Confidence: 0.85241562125

00:47:52.528 --> 00:47:54.770 of cases that the concordance  
NOTE Confidence: 0.85241562125

00:47:54.770 --> 00:47:57.218 among pathologists sticks to.  
NOTE Confidence: 0.85241562125

00:47:57.220 --> 00:48:00.358 X1X2 and X3 are by ice.  
NOTE Confidence: 0.85241562125

00:48:00.360 --> 00:48:05.184 A artificial intelligence one and AI two are.  
NOTE Confidence: 0.85241562125

00:48:05.190 --> 00:48:08.256 It is the same samples analyzed  
NOTE Confidence: 0.85241562125

00:48:08.256 --> 00:48:09.789 using this algorithm,  
NOTE Confidence: 0.85241562125

00:48:09.790 --> 00:48:10.909 the Concordia single,  
NOTE Confidence: 0.85241562125

00:48:10.909 --> 00:48:13.520 but is better when you use this  
NOTE Confidence: 0.85241562125

00:48:13.596 --> 00:48:16.245 algorithm and of course is for  
NOTE Confidence: 0.85241562125

00:48:16.245 --> 00:48:18.260 almost perfect when the algorithm  
NOTE Confidence: 0.85241562125

00:48:18.336 --> 00:48:20.646 is compared with the algorithm.  
NOTE Confidence: 0.85241562125

00:48:20.650 --> 00:48:23.858 What we did is to review blinded 3  
NOTE Confidence: 0.85241562125

00:48:23.858 --> 00:48:27.100 months later same cases, so pathology 1,  
NOTE Confidence: 0.85241562125

00:48:27.100 --> 00:48:29.450 pathology 2 using the eyes,  
NOTE Confidence: 0.85241562125

00:48:29.450 --> 00:48:32.570 artificial intelligent pathology to using

NOTE Confidence: 0.85241562125

00:48:32.570 --> 00:48:35.690 the eye and artificial intelligence.

NOTE Confidence: 0.85241562125

00:48:35.690 --> 00:48:37.820 Thing changed a little because

NOTE Confidence: 0.85241562125

00:48:37.820 --> 00:48:39.950 it seems that using artificial

NOTE Confidence: 0.85241562125

00:48:40.024 --> 00:48:42.610 intelligence you can be more precise.

NOTE Confidence: 0.85241562125

00:48:42.610 --> 00:48:45.137 Be careful because we have to teach

NOTE Confidence: 0.85241562125

00:48:45.137 --> 00:48:48.180 the machine before doing all this.

NOTE Confidence: 0.85241562125

00:48:48.180 --> 00:48:50.520 The machine doesn't know if

NOTE Confidence: 0.85241562125

00:48:50.520 --> 00:48:52.020 we don't teach the machine.

NOTE Confidence: 0.85241562125

00:48:52.020 --> 00:48:53.324 So remember human intelligence

NOTE Confidence: 0.85241562125

00:48:53.324 --> 00:48:55.280 has to be at my heart

NOTE Confidence: 0.830469566923077

00:48:55.349 --> 00:48:56.918 with artificial interest.

NOTE Confidence: 0.830469566923077

00:48:56.920 --> 00:48:58.685 So just finishing this part

NOTE Confidence: 0.830469566923077

00:48:58.685 --> 00:49:00.097 of immunity second mystery.

NOTE Confidence: 0.830469566923077

00:49:00.100 --> 00:49:02.599 Sometimes we try to do our best,

NOTE Confidence: 0.830469566923077

00:49:02.600 --> 00:49:04.252 but sometimes sometimes it

NOTE Confidence: 0.830469566923077

00:49:04.252 --> 00:49:05.904 doesn't work because the.  
NOTE Confidence: 0.830469566923077

00:49:05.910 --> 00:49:07.834 Sample because of whatever.  
NOTE Confidence: 0.830469566923077

00:49:07.834 --> 00:49:11.371 Be be aware that CPS and PDL  
NOTE Confidence: 0.830469566923077

00:49:11.371 --> 00:49:14.701 one is not possible to measure  
NOTE Confidence: 0.830469566923077

00:49:14.701 --> 00:49:16.366 on psychological samples.  
NOTE Confidence: 0.830469566923077

00:49:16.370 --> 00:49:19.667 We only can evaluate 2 more cells,  
NOTE Confidence: 0.830469566923077

00:49:19.670 --> 00:49:23.080 not infiltrate, it's not in.  
NOTE Confidence: 0.839813974615385

00:49:25.150 --> 00:49:26.990 Lymphocytes and so on.  
NOTE Confidence: 0.839813974615385

00:49:26.990 --> 00:49:30.770 And sometimes we do as best as we can.  
NOTE Confidence: 0.839813974615385

00:49:30.770 --> 00:49:31.694 But simply immunity,  
NOTE Confidence: 0.839813974615385

00:49:31.694 --> 00:49:32.926 the mystery doesn't work.  
NOTE Confidence: 0.839813974615385

00:49:32.930 --> 00:49:36.206 That happened, but with adequate samples,  
NOTE Confidence: 0.839813974615385

00:49:36.210 --> 00:49:38.874 proper management of the samples and  
NOTE Confidence: 0.839813974615385

00:49:38.874 --> 00:49:40.206 appropriate validation controls,  
NOTE Confidence: 0.839813974615385

00:49:40.210 --> 00:49:42.470 it really works on smears.  
NOTE Confidence: 0.839813974615385

00:49:42.470 --> 00:49:45.200 And you have here some examples

NOTE Confidence: 0.839813974615385  
00:49:45.200 --> 00:49:48.314 from real cases from our department  
NOTE Confidence: 0.839813974615385  
00:49:48.314 --> 00:49:50.710 and cellblocks and smears.  
NOTE Confidence: 0.839813974615385  
00:49:50.710 --> 00:49:51.988 So yes, Sir,  
NOTE Confidence: 0.839813974615385  
00:49:51.988 --> 00:49:54.970 2 words about this piece is very.  
NOTE Confidence: 0.839813974615385  
00:49:54.970 --> 00:49:57.402 Useful on psychology because  
NOTE Confidence: 0.839813974615385  
00:49:57.402 --> 00:49:59.226 especially on smears,  
NOTE Confidence: 0.839813974615385  
00:49:59.230 --> 00:50:01.096 because the main advantage is is  
NOTE Confidence: 0.839813974615385  
00:50:01.096 --> 00:50:03.300 that we have the entire nuclei,  
NOTE Confidence: 0.839813974615385  
00:50:03.300 --> 00:50:07.665 so the signals we analyze at the real ones.  
NOTE Confidence: 0.839813974615385  
00:50:07.670 --> 00:50:10.518 What we do is to select this monolayer  
NOTE Confidence: 0.839813974615385  
00:50:10.518 --> 00:50:13.200 areas and avoid these crowded because  
NOTE Confidence: 0.839813974615385  
00:50:13.200 --> 00:50:16.044 here we cannot interpret any signal.  
NOTE Confidence: 0.839813974615385  
00:50:16.050 --> 00:50:18.822 Here yes we we have the isolated  
NOTE Confidence: 0.839813974615385  
00:50:18.822 --> 00:50:21.010 nuclei to interpret the signals.  
NOTE Confidence: 0.839813974615385  
00:50:21.010 --> 00:50:23.845 What we do is to to to  
NOTE Confidence: 0.839813974615385

00:50:23.845 --> 00:50:25.678 mark this the the smear.  
NOTE Confidence: 0.839813974615385

00:50:25.678 --> 00:50:28.244 So it's not cost effective to to  
NOTE Confidence: 0.839813974615385

00:50:28.244 --> 00:50:30.666 put the probe over the whole smear.  
NOTE Confidence: 0.839813974615385

00:50:30.670 --> 00:50:34.414 So we mark the areas with the cells are  
NOTE Confidence: 0.839813974615385

00:50:34.414 --> 00:50:37.340 monolayers even we can do two different.  
NOTE Confidence: 0.839813974615385

00:50:37.340 --> 00:50:39.482 Approves and one on this part  
NOTE Confidence: 0.839813974615385

00:50:39.482 --> 00:50:42.065 of this meal and one of the  
NOTE Confidence: 0.839813974615385

00:50:42.065 --> 00:50:43.860 other part of this smears.  
NOTE Confidence: 0.839813974615385

00:50:43.860 --> 00:50:45.945 Probably the most tricky issue  
NOTE Confidence: 0.839813974615385

00:50:45.945 --> 00:50:48.914 on smears during fees is they is  
NOTE Confidence: 0.839813974615385

00:50:48.914 --> 00:50:51.326 optimizing the Pepsi in time because  
NOTE Confidence: 0.839813974615385

00:50:51.326 --> 00:50:53.686 if there is insufficient digestion  
NOTE Confidence: 0.839813974615385

00:50:53.686 --> 00:50:56.644 the proof doesn't enter into nuclei  
NOTE Confidence: 0.839813974615385

00:50:56.644 --> 00:50:59.570 and we see nothing but the the  
NOTE Confidence: 0.839813974615385

00:50:59.570 --> 00:51:02.204 the digestion is is too strong  
NOTE Confidence: 0.839813974615385

00:51:02.204 --> 00:51:04.976 is the sample is over digested.

NOTE Confidence: 0.839813974615385  
00:51:04.980 --> 00:51:07.506 We have this like a Donuts.  
NOTE Confidence: 0.839813974615385  
00:51:07.510 --> 00:51:10.830 Appearance of this is and this is not,  
NOTE Confidence: 0.839813974615385  
00:51:10.830 --> 00:51:12.782 we cannot see nothing.  
NOTE Confidence: 0.839813974615385  
00:51:12.782 --> 00:51:15.222 There are many papers published  
NOTE Confidence: 0.839813974615385  
00:51:15.222 --> 00:51:18.814 in the literature that that show  
NOTE Confidence: 0.839813974615385  
00:51:18.814 --> 00:51:22.966 the the usefulness the of this.  
NOTE Confidence: 0.839813974615385  
00:51:22.970 --> 00:51:23.518 It's me.  
NOTE Confidence: 0.839813974615385  
00:51:23.518 --> 00:51:25.436 Our support to infuse this is an  
NOTE Confidence: 0.839813974615385  
00:51:25.436 --> 00:51:27.218 example of ALK is that we do this  
NOTE Confidence: 0.839813974615385  
00:51:27.218 --> 00:51:29.601 is the real image we see at the  
NOTE Confidence: 0.839813974615385  
00:51:29.601 --> 00:51:30.965 Microsoft that fluorescent microscope  
NOTE Confidence: 0.839813974615385  
00:51:30.965 --> 00:51:32.990 and the very fancy, you know,  
NOTE Confidence: 0.839813974615385  
00:51:32.990 --> 00:51:35.366 makeup image that is very nice.  
NOTE Confidence: 0.839813974615385  
00:51:35.370 --> 00:51:38.268 But we deal every day with this  
NOTE Confidence: 0.839813974615385  
00:51:38.268 --> 00:51:39.534 type of images.  
NOTE Confidence: 0.839813974615385

00:51:39.534 --> 00:51:43.006 This is a rogue one positive cases and  
NOTE Confidence: 0.839813974615385

00:51:43.006 --> 00:51:46.250 this is a polysemic negative for Ark.  
NOTE Confidence: 0.839813974615385

00:51:46.250 --> 00:51:49.568 Sometimes we we see not entirely negative  
NOTE Confidence: 0.839813974615385

00:51:49.568 --> 00:51:53.536 cases and in which the chemistry for all.  
NOTE Confidence: 0.839813974615385

00:51:53.540 --> 00:51:56.940 We found out these polysemic cases and fish.  
NOTE Confidence: 0.839813974615385

00:51:56.940 --> 00:52:00.042 So as I said before, the advantage is  
NOTE Confidence: 0.839813974615385

00:52:00.042 --> 00:52:03.080 that we we have the entire nuclei,  
NOTE Confidence: 0.839813974615385

00:52:03.080 --> 00:52:05.560 we have to test at least 50 cells,  
NOTE Confidence: 0.839813974615385

00:52:05.560 --> 00:52:06.920 is better to test 100,  
NOTE Confidence: 0.839813974615385

00:52:06.920 --> 00:52:09.400 we test always 100 cells.  
NOTE Confidence: 0.839813974615385

00:52:09.400 --> 00:52:13.258 Of course digital scan the preparation  
NOTE Confidence: 0.839813974615385

00:52:13.258 --> 00:52:15.830 because we can understand.  
NOTE Confidence: 0.839813974615385

00:52:15.830 --> 00:52:16.490 And yes,  
NOTE Confidence: 0.839813974615385

00:52:16.490 --> 00:52:18.470 I have some words about NGS,  
NOTE Confidence: 0.839813974615385

00:52:18.470 --> 00:52:20.682 but before going to NGS we are  
NOTE Confidence: 0.839813974615385

00:52:20.682 --> 00:52:22.190 going to Canary Island.

NOTE Confidence: 0.839813974615385  
00:52:22.190 --> 00:52:24.890 The Spain have two different island.  
NOTE Confidence: 0.839813974615385  
00:52:24.890 --> 00:52:27.123 This is Canary Island without in the  
NOTE Confidence: 0.839813974615385  
00:52:27.123 --> 00:52:29.615 South close to Africa in the in the  
NOTE Confidence: 0.839813974615385  
00:52:29.615 --> 00:52:31.488 Atlantic Ocean and this is island  
NOTE Confidence: 0.839813974615385  
00:52:31.488 --> 00:52:33.516 of Tenerife is a totally volcanic  
NOTE Confidence: 0.839813974615385  
00:52:33.516 --> 00:52:37.440 island as you see here and we have.  
NOTE Confidence: 0.839813974615385  
00:52:37.440 --> 00:52:38.168 Beautiful places,  
NOTE Confidence: 0.839813974615385  
00:52:38.168 --> 00:52:40.352 so you are also invited to  
NOTE Confidence: 0.839813974615385  
00:52:40.352 --> 00:52:42.179 go to Canary Island.  
NOTE Confidence: 0.839813974615385  
00:52:42.180 --> 00:52:44.952 So what about NDS and and  
NOTE Confidence: 0.839813974615385  
00:52:44.952 --> 00:52:46.800 psychology was the same.  
NOTE Confidence: 0.839813974615385  
00:52:46.800 --> 00:52:48.250 There is a significant variation  
NOTE Confidence: 0.839813974615385  
00:52:48.250 --> 00:52:50.140 in the quality of the tissue,  
NOTE Confidence: 0.839813974615385  
00:52:50.140 --> 00:52:52.668 diversity in specimen preparation,  
NOTE Confidence: 0.839813974615385  
00:52:52.668 --> 00:52:55.196 and lack of standardization  
NOTE Confidence: 0.839813974615385

00:52:55.196 --> 00:52:56.460 across laboratories.  
NOTE Confidence: 0.8923929333333333

00:52:56.460 --> 00:53:00.699 It's important to say that if it is feasible,  
NOTE Confidence: 0.8923929333333333

00:53:00.700 --> 00:53:02.504 obtaining concurring coronaviruses and  
NOTE Confidence: 0.8923929333333333

00:53:02.504 --> 00:53:05.210 effeminate to maximize chances of sufficient  
NOTE Confidence: 0.8923929333333333

00:53:05.272 --> 00:53:07.337 material to perform ancillary studies.  
NOTE Confidence: 0.8923929333333333

00:53:07.340 --> 00:53:09.719 Please recommend it.  
NOTE Confidence: 0.8923929333333333

00:53:09.720 --> 00:53:14.031 We have to to to take into account when  
NOTE Confidence: 0.8923929333333333

00:53:14.031 --> 00:53:18.406 we talk about NDS to many to two ideas.  
NOTE Confidence: 0.8923929333333333

00:53:18.406 --> 00:53:21.184 One is overall cellularity that translate  
NOTE Confidence: 0.8923929333333333

00:53:21.184 --> 00:53:24.338 total DNA gene so it belongs to all  
NOTE Confidence: 0.8923929333333333

00:53:24.338 --> 00:53:26.750 nucleated cells in the samples and  
NOTE Confidence: 0.8923929333333333

00:53:26.750 --> 00:53:29.886 the other term is tumor fraction that  
NOTE Confidence: 0.8923929333333333

00:53:29.886 --> 00:53:31.798 translates to analytical sensitivity  
NOTE Confidence: 0.8923929333333333

00:53:31.798 --> 00:53:34.714 that means the percentage of tumor  
NOTE Confidence: 0.8923929333333333

00:53:34.714 --> 00:53:36.931 cells on the the whole proportion  
NOTE Confidence: 0.8923929333333333

00:53:36.931 --> 00:53:39.769 of cell on the on the summers so.

NOTE Confidence: 0.8923929333333333  
00:53:39.770 --> 00:53:43.616 How many cells do we need to get success to  
NOTE Confidence: 0.8923929333333333  
00:53:43.616 --> 00:53:47.024 get successful with NGS is easy to calculate.  
NOTE Confidence: 0.8923929333333333  
00:53:47.030 --> 00:53:52.703 1 cells have about 6 to 76 to 7.  
NOTE Confidence: 0.8923929333333333  
00:53:52.703 --> 00:53:55.067 Sorry. Picograms of DNA,  
NOTE Confidence: 0.8923929333333333  
00:53:55.070 --> 00:53:57.985 molecular acid required in one  
NOTE Confidence: 0.8923929333333333  
00:53:57.985 --> 00:54:01.660 nanogram of DNA a input needs.  
NOTE Confidence: 0.8923929333333333  
00:54:01.660 --> 00:54:05.476 One about 1:50 in the cells.  
NOTE Confidence: 0.8923929333333333  
00:54:05.480 --> 00:54:08.651 So for example NGS ion torrent that  
NOTE Confidence: 0.8923929333333333  
00:54:08.651 --> 00:54:11.268 requires around 10 nanograms of DNA  
NOTE Confidence: 0.8923929333333333  
00:54:11.268 --> 00:54:14.532 for the panel of 53 genes therefore  
NOTE Confidence: 0.8923929333333333  
00:54:14.532 --> 00:54:18.180 will require approximately 100.  
NOTE Confidence: 0.8923929333333333  
00:54:18.180 --> 00:54:22.570 Sorry as 1050 hundred 500 sales more  
NOTE Confidence: 0.8923929333333333  
00:54:22.570 --> 00:54:24.720 or less following this calculation.  
NOTE Confidence: 0.8923929333333333  
00:54:24.720 --> 00:54:28.094 OK, we are talking about sells all  
NOTE Confidence: 0.8923929333333333  
00:54:28.094 --> 00:54:31.350 kind of cells but the point is.  
NOTE Confidence: 0.8923929333333333

00:54:31.350 --> 00:54:34.038 To detect mutation in samples that  
NOTE Confidence: 0.8923929333333333

00:54:34.038 --> 00:54:36.969 have tumor cells and normal cells.  
NOTE Confidence: 0.8923929333333333

00:54:36.970 --> 00:54:39.434 So we have to enrich the samples and  
NOTE Confidence: 0.8923929333333333

00:54:39.434 --> 00:54:41.873 there are different techniques to  
NOTE Confidence: 0.8923929333333333

00:54:41.873 --> 00:54:44.209 enrich sample manual microdissection,  
NOTE Confidence: 0.8923929333333333

00:54:44.210 --> 00:54:46.358 manual microdissection and laser  
NOTE Confidence: 0.8923929333333333

00:54:46.358 --> 00:54:48.506 capture at this section.  
NOTE Confidence: 0.8923929333333333

00:54:48.510 --> 00:54:51.230 So we can get good results during NGS  
NOTE Confidence: 0.8923929333333333

00:54:51.230 --> 00:54:53.650 doing even digestion on the on the  
NOTE Confidence: 0.8923929333333333

00:54:53.650 --> 00:54:56.170 smears of of course the cell block.  
NOTE Confidence: 0.8923929333333333

00:54:56.170 --> 00:54:58.954 So The thing is that the the points  
NOTE Confidence: 0.8923929333333333

00:54:58.954 --> 00:55:00.878 are appropriate to more fraction.  
NOTE Confidence: 0.8923929333333333

00:55:00.880 --> 00:55:02.230 This is the most the key.  
NOTE Confidence: 0.8923929333333333

00:55:02.230 --> 00:55:06.143 The key issue to get to determine  
NOTE Confidence: 0.8923929333333333

00:55:06.143 --> 00:55:08.410 the successful mutation test.  
NOTE Confidence: 0.8923929333333333

00:55:08.410 --> 00:55:11.344 So for tests that required between

NOTE Confidence: 0.8923929333333333  
00:55:11.344 --> 00:55:13.969 5:00 and 10:00 nanograms of DNA,  
NOTE Confidence: 0.8923929333333333  
00:55:13.970 --> 00:55:16.046 RNA is published in the literature  
NOTE Confidence: 0.8923929333333333  
00:55:16.046 --> 00:55:17.907 that psychology is the sample  
NOTE Confidence: 0.8923929333333333  
00:55:17.907 --> 00:55:19.559 is a psychological samples.  
NOTE Confidence: 0.8923929333333333  
00:55:19.560 --> 00:55:22.830 We need about 200 tumor cells,  
NOTE Confidence: 0.8923929333333333  
00:55:22.830 --> 00:55:26.120 not all kind of cell tumor cells.  
NOTE Confidence: 0.8923929333333333  
00:55:26.120 --> 00:55:29.252 On with a 10% of two more cell content,  
NOTE Confidence: 0.8923929333333333  
00:55:29.260 --> 00:55:32.566 if it's paraffin we we would  
NOTE Confidence: 0.8923929333333333  
00:55:32.566 --> 00:55:34.764 need 502 more cells,  
NOTE Confidence: 0.8923929333333333  
00:55:34.764 --> 00:55:36.956 which means that about  
NOTE Confidence: 0.8923929333333333  
00:55:36.960 --> 00:55:38.800 2020% of tumor cell contact.  
NOTE Confidence: 0.8923929333333333  
00:55:38.800 --> 00:55:40.726 This is published in the literature  
NOTE Confidence: 0.8923929333333333  
00:55:40.726 --> 00:55:42.660 and this is already validated.  
NOTE Confidence: 0.8923929333333333  
00:55:42.660 --> 00:55:45.365 It's validated by the international  
NOTE Confidence: 0.8923929333333333  
00:55:45.365 --> 00:55:47.529 Molecular Cytopathology Meeting Group  
NOTE Confidence: 0.8923929333333333

00:55:47.529 --> 00:55:50.201 which is led by Professor Giancarlo

NOTE Confidence: 0.8923929333333333

00:55:50.201 --> 00:55:52.256 Trongone from Naples in Italy.

NOTE Confidence: 0.8923929333333333

00:55:52.260 --> 00:55:54.708 And we many institutions around the

NOTE Confidence: 0.8923929333333333

00:55:54.708 --> 00:55:56.740 world are participating in this.

NOTE Confidence: 0.8923929333333333

00:55:56.740 --> 00:55:59.398 Are these in these validation aside

NOTE Confidence: 0.8923929333333333

00:55:59.398 --> 00:56:02.183 we published already to to studies

NOTE Confidence: 0.8923929333333333

00:56:02.183 --> 00:56:04.513 validating mutations and last year

NOTE Confidence: 0.8923929333333333

00:56:04.513 --> 00:56:06.980 we published the study validating

NOTE Confidence: 0.8923929333333333

00:56:06.980 --> 00:56:09.460 translocation so and and this

NOTE Confidence: 0.8923929333333333

00:56:09.460 --> 00:56:11.590 validated on smears only smears.

NOTE Confidence: 0.8923929333333333

00:56:11.590 --> 00:56:14.150 OK so to finish this part and yes

NOTE Confidence: 0.8923929333333333

00:56:14.222 --> 00:56:16.808 it's useful tool for the analysis

NOTE Confidence: 0.8923929333333333

00:56:16.808 --> 00:56:18.532 and molecular alteration and

NOTE Confidence: 0.8923929333333333

00:56:18.608 --> 00:56:20.070 symbological samples.

NOTE Confidence: 0.8923929333333333

00:56:20.070 --> 00:56:22.265 It allows for a simultaneous

NOTE Confidence: 0.8923929333333333

00:56:22.265 --> 00:56:24.932 analysis of several genes the quality

NOTE Confidence: 0.8923929333333333

00:56:24.932 --> 00:56:26.887 of DNA and everyone is.

NOTE Confidence: 0.8923929333333333

00:56:26.890 --> 00:56:29.620 Better because it's not formally

NOTE Confidence: 0.8923929333333333

00:56:29.620 --> 00:56:32.949 in our paraffin went through and

NOTE Confidence: 0.8923929333333333

00:56:32.949 --> 00:56:35.764 we need of course externalization

NOTE Confidence: 0.8923929333333333

00:56:35.764 --> 00:56:38.740 protocols and internal validation.

NOTE Confidence: 0.8923929333333333

00:56:38.740 --> 00:56:41.516 So it is important is to cheat or

NOTE Confidence: 0.8923929333333333

00:56:41.516 --> 00:56:44.495 to manage a small sample using

NOTE Confidence: 0.8923929333333333

00:56:44.495 --> 00:56:46.228 different specimens, biopsies,

NOTE Confidence: 0.8923929333333333

00:56:46.228 --> 00:56:48.740 core biopsies and smear.

NOTE Confidence: 0.8538257158333333

00:56:48.740 --> 00:56:50.792 Anything is good because if we

NOTE Confidence: 0.8538257158333333

00:56:50.792 --> 00:56:52.959 have for example this cell block,

NOTE Confidence: 0.8538257158333333

00:56:52.960 --> 00:56:54.778 it is good, it's very cellular,

NOTE Confidence: 0.8538257158333333

00:56:54.780 --> 00:56:57.020 we can do whatever immuno fees are.

NOTE Confidence: 0.8538257158333333

00:56:57.020 --> 00:56:58.855 And yes, but what happening

NOTE Confidence: 0.8538257158333333

00:56:58.855 --> 00:57:01.230 if we have this cell block,

NOTE Confidence: 0.8538257158333333

00:57:01.230 --> 00:57:03.666 probably the two more content is  
NOTE Confidence: 0.853825715833333

00:57:03.666 --> 00:57:05.869 very low for performing an NGS.  
NOTE Confidence: 0.853825715833333

00:57:05.870 --> 00:57:08.460 But if we have smears from this  
NOTE Confidence: 0.853825715833333

00:57:08.460 --> 00:57:11.268 patient we can scan and we can add.  
NOTE Confidence: 0.853825715833333

00:57:11.270 --> 00:57:14.880 So putting together all the  
NOTE Confidence: 0.853825715833333

00:57:14.880 --> 00:57:18.094 samples we will be successful.  
NOTE Confidence: 0.853825715833333

00:57:18.094 --> 00:57:22.270 Doing anything immuno in the cell block fees  
NOTE Confidence: 0.853825715833333

00:57:22.361 --> 00:57:25.981 or NGS on the on the smears in this case.  
NOTE Confidence: 0.853825715833333

00:57:25.990 --> 00:57:29.134 So the success of any test  
NOTE Confidence: 0.853825715833333

00:57:29.134 --> 00:57:32.650 depends of the tissue procurement.  
NOTE Confidence: 0.853825715833333

00:57:32.650 --> 00:57:34.555 The test that we selected  
NOTE Confidence: 0.853825715833333

00:57:34.555 --> 00:57:36.991 related to amount of tissue and  
NOTE Confidence: 0.853825715833333

00:57:36.991 --> 00:57:39.266 characteristic of this the tissue,  
NOTE Confidence: 0.853825715833333

00:57:39.270 --> 00:57:43.710 the tissue of the samples and a careful  
NOTE Confidence: 0.853825715833333

00:57:43.710 --> 00:57:46.058 interpretation of the results because  
NOTE Confidence: 0.853825715833333

00:57:46.058 --> 00:57:48.740 it the treatment depends on that.

NOTE Confidence: 0.853825715833333  
00:57:48.740 --> 00:57:53.654 So, but this is very nice and very useful.  
NOTE Confidence: 0.853825715833333  
00:57:53.660 --> 00:57:54.081 Very.  
NOTE Confidence: 0.853825715833333  
00:57:54.081 --> 00:57:55.344 But so far,  
NOTE Confidence: 0.853825715833333  
00:57:55.344 --> 00:57:59.599 this is the real world and we live there is.  
NOTE Confidence: 0.853825715833333  
00:57:59.600 --> 00:58:01.740 Psychological samples are under  
NOTE Confidence: 0.853825715833333  
00:58:01.740 --> 00:58:04.415 use for molecular tests because,  
NOTE Confidence: 0.853825715833333  
00:58:04.420 --> 00:58:07.024 importantly, there is a lack of  
NOTE Confidence: 0.853825715833333  
00:58:07.024 --> 00:58:08.760 standardization across different labs.  
NOTE Confidence: 0.853825715833333  
00:58:08.760 --> 00:58:11.120 For specimen collection and processing,  
NOTE Confidence: 0.853825715833333  
00:58:11.120 --> 00:58:13.700 there is kind of reluctance of  
NOTE Confidence: 0.853825715833333  
00:58:13.700 --> 00:58:16.619 molecular and immune labs to validate  
NOTE Confidence: 0.853825715833333  
00:58:16.619 --> 00:58:19.414 different types of cytological samples.  
NOTE Confidence: 0.853825715833333  
00:58:19.420 --> 00:58:22.148 This is a kind of lack of awareness  
NOTE Confidence: 0.853825715833333  
00:58:22.148 --> 00:58:24.192 among oncology and pathology communities  
NOTE Confidence: 0.853825715833333  
00:58:24.192 --> 00:58:26.772 regarding the utility of this type  
NOTE Confidence: 0.853825715833333

00:58:26.772 --> 00:58:29.320 of samples for biomarker testing.  
NOTE Confidence: 0.853825715833333

00:58:29.320 --> 00:58:32.568 And even there is reluctance of some  
NOTE Confidence: 0.853825715833333

00:58:32.568 --> 00:58:34.390 pathologists and cytopathologist to  
NOTE Confidence: 0.853825715833333

00:58:34.390 --> 00:58:36.568 sacrifice these smears and this is  
NOTE Confidence: 0.853825715833333

00:58:36.568 --> 00:58:39.069 true although we have some solutions.  
NOTE Confidence: 0.853825715833333

00:58:39.070 --> 00:58:42.558 So yes, to finish and talk, yes, 2 minutes.  
NOTE Confidence: 0.853825715833333

00:58:42.558 --> 00:58:43.866 About macro environment,  
NOTE Confidence: 0.853825715833333

00:58:43.870 --> 00:58:46.110 I don't know you have had some time  
NOTE Confidence: 0.853825715833333

00:58:46.110 --> 00:58:48.819 and I like to go up to this pain  
NOTE Confidence: 0.853825715833333

00:58:48.819 --> 00:58:50.852 because this is the region where  
NOTE Confidence: 0.853825715833333

00:58:50.852 --> 00:58:53.788 where I was born is close to France,  
NOTE Confidence: 0.853825715833333

00:58:53.790 --> 00:58:55.446 is in the Pyrenees.  
NOTE Confidence: 0.853825715833333

00:58:55.446 --> 00:58:57.516 And it's beautiful in winter  
NOTE Confidence: 0.853825715833333

00:58:57.516 --> 00:59:00.008 and it's beautiful in summer,  
NOTE Confidence: 0.853825715833333

00:59:00.010 --> 00:59:03.194 so you also are invited to  
NOTE Confidence: 0.853825715833333

00:59:03.194 --> 00:59:04.890 the north of Spain.

NOTE Confidence: 0.853825715833333  
00:59:04.890 --> 00:59:07.386 And just few words because I  
NOTE Confidence: 0.853825715833333  
00:59:07.386 --> 00:59:09.619 think it's very important tumor  
NOTE Confidence: 0.853825715833333  
00:59:09.619 --> 00:59:11.563 microenvironment because cancer is  
NOTE Confidence: 0.853825715833333  
00:59:11.563 --> 00:59:15.042 made not only of tumor cells that it  
NOTE Confidence: 0.853825715833333  
00:59:15.042 --> 00:59:17.306 is with a tons of characteristics,  
NOTE Confidence: 0.853825715833333  
00:59:17.306 --> 00:59:20.469 but this also made these cells are in  
NOTE Confidence: 0.853825715833333  
00:59:20.469 --> 00:59:22.800 a in a background in an environment  
NOTE Confidence: 0.853825715833333  
00:59:22.800 --> 00:59:25.050 that has blood lymphatic cells,  
NOTE Confidence: 0.853825715833333  
00:59:25.050 --> 00:59:26.325 macrophages, B cells,  
NOTE Confidence: 0.853825715833333  
00:59:26.325 --> 00:59:28.025 T cell dendritic etcetera,  
NOTE Confidence: 0.853825715833333  
00:59:28.030 --> 00:59:28.626 etcetera.  
NOTE Confidence: 0.853825715833333  
00:59:28.626 --> 00:59:32.202 So the oncology is changing because  
NOTE Confidence: 0.853825715833333  
00:59:32.202 --> 00:59:34.610 the historical concept of of.  
NOTE Confidence: 0.853825715833333  
00:59:34.610 --> 00:59:36.770 Developing drugs or was the drug  
NOTE Confidence: 0.853825715833333  
00:59:36.770 --> 00:59:38.700 has to target tumor cells.  
NOTE Confidence: 0.853825715833333

00:59:38.700 --> 00:59:41.228 But now the new concept is the drug  
NOTE Confidence: 0.853825715833333

00:59:41.228 --> 00:59:43.784 target the immune cells and the immune  
NOTE Confidence: 0.853825715833333

00:59:43.784 --> 00:59:46.120 cells kills the the immune cells,  
NOTE Confidence: 0.853825715833333

00:59:46.120 --> 00:59:48.300 kills the the tumor cells.  
NOTE Confidence: 0.853825715833333

00:59:48.300 --> 00:59:51.772 So if we are able to understand the  
NOTE Confidence: 0.853825715833333

00:59:51.772 --> 00:59:55.118 new context of malignant tumors this  
NOTE Confidence: 0.853825715833333

00:59:55.118 --> 00:59:58.093 is important for design effective  
NOTE Confidence: 0.853825715833333

00:59:58.100 --> 01:00:01.799 anti cancer immunotherapies.  
NOTE Confidence: 0.853825715833333

01:00:01.800 --> 01:00:03.834 We know that there are tumors  
NOTE Confidence: 0.853825715833333

01:00:03.834 --> 01:00:05.930 that are are not inflamed,  
NOTE Confidence: 0.853825715833333

01:00:05.930 --> 01:00:08.366 they don't have many inflammatory cells  
NOTE Confidence: 0.853825715833333

01:00:08.366 --> 01:00:11.239 related with the tumor cells and these  
NOTE Confidence: 0.853825715833333

01:00:11.239 --> 01:00:13.597 tumor do not respond to immunotherapy.  
NOTE Confidence: 0.853825715833333

01:00:13.600 --> 01:00:15.280 By contrast that they had  
NOTE Confidence: 0.853825715833333

01:00:15.280 --> 01:00:18.066 hot tumors that have a lot of  
NOTE Confidence: 0.853825715833333

01:00:18.066 --> 01:00:19.620 tumor infiltrating lymphocyte.

NOTE Confidence: 0.853825715833333  
01:00:19.620 --> 01:00:22.280 In general they express PDL one and  
NOTE Confidence: 0.853825715833333  
01:00:22.280 --> 01:00:25.559 more than the others they have a  
NOTE Confidence: 0.853825715833333  
01:00:25.559 --> 01:00:27.615 more genomic instability etcetera.  
NOTE Confidence: 0.755276231111111  
01:00:27.620 --> 01:00:29.780 These two more to response  
NOTE Confidence: 0.755276231111111  
01:00:29.780 --> 01:00:31.508 to immunotherapy they key.  
NOTE Confidence: 0.755276231111111  
01:00:31.510 --> 01:00:34.522 Issue is how to do transport  
NOTE Confidence: 0.755276231111111  
01:00:34.522 --> 01:00:37.176 this tumor into other like this,  
NOTE Confidence: 0.755276231111111  
01:00:37.176 --> 01:00:39.086 we don't know so far.  
NOTE Confidence: 0.755276231111111  
01:00:39.090 --> 01:00:42.570 So we have to deal with with what we have.  
NOTE Confidence: 0.755276231111111  
01:00:42.570 --> 01:00:46.320 So I said before PDL one, win 4,  
NOTE Confidence: 0.755276231111111  
01:00:46.320 --> 01:00:48.540 PDL one we've seen only in  
NOTE Confidence: 0.755276231111111  
01:00:48.540 --> 01:00:50.374 ministry chemistry but is has  
NOTE Confidence: 0.755276231111111  
01:00:50.374 --> 01:00:52.064 many limitation as we know.  
NOTE Confidence: 0.755276231111111  
01:00:52.070 --> 01:00:55.058 So the assessment of tumor infiltrating  
NOTE Confidence: 0.755276231111111  
01:00:55.058 --> 01:00:58.002 lymphocytes together with PDL 1 by  
NOTE Confidence: 0.755276231111111

01:00:58.002 --> 01:00:59.762 Minister chemistry could improve  
NOTE Confidence: 0.7552762311111111

01:00:59.762 --> 01:01:02.030 the specificity of this essay.  
NOTE Confidence: 0.7552762311111111

01:01:02.030 --> 01:01:04.725 How do you test this micro environment  
NOTE Confidence: 0.7552762311111111

01:01:04.725 --> 01:01:07.869 in the real day in pathology using  
NOTE Confidence: 0.7552762311111111

01:01:07.869 --> 01:01:10.254 this technique that is called  
NOTE Confidence: 0.7552762311111111

01:01:10.254 --> 01:01:11.403 Multiplex immunofluorescence,  
NOTE Confidence: 0.7552762311111111

01:01:11.403 --> 01:01:12.066 immunofluorescence,  
NOTE Confidence: 0.7552762311111111

01:01:12.066 --> 01:01:14.718 fluorescence that the technique  
NOTE Confidence: 0.7552762311111111

01:01:14.718 --> 01:01:16.707 is very simple.  
NOTE Confidence: 0.7552762311111111

01:01:16.710 --> 01:01:19.526 It's not simple but is to do several  
NOTE Confidence: 0.7552762311111111

01:01:19.526 --> 01:01:21.750 runs of immunofluorescence each one  
NOTE Confidence: 0.7552762311111111

01:01:21.750 --> 01:01:25.110 mark with a specific mark with a  
NOTE Confidence: 0.7552762311111111

01:01:25.190 --> 01:01:27.970 different color SO1 above the other.  
NOTE Confidence: 0.7552762311111111

01:01:27.970 --> 01:01:29.594 We can do 68.  
NOTE Confidence: 0.7552762311111111

01:01:29.594 --> 01:01:33.539 Up to in our department up to 8 up to 10.  
NOTE Confidence: 0.7552762311111111

01:01:33.540 --> 01:01:36.100 So the end of the story is this

NOTE Confidence: 0.7552762311111111  
01:01:36.100 --> 01:01:39.127 we it can have the the separate  
NOTE Confidence: 0.7552762311111111  
01:01:39.127 --> 01:01:42.341 antibodies mark here but we can the  
NOTE Confidence: 0.7552762311111111  
01:01:42.341 --> 01:01:44.831 machine can merge all these images  
NOTE Confidence: 0.7552762311111111  
01:01:44.831 --> 01:01:47.840 so we can see the different cells  
NOTE Confidence: 0.7552762311111111  
01:01:47.840 --> 01:01:50.980 population of the cells in the in the.  
NOTE Confidence: 0.7552762311111111  
01:01:50.980 --> 01:01:53.234 In the stroma of the tumor and  
NOTE Confidence: 0.7552762311111111  
01:01:53.234 --> 01:01:54.616 even the relationship between  
NOTE Confidence: 0.7552762311111111  
01:01:54.616 --> 01:01:56.734 these cells and the tumor cells,  
NOTE Confidence: 0.7552762311111111  
01:01:56.740 --> 01:01:59.995 and we can quantify also these cells,  
NOTE Confidence: 0.7552762311111111  
01:02:00.000 --> 01:02:03.241 but the question is it is feasible  
NOTE Confidence: 0.7552762311111111  
01:02:03.241 --> 01:02:04.630 and psychological samples.  
NOTE Confidence: 0.7552762311111111  
01:02:04.630 --> 01:02:06.750 We need formalin fixed paraffin  
NOTE Confidence: 0.7552762311111111  
01:02:06.750 --> 01:02:08.870 embedded tissue and we need  
NOTE Confidence: 0.7552762311111111  
01:02:08.945 --> 01:02:11.030 amatoxin analysin as a guide.  
NOTE Confidence: 0.7552762311111111  
01:02:11.030 --> 01:02:13.346 We the architecture of the lesion  
NOTE Confidence: 0.7552762311111111

01:02:13.346 --> 01:02:16.036 is required and also the present of  
NOTE Confidence: 0.7552762311111111

01:02:16.036 --> 01:02:18.535 the stroma because in the stroma is  
NOTE Confidence: 0.7552762311111111

01:02:18.614 --> 01:02:21.687 mainly where the inflammatory cells are so.  
NOTE Confidence: 0.7552762311111111

01:02:21.690 --> 01:02:24.768 Go back to the the first part of my  
NOTE Confidence: 0.7552762311111111

01:02:24.768 --> 01:02:27.960 talk the the need to get good if it  
NOTE Confidence: 0.7552762311111111

01:02:27.960 --> 01:02:30.090 is possible diet cell blocks using  
NOTE Confidence: 0.7552762311111111

01:02:30.090 --> 01:02:32.829 this new needles and new procedures.  
NOTE Confidence: 0.7552762311111111

01:02:32.830 --> 01:02:34.830 This is very very important  
NOTE Confidence: 0.7552762311111111

01:02:34.830 --> 01:02:36.030 actually with this.  
NOTE Confidence: 0.7552762311111111

01:02:36.030 --> 01:02:38.060 These are real examples the  
NOTE Confidence: 0.7552762311111111

01:02:38.060 --> 01:02:41.042 amatoxin and the and the study when  
NOTE Confidence: 0.7552762311111111

01:02:41.042 --> 01:02:43.217 we use all these antibodies.  
NOTE Confidence: 0.7552762311111111

01:02:43.220 --> 01:02:45.938 And we published this study last  
NOTE Confidence: 0.7552762311111111

01:02:45.938 --> 01:02:49.658 year and is even is not a validation  
NOTE Confidence: 0.7552762311111111

01:02:49.658 --> 01:02:52.376 is nothing easy as 5-6 cases.  
NOTE Confidence: 0.7552762311111111

01:02:52.380 --> 01:02:55.180 I think yes to show that there

NOTE Confidence: 0.7552762311111111  
01:02:55.180 --> 01:02:57.204 is possible using this technique  
NOTE Confidence: 0.7552762311111111  
01:02:57.204 --> 01:03:00.060 is is feasible using this type of  
NOTE Confidence: 0.7552762311111111  
01:03:00.138 --> 01:03:02.766 psychological samples and even we can  
NOTE Confidence: 0.7552762311111111  
01:03:02.766 --> 01:03:05.957 measure we can count the percentage of  
NOTE Confidence: 0.7552762311111111  
01:03:05.957 --> 01:03:08.675 different immune cells in each case.  
NOTE Confidence: 0.7552762311111111  
01:03:08.680 --> 01:03:11.524 This is 1 case with many cells CD20,  
NOTE Confidence: 0.7552762311111111  
01:03:11.524 --> 01:03:13.140 CD, a CD3 and.  
NOTE Confidence: 0.7552762311111111  
01:03:13.140 --> 01:03:14.685 This is another case with  
NOTE Confidence: 0.7552762311111111  
01:03:14.685 --> 01:03:16.230 low low number of cells.  
NOTE Confidence: 0.7552762311111111  
01:03:16.230 --> 01:03:21.910 Same with CD88 and CD11B.  
NOTE Confidence: 0.7552762311111111  
01:03:21.910 --> 01:03:24.205 And this is the the the paper and the  
NOTE Confidence: 0.7552762311111111  
01:03:24.205 --> 01:03:26.494 the paper that published recently with  
NOTE Confidence: 0.7552762311111111  
01:03:26.494 --> 01:03:29.093 Fernando Smith that we refer also to  
NOTE Confidence: 0.7552762311111111  
01:03:29.093 --> 01:03:31.095 this to this technique and this is  
NOTE Confidence: 0.7552762311111111  
01:03:31.095 --> 01:03:33.868 one of the picture of the paper you  
NOTE Confidence: 0.7552762311111111

01:03:33.868 --> 01:03:36.709 see here and these cells are here.  
NOTE Confidence: 0.7552762311111111

01:03:36.710 --> 01:03:39.422 So yes my last my last slide just  
NOTE Confidence: 0.7552762311111111

01:03:39.422 --> 01:03:42.827 to summarize I would say there is a  
NOTE Confidence: 0.7552762311111111

01:03:42.827 --> 01:03:44.595 theological samples provide versatile  
NOTE Confidence: 0.7552762311111111

01:03:44.672 --> 01:03:47.027 ways to perform properly accurate  
NOTE Confidence: 0.7552762311111111

01:03:47.027 --> 01:03:49.382 diagnosis as well as biomarker  
NOTE Confidence: 0.7552762311111111

01:03:49.390 --> 01:03:51.820 testing for lung lung cancer.  
NOTE Confidence: 0.7552762311111111

01:03:51.820 --> 01:03:52.604 Analytical case,  
NOTE Confidence: 0.7552762311111111

01:03:52.604 --> 01:03:55.348 you as in the specimen collection and  
NOTE Confidence: 0.7552762311111111

01:03:55.348 --> 01:03:57.904 and and management of the samples  
NOTE Confidence: 0.7552762311111111

01:03:57.904 --> 01:03:59.999 impact the success of diagnostic  
NOTE Confidence: 0.778453714285714

01:04:00.000 --> 01:04:00.946 biomarker testing.  
NOTE Confidence: 0.778453714285714

01:04:00.946 --> 01:04:03.784 So the cyto technician have a  
NOTE Confidence: 0.778453714285714

01:04:03.784 --> 01:04:06.478 key role on all this process.  
NOTE Confidence: 0.778453714285714

01:04:06.480 --> 01:04:09.492 We are nothing without them and they  
NOTE Confidence: 0.778453714285714

01:04:09.492 --> 01:04:11.036 pathologists and the psychopathologies

NOTE Confidence: 0.778453714285714  
01:04:11.036 --> 01:04:13.783 of course plays a key role ensuring  
NOTE Confidence: 0.778453714285714  
01:04:13.783 --> 01:04:15.678 the success of biomarker testing.  
NOTE Confidence: 0.778453714285714  
01:04:15.680 --> 01:04:19.568 So we need to be able to integrate clinical  
NOTE Confidence: 0.778453714285714  
01:04:19.568 --> 01:04:22.648 radiologic morphological biomarker results.  
NOTE Confidence: 0.778453714285714  
01:04:22.650 --> 01:04:24.890 And just to remind you that precision  
NOTE Confidence: 0.778453714285714  
01:04:24.890 --> 01:04:26.969 medicine is in the hands of the,  
NOTE Confidence: 0.778453714285714  
01:04:26.970 --> 01:04:28.642 in this case, cytopathologist.  
NOTE Confidence: 0.778453714285714  
01:04:28.642 --> 01:04:31.150 So this I want to thank  
NOTE Confidence: 0.778453714285714  
01:04:31.229 --> 01:04:33.009 you for your attention,  
NOTE Confidence: 0.778453714285714  
01:04:33.010 --> 01:04:35.146 for your patience with my English.  
NOTE Confidence: 0.778453714285714  
01:04:35.150 --> 01:04:36.670 And this is my university,  
NOTE Confidence: 0.778453714285714  
01:04:36.670 --> 01:04:39.204 University of Navarra is a beautiful place.  
NOTE Confidence: 0.778453714285714  
01:04:39.210 --> 01:04:41.709 Of course, you all are invited seriously,  
NOTE Confidence: 0.778453714285714  
01:04:41.710 --> 01:04:43.528 you are invited to my university.  
NOTE Confidence: 0.778453714285714  
01:04:43.530 --> 01:04:44.510 So thank you very much.  
NOTE Confidence: 0.778453714285714

01:04:44.510 --> 01:04:45.970 I'm hoping for your question.  
NOTE Confidence: 0.66216576

01:04:53.670 --> 01:04:55.280 Any question? No.  
NOTE Confidence: 0.556257365

01:05:01.260 --> 01:05:05.878 The meeting. You need to have  
NOTE Confidence: 0.556257365

01:05:05.878 --> 01:05:08.863 the clinical folks through that.  
NOTE Confidence: 0.599473398

01:05:10.180 --> 01:05:11.300 You know, for their rose  
NOTE Confidence: 0.703315806923077

01:05:11.310 --> 01:05:12.542 technique. In other words,  
NOTE Confidence: 0.703315806923077

01:05:12.542 --> 01:05:14.390 how did you implement that new  
NOTE Confidence: 0.703315806923077

01:05:14.452 --> 01:05:17.470 needle and how teams embrace it?  
NOTE Confidence: 0.703315806923077

01:05:17.470 --> 01:05:20.718 Yeah, it would in our in our university  
NOTE Confidence: 0.703315806923077

01:05:20.718 --> 01:05:24.002 they then what we did is that the ECHO  
NOTE Confidence: 0.703315806923077

01:05:24.002 --> 01:05:26.745 and the Echo endoscopist start doing  
NOTE Confidence: 0.703315806923077

01:05:26.745 --> 01:05:30.712 that because it's easy doing doing use  
NOTE Confidence: 0.703315806923077

01:05:30.712 --> 01:05:34.870 and then the ebus people follow them.  
NOTE Confidence: 0.703315806923077

01:05:34.870 --> 01:05:38.566 So yes, they start using it and we  
NOTE Confidence: 0.703315806923077

01:05:38.566 --> 01:05:41.370 were getting very good results.  
NOTE Confidence: 0.703315806923077

01:05:41.370 --> 01:05:44.184 So we implement so we use

NOTE Confidence: 0.703315806923077  
01:05:44.184 --> 01:05:46.060 in every procedure now.  
NOTE Confidence: 0.703315806923077  
01:05:46.060 --> 01:05:48.594 And they were very amenable to change.  
NOTE Confidence: 0.703315806923077  
01:05:48.600 --> 01:05:51.198 Nothing, no, no, no, no changes,  
NOTE Confidence: 0.703315806923077  
01:05:51.200 --> 01:05:53.100 no change. No, no, no.  
NOTE Confidence: 0.703315806923077  
01:05:53.100 --> 01:05:54.040 It's not a big issue,  
NOTE Confidence: 0.703315806923077  
01:05:54.040 --> 01:05:55.600 the cars, but the only,  
NOTE Confidence: 0.703315806923077  
01:05:55.600 --> 01:05:58.288 the only thing is that the person who  
NOTE Confidence: 0.703315806923077  
01:05:58.288 --> 01:06:01.436 do that has to be trained and has to do,  
NOTE Confidence: 0.703315806923077  
01:06:01.440 --> 01:06:03.108 you know, but it's very good.  
NOTE Confidence: 0.824911228333333  
01:06:05.960 --> 01:06:07.736 I don't know. There are several,  
NOTE Confidence: 0.824911228333333  
01:06:07.740 --> 01:06:09.940 several companies doing that. Yeah,  
NOTE Confidence: 0.824911228333333  
01:06:09.940 --> 01:06:13.590 I I I can give you this data by e-mail.  
NOTE Confidence: 0.672204652222222  
01:06:18.860 --> 01:06:22.060 You know one species, but all the clinical  
NOTE Confidence: 0.672204652222222  
01:06:22.060 --> 01:06:24.610 trials were done on tissue specimens.  
NOTE Confidence: 0.8696301  
01:06:24.930 --> 01:06:26.626 How do you know that the psychologist has  
NOTE Confidence: 0.801766143333333

01:06:26.950 --> 01:06:32.920 the same association? No. Well.  
NOTE Confidence: 0.8017661433333333

01:06:32.920 --> 01:06:35.976 Yeah, so people one is even is not  
NOTE Confidence: 0.8017661433333333

01:06:35.976 --> 01:06:39.988 validated in psychology, but even is not.  
NOTE Confidence: 0.8017661433333333

01:06:39.988 --> 01:06:42.905 Consider in psychology, I would say.  
NOTE Confidence: 0.8017661433333333

01:06:42.905 --> 01:06:45.250 But I know yeah, should be.  
NOTE Confidence: 0.8017661433333333

01:06:45.250 --> 01:06:49.350 Of course you'd be under. Yes.  
NOTE Confidence: 0.8017661433333333

01:06:49.350 --> 01:06:52.646 No, no, no, no. No, no, no, no.  
NOTE Confidence: 0.8017661433333333

01:06:52.646 --> 01:06:54.098 Yeah, it's it's a proper tissue,  
NOTE Confidence: 0.8017661433333333

01:06:54.100 --> 01:06:56.260 but it's going to be a proper for cytology,  
NOTE Confidence: 0.8017661433333333

01:06:56.260 --> 01:06:59.710 I hope. Yeah, but no, yeah,  
NOTE Confidence: 0.8017661433333333

01:06:59.710 --> 01:07:01.860 there are papers in the  
NOTE Confidence: 0.8017661433333333

01:07:01.860 --> 01:07:03.580 literature that demonstrate the,  
NOTE Confidence: 0.8017661433333333

01:07:03.580 --> 01:07:06.440 the good results comparing resection,  
NOTE Confidence: 0.8017661433333333

01:07:06.440 --> 01:07:09.305 specimen, cellblock and smears that  
NOTE Confidence: 0.8017661433333333

01:07:09.305 --> 01:07:13.295 exist many papers one and the second  
NOTE Confidence: 0.8017661433333333

01:07:13.295 --> 01:07:16.879 thing is that there are coming papers,

NOTE Confidence: 0.801766143333333  
01:07:16.880 --> 01:07:18.380 we are doing a study.  
NOTE Confidence: 0.801766143333333  
01:07:18.380 --> 01:07:21.004 I will let you know when we finish.  
NOTE Confidence: 0.801766143333333  
01:07:21.010 --> 01:07:24.610 Will be the one on cytological samples by I,  
NOTE Confidence: 0.801766143333333  
01:07:24.610 --> 01:07:27.354 by the algorithm that I show you  
NOTE Confidence: 0.801766143333333  
01:07:27.354 --> 01:07:29.970 and compare with clinical results.  
NOTE Confidence: 0.801766143333333  
01:07:29.970 --> 01:07:32.168 This is the study we are doing.  
NOTE Confidence: 0.801766143333333  
01:07:32.170 --> 01:07:35.596 So yes, I'll let you know and we don't so,  
NOTE Confidence: 0.801766143333333  
01:07:35.596 --> 01:07:36.514 but yeah, yeah,  
NOTE Confidence: 0.801766143333333  
01:07:36.514 --> 01:07:38.755 it's not validated by I think the  
NOTE Confidence: 0.801766143333333  
01:07:38.755 --> 01:07:41.156 patient would benefit if it's well done.  
NOTE Confidence: 0.944401644  
01:07:43.550 --> 01:07:45.234 Yeah. No, no, no, no. Not yet.  
NOTE Confidence: 0.944401644  
01:07:45.234 --> 01:07:47.910 Not yet. Yeah, you are right. Not yet.  
NOTE Confidence: 0.944401644  
01:07:47.910 --> 01:07:49.660 Hope we will have, but not yet.  
NOTE Confidence: 0.14122492  
01:07:52.490 --> 01:07:53.340 Multiplex.  
NOTE Confidence: 0.7698767  
01:07:55.740 --> 01:07:56.020 Help.  
NOTE Confidence: 0.691435665

01:07:58.090 --> 01:07:58.878 Because now I think.  
NOTE Confidence: 0.8161253933333333

01:08:00.440 --> 01:08:02.342 Yeah, it's more research in our  
NOTE Confidence: 0.8161253933333333

01:08:02.342 --> 01:08:04.820 in our lab is only researched,  
NOTE Confidence: 0.8161253933333333

01:08:04.820 --> 01:08:09.120 no translation to the clinics. Against the.  
NOTE Confidence: 0.79639212375

01:08:14.050 --> 01:08:16.858 Yeah, so far is same with PDL one,  
NOTE Confidence: 0.79639212375

01:08:16.860 --> 01:08:19.415 there is no translation to but even  
NOTE Confidence: 0.79639212375

01:08:19.415 --> 01:08:22.373 in in surgical specimen there is no  
NOTE Confidence: 0.79639212375

01:08:22.373 --> 01:08:24.920 translation so far with Multiplex, yeah.  
NOTE Confidence: 0.677777085

01:08:28.870 --> 01:08:31.870 I just requested since now  
NOTE Confidence: 0.677777085

01:08:31.870 --> 01:08:33.710 they finally go by option.  
NOTE Confidence: 0.7236318733333333

01:08:35.930 --> 01:08:39.520 You know, now we get assessment report.  
NOTE Confidence: 0.8982044475

01:08:40.630 --> 01:08:41.838 What's the best way  
NOTE Confidence: 0.71609089625

01:08:41.850 --> 01:08:44.222 to process those tests  
NOTE Confidence: 0.71609089625

01:08:44.222 --> 01:08:46.594 because they all institute?  
NOTE Confidence: 0.71609089625

01:08:46.600 --> 01:08:48.280 You know, sometimes, you know.  
NOTE Confidence: 0.15111926

01:08:50.990 --> 01:08:54.210 Formatting. Start with that.

NOTE Confidence: 0.580575915

01:08:56.890 --> 01:08:57.410 At all.

NOTE Confidence: 0.4071452

01:09:00.320 --> 01:09:02.700 Awesome. Thanks. So

NOTE Confidence: 0.817828632

01:09:03.080 --> 01:09:04.560 that you know what's that?

NOTE Confidence: 0.844807004444445

01:09:07.830 --> 01:09:11.126 Well, the the first thing is that all

NOTE Confidence: 0.844807004444445

01:09:11.126 --> 01:09:13.745 sell block is that recommendation

NOTE Confidence: 0.844807004444445

01:09:13.745 --> 01:09:16.590 should be fixed in informally.

NOTE Confidence: 0.844807004444445

01:09:16.590 --> 01:09:18.954 The small biopsies and cell block

NOTE Confidence: 0.844807004444445

01:09:18.954 --> 01:09:21.039 that we clot whatever we do,

NOTE Confidence: 0.844807004444445

01:09:21.040 --> 01:09:24.449 the cell block should be facing formally

NOTE Confidence: 0.844807004444445

01:09:24.449 --> 01:09:27.400 because it allows us to adapt to

NOTE Confidence: 0.844807004444445

01:09:27.400 --> 01:09:30.340 the protocols of immune or whatever.

NOTE Confidence: 0.844807004444445

01:09:30.340 --> 01:09:32.176 So first thing has they should

NOTE Confidence: 0.844807004444445

01:09:32.176 --> 01:09:33.400 be fixed in formalin.

NOTE Confidence: 0.844807004444445

01:09:33.400 --> 01:09:36.175 Yeah it's the main recommendation, yeah.

NOTE Confidence: 0.844807004444445

01:09:36.175 --> 01:09:39.640 And then yes trade like a paraffin,

NOTE Confidence: 0.844807004444445

01:09:39.640 --> 01:09:41.521 normal paraffin sample.  
NOTE Confidence: 0.844807004444445

01:09:41.521 --> 01:09:42.148 So  
NOTE Confidence: 0.459446306

01:09:42.160 --> 01:09:43.710 that little spectrum will state.  
NOTE Confidence: 0.850667221666667

01:09:46.340 --> 01:09:48.098 Well, it depends of the hospital.  
NOTE Confidence: 0.850667221666667

01:09:48.100 --> 01:09:50.774 In my hospital is done by the  
NOTE Confidence: 0.850667221666667

01:09:50.780 --> 01:09:53.036 we are our small group, so we,  
NOTE Confidence: 0.850667221666667

01:09:53.036 --> 01:09:55.626 we psychologists do both the  
NOTE Confidence: 0.850667221666667

01:09:55.626 --> 01:09:58.720 small biopsies and the psychology.  
NOTE Confidence: 0.850667221666667

01:09:58.720 --> 01:10:00.645 We consult with other colleagues  
NOTE Confidence: 0.850667221666667

01:10:00.645 --> 01:10:03.260 that we are handled by us. Yeah.  
NOTE Confidence: 0.850667221666667

01:10:03.260 --> 01:10:05.902 In some other hospital is you know,  
NOTE Confidence: 0.850667221666667

01:10:05.902 --> 01:10:07.507 the problem with psychopathology is  
NOTE Confidence: 0.850667221666667

01:10:07.507 --> 01:10:10.322 that there is it's very hard to get  
NOTE Confidence: 0.850667221666667

01:10:10.322 --> 01:10:13.860 standardized procedures, it's very hard so.  
NOTE Confidence: 0.850667221666667

01:10:13.860 --> 01:10:14.960 Yeah, we have to do.  
NOTE Confidence: 0.850667221666667

01:10:14.960 --> 01:10:17.100 We have to work a lot. Yeah.

NOTE Confidence: 0.52331363

01:10:22.200 --> 01:10:25.000 OK. Anything.