

WEBVTT

NOTE duration:"01:08:43"

NOTE recognizability:0.823

NOTE language:en-us

NOTE Confidence: 0.85639803

00:00:00.000 --> 00:00:01.680 I think we'll get started.

NOTE Confidence: 0.91080498

00:00:01.690 --> 00:00:04.350 So it's 1230. Thanks all for coming.

NOTE Confidence: 0.91080498

00:00:04.350 --> 00:00:05.860 It's my great pleasure to

NOTE Confidence: 0.91080498

00:00:05.860 --> 00:00:07.068 introduce friend and mentor,

NOTE Confidence: 0.91080498

00:00:07.070 --> 00:00:09.790 doctor Syed Ali's world renowned

NOTE Confidence: 0.91080498

00:00:09.790 --> 00:00:11.966 cytopathologist and innovative educator.

NOTE Confidence: 0.91080498

00:00:11.970 --> 00:00:13.638 Doctor Ali serves as professor of

NOTE Confidence: 0.91080498

00:00:13.638 --> 00:00:15.338 pathology and radiology at the Johns

NOTE Confidence: 0.91080498

00:00:15.338 --> 00:00:16.952 Hopkins University School of Medicine as

NOTE Confidence: 0.91080498

00:00:16.952 --> 00:00:19.145 well as a director of the Division of

NOTE Confidence: 0.91080498

00:00:19.145 --> 00:00:20.890 Cytopathology at Johns Hopkins Hospital.

NOTE Confidence: 0.91080498

00:00:20.890 --> 00:00:22.856 He received his pathology residency

NOTE Confidence: 0.91080498

00:00:22.856 --> 00:00:24.726 training at North Shore University,

NOTE Confidence: 0.91080498

00:00:24.730 --> 00:00:26.735 Cornell University in New York  
NOTE Confidence: 0.91080498

00:00:26.735 --> 00:00:28.339 with fellowships and oncologic  
NOTE Confidence: 0.91080498

00:00:28.339 --> 00:00:30.059 surgical pathology at Memorial.  
NOTE Confidence: 0.91080498

00:00:30.060 --> 00:00:30.750 In New York,  
NOTE Confidence: 0.91080498

00:00:30.750 --> 00:00:32.540 under the mentorship of Doctor Juan Rosai,  
NOTE Confidence: 0.91080498

00:00:32.540 --> 00:00:34.012 followed by cytopathology at  
NOTE Confidence: 0.91080498

00:00:34.012 --> 00:00:35.484 the Johns Hopkins Hospital  
NOTE Confidence: 0.79959724

00:00:35.500 --> 00:00:37.788 in Baltimore. Known globally  
NOTE Confidence: 0.878961890909091

00:00:37.800 --> 00:00:39.456 as an innovative educator and one  
NOTE Confidence: 0.878961890909091

00:00:39.456 --> 00:00:41.280 of the most traveled pathologists,  
NOTE Confidence: 0.878961890909091

00:00:41.280 --> 00:00:44.010 doctor Ali has well over 350  
NOTE Confidence: 0.878961890909091

00:00:44.010 --> 00:00:45.892 invited lectures, keynote speeches,  
NOTE Confidence: 0.878961890909091

00:00:45.892 --> 00:00:47.380 and visiting professorships  
NOTE Confidence: 0.878961890909091

00:00:47.380 --> 00:00:48.780 all over the world.  
NOTE Confidence: 0.878961890909091

00:00:48.780 --> 00:00:50.572 In collaboration with international  
NOTE Confidence: 0.878961890909091

00:00:50.572 --> 00:00:53.022 societies in universities, he directs,

NOTE Confidence: 0.878961890909091  
00:00:53.022 --> 00:00:56.328 or Co directs several annual major  
NOTE Confidence: 0.878961890909091  
00:00:56.328 --> 00:00:57.430 cytopathology tutorials.  
NOTE Confidence: 0.878961890909091  
00:00:57.430 --> 00:00:59.674 He's published extensively with over 300  
NOTE Confidence: 0.878961890909091  
00:00:59.674 --> 00:01:01.710 articles and major scientific journals,  
NOTE Confidence: 0.878961890909091  
00:01:01.710 --> 00:01:03.530 over 35 books, book chapters,  
NOTE Confidence: 0.878961890909091  
00:01:03.530 --> 00:01:04.658 and electronic media.  
NOTE Confidence: 0.878961890909091  
00:01:04.658 --> 00:01:06.914 Known for his expertise in thyroid  
NOTE Confidence: 0.878961890909091  
00:01:06.914 --> 00:01:08.930 and pancreatic cytopathology.  
NOTE Confidence: 0.878961890909091  
00:01:08.930 --> 00:01:11.408 His monograph on the Bethesda system  
NOTE Confidence: 0.878961890909091  
00:01:11.408 --> 00:01:13.060 for reporting thyroid cytopathology  
NOTE Confidence: 0.878961890909091  
00:01:13.123 --> 00:01:14.903 has been translated in seven  
NOTE Confidence: 0.878961890909091  
00:01:14.903 --> 00:01:17.063 languages and is extensively used in  
NOTE Confidence: 0.878961890909091  
00:01:17.063 --> 00:01:19.070 medical practice all over the world.  
NOTE Confidence: 0.878961890909091  
00:01:19.070 --> 00:01:20.858 He's the founding editor in chief of  
NOTE Confidence: 0.878961890909091  
00:01:20.858 --> 00:01:22.428 the Journal of the American Society  
NOTE Confidence: 0.878961890909091

00:01:22.428 --> 00:01:24.138 of Cytopathology and has served as  
NOTE Confidence: 0.878961890909091

00:01:24.138 --> 00:01:26.161 a member of the Executive Board and  
NOTE Confidence: 0.878961890909091

00:01:26.161 --> 00:01:27.561 chair of the Scientific Program.  
NOTE Confidence: 0.878961890909091

00:01:27.570 --> 00:01:29.555 And other committees of the  
NOTE Confidence: 0.878961890909091

00:01:29.555 --> 00:01:31.143 American Society of Cytopathology.  
NOTE Confidence: 0.878961890909091

00:01:31.150 --> 00:01:33.070 He's past president of the ANC,  
NOTE Confidence: 0.878961890909091

00:01:33.070 --> 00:01:35.325 presently serves as Vice President  
NOTE Confidence: 0.878961890909091

00:01:35.325 --> 00:01:36.227 in November,  
NOTE Confidence: 0.878961890909091

00:01:36.230 --> 00:01:38.230 president-elect of the International  
NOTE Confidence: 0.878961890909091

00:01:38.230 --> 00:01:39.730 Academy of Psychology,  
NOTE Confidence: 0.878961890909091

00:01:39.730 --> 00:01:41.878 and the Chair of the International  
NOTE Confidence: 0.878961890909091

00:01:41.878 --> 00:01:43.850 Board of Cytopathology of the AIC.  
NOTE Confidence: 0.878961890909091

00:01:43.850 --> 00:01:45.873 He's a fellow of both the Royal  
NOTE Confidence: 0.878961890909091

00:01:45.873 --> 00:01:47.368 College of Pathologists and the IC,  
NOTE Confidence: 0.878961890909091

00:01:47.370 --> 00:01:49.830 and a recipient of ASC's Warren  
NOTE Confidence: 0.878961890909091

00:01:49.830 --> 00:01:51.470 Lang Award in 96,

NOTE Confidence: 0.878961890909091  
00:01:51.470 --> 00:01:53.690 the President's award in 2012,  
NOTE Confidence: 0.878961890909091  
00:01:53.690 --> 00:01:56.306 Excellence in Education award in 2015,  
NOTE Confidence: 0.878961890909091  
00:01:56.310 --> 00:01:57.790 and the Maurice Goldback Board.  
NOTE Confidence: 0.878961890909091  
00:01:57.790 --> 00:01:59.880 In 2019.  
NOTE Confidence: 0.878961890909091  
00:01:59.880 --> 00:02:01.386 I personally know Doctor Lee for  
NOTE Confidence: 0.878961890909091  
00:02:01.386 --> 00:02:03.064 over 25 years since my residency  
NOTE Confidence: 0.878961890909091  
00:02:03.064 --> 00:02:04.316 training at Johns Hopkins.  
NOTE Confidence: 0.878961890909091  
00:02:04.320 --> 00:02:06.350 I can personally speak to the impact  
NOTE Confidence: 0.878961890909091  
00:02:06.350 --> 00:02:09.018 he's had on those who he's trained  
NOTE Confidence: 0.878961890909091  
00:02:09.018 --> 00:02:11.160 and cytopathology education overall.  
NOTE Confidence: 0.878961890909091  
00:02:11.160 --> 00:02:12.826 As he shared with our residents this  
NOTE Confidence: 0.878961890909091  
00:02:12.826 --> 00:02:14.480 morning at the diagnostic seminar,  
NOTE Confidence: 0.878961890909091  
00:02:14.480 --> 00:02:16.070 mentors like Doctor Rose I have  
NOTE Confidence: 0.878961890909091  
00:02:16.070 --> 00:02:17.660 a lasting impact on trainees,  
NOTE Confidence: 0.878961890909091  
00:02:17.660 --> 00:02:19.328 pathologists, and the profession.  
NOTE Confidence: 0.878961890909091

00:02:19.328 --> 00:02:20.579 Like Doctor Rosai,  
NOTE Confidence: 0.878961890909091

00:02:20.580 --> 00:02:22.476 Doctor Ali continues to challenge us.  
NOTE Confidence: 0.878961890909091

00:02:22.480 --> 00:02:24.030 He not only lights up a room,  
NOTE Confidence: 0.878961890909091

00:02:24.030 --> 00:02:26.856 but also past Twitter with fascinating cases,  
NOTE Confidence: 0.878961890909091

00:02:26.860 --> 00:02:28.286 morphologic observation,  
NOTE Confidence: 0.878961890909091

00:02:28.286 --> 00:02:29.138 detailed descriptions.  
NOTE Confidence: 0.878961890909091

00:02:29.138 --> 00:02:31.694 That extend to not only us,  
NOTE Confidence: 0.878961890909091

00:02:31.700 --> 00:02:34.022 but to over 25,000 of his  
NOTE Confidence: 0.878961890909091

00:02:34.022 --> 00:02:35.330 international pathology followers.  
NOTE Confidence: 0.878961890909091

00:02:35.330 --> 00:02:36.554 Without further ado,  
NOTE Confidence: 0.878961890909091

00:02:36.554 --> 00:02:38.289 I am privileged and delighted  
NOTE Confidence: 0.878961890909091

00:02:38.289 --> 00:02:39.899 to introduce Doctor Syed Ali.  
NOTE Confidence: 0.878961890909091

00:02:39.900 --> 00:02:42.318 His topic today Quest for perfection,  
NOTE Confidence: 0.878961890909091

00:02:42.320 --> 00:02:44.525 updating the Bethesda system for  
NOTE Confidence: 0.878961890909091

00:02:44.525 --> 00:02:45.848 reporting thyroid cytopathology.  
NOTE Confidence: 0.872829148

00:02:48.700 --> 00:02:50.640 Thank you so much, Angelique,

NOTE Confidence: 0.872829148

00:02:50.640 --> 00:02:52.664 for that kind introduction.

NOTE Confidence: 0.872829148

00:02:52.664 --> 00:02:55.716 Allow me to say that you were

NOTE Confidence: 0.872829148

00:02:55.716 --> 00:02:57.522 one of the best that you trained

NOTE Confidence: 0.872829148

00:02:57.522 --> 00:02:59.291 at Hopkins and it's so good to

NOTE Confidence: 0.872829148

00:02:59.291 --> 00:03:01.470 see you do so well here at Yale.

NOTE Confidence: 0.872829148

00:03:01.470 --> 00:03:03.720 So we do miss you.

NOTE Confidence: 0.872829148

00:03:03.720 --> 00:03:04.818 Good afternoon, everyone.

NOTE Confidence: 0.872829148

00:03:04.818 --> 00:03:07.014 It's a pleasure to be here,

NOTE Confidence: 0.872829148

00:03:07.020 --> 00:03:09.204 especially presenting a topic to you

NOTE Confidence: 0.872829148

00:03:09.204 --> 00:03:12.119 which is very near and dear to my heart.

NOTE Confidence: 0.872829148

00:03:12.120 --> 00:03:13.596 As Angelique mentioned,

NOTE Confidence: 0.872829148

00:03:13.596 --> 00:03:17.480 we are in the process of updating the.

NOTE Confidence: 0.872829148

00:03:17.480 --> 00:03:18.494 With this system,

NOTE Confidence: 0.872829148

00:03:18.494 --> 00:03:21.746 which we will call 2023 Bethesda System or

NOTE Confidence: 0.872829148

00:03:21.746 --> 00:03:25.940 the 3rd edition of the Bethesda system.

NOTE Confidence: 0.872829148

00:03:25.940 --> 00:03:28.971 As my friend Mag Demay often says  
NOTE Confidence: 0.872829148

00:03:28.971 --> 00:03:31.812 that I don't have any conflicts  
NOTE Confidence: 0.872829148

00:03:31.812 --> 00:03:34.692 of interest and I don't have  
NOTE Confidence: 0.872829148

00:03:34.692 --> 00:03:37.348 any interest in conflicts.  
NOTE Confidence: 0.872829148

00:03:37.350 --> 00:03:39.014 So before I proceed,  
NOTE Confidence: 0.872829148

00:03:39.014 --> 00:03:42.797 I just wanted you to read what the Great  
NOTE Confidence: 0.872829148

00:03:42.797 --> 00:03:46.288 Leo Post said in his very well known book,  
NOTE Confidence: 0.872829148

00:03:46.288 --> 00:03:47.419 the 1st edition,  
NOTE Confidence: 0.872829148

00:03:47.420 --> 00:03:50.874 and it will tell you that the reporting  
NOTE Confidence: 0.872829148

00:03:50.874 --> 00:03:53.730 or the language that we use when we  
NOTE Confidence: 0.872829148

00:03:53.804 --> 00:03:56.499 report the psychological findings are  
NOTE Confidence: 0.872829148

00:03:56.500 --> 00:03:59.560 as important as the diagnosis itself.  
NOTE Confidence: 0.872829148

00:03:59.560 --> 00:04:02.549 I often tell my own trainees that  
NOTE Confidence: 0.872829148

00:04:02.549 --> 00:04:06.052 it's 50% of the job that we do as  
NOTE Confidence: 0.872829148

00:04:06.052 --> 00:04:07.590 cytopathologist diagnosing something.  
NOTE Confidence: 0.872829148

00:04:07.590 --> 00:04:10.110 The way we properly communicate



NOTE Confidence: 0.872829148  
00:04:10.110 --> 00:04:12.630 that diagnosis to be clinician  
NOTE Confidence: 0.872829148  
00:04:12.630 --> 00:04:14.030 is the remaining 50%,  
NOTE Confidence: 0.872829148  
00:04:14.030 --> 00:04:16.130 because if you don't use the  
NOTE Confidence: 0.872829148  
00:04:16.206 --> 00:04:18.310 right language or terminology,  
NOTE Confidence: 0.872829148  
00:04:18.310 --> 00:04:21.016 your diagnosis of excellent  
NOTE Confidence: 0.872829148  
00:04:21.016 --> 00:04:23.824 diagnosis could be misinterpreted.  
NOTE Confidence: 0.872829148  
00:04:23.830 --> 00:04:25.460 It's valid in search path,  
NOTE Confidence: 0.872829148  
00:04:25.460 --> 00:04:27.964 but it's much more valid inside of pathology,  
NOTE Confidence: 0.872829148  
00:04:27.970 --> 00:04:29.842 where typically no intervening  
NOTE Confidence: 0.872829148  
00:04:29.842 --> 00:04:32.650 biopsy is done and the affinity  
NOTE Confidence: 0.872829148  
00:04:32.735 --> 00:04:35.906 diagnosis most of the time will lead  
NOTE Confidence: 0.872829148  
00:04:35.906 --> 00:04:38.180 to definitive treatment or surgery.  
NOTE Confidence: 0.872829148  
00:04:38.180 --> 00:04:40.850 I'm sure people who sign out  
NOTE Confidence: 0.872829148  
00:04:40.850 --> 00:04:43.529 psychology would know that the tester  
NOTE Confidence: 0.872829148  
00:04:43.529 --> 00:04:46.322 system was based on a lot of work  
NOTE Confidence: 0.872829148

00:04:46.322 --> 00:04:48.720 which was done in 2007 at the NCI.  
NOTE Confidence: 0.872829148

00:04:48.720 --> 00:04:50.927 NCI is located in the town of  
NOTE Confidence: 0.872829148

00:04:50.927 --> 00:04:53.062 the Test in Maryland and has the  
NOTE Confidence: 0.872829148

00:04:53.062 --> 00:04:55.018 name of the tester system.  
NOTE Confidence: 0.872829148

00:04:55.020 --> 00:04:56.712 It took us three years to  
NOTE Confidence: 0.872829148

00:04:56.712 --> 00:04:57.840 publish the first monograph,  
NOTE Confidence: 0.872829148

00:04:57.840 --> 00:05:01.200 the 2010 edition, which is shown here.  
NOTE Confidence: 0.872829148

00:05:01.200 --> 00:05:03.888 And then of course another seven years  
NOTE Confidence: 0.872829148

00:05:03.888 --> 00:05:06.439 passed before we updated the system,  
NOTE Confidence: 0.872829148

00:05:06.440 --> 00:05:08.240 which we call the 2017.  
NOTE Confidence: 0.872829148

00:05:08.240 --> 00:05:08.628 Condition.  
NOTE Confidence: 0.872829148

00:05:08.628 --> 00:05:10.956 And as you can read here,  
NOTE Confidence: 0.872829148

00:05:10.960 --> 00:05:13.162 there were there was no significant  
NOTE Confidence: 0.872829148

00:05:13.162 --> 00:05:15.035 change in the six terminologies  
NOTE Confidence: 0.872829148

00:05:15.035 --> 00:05:17.870 or six groups that are used to  
NOTE Confidence: 0.872829148

00:05:17.870 --> 00:05:19.650 report thyroid psychologies,

NOTE Confidence: 0.872829148  
00:05:19.650 --> 00:05:21.818 non diagnostic or unsat.  
NOTE Confidence: 0.872829148  
00:05:21.818 --> 00:05:26.360 We have benign AUS or plus SFN or FNS,  
NOTE Confidence: 0.872829148  
00:05:26.360 --> 00:05:27.650 FM and malignant.  
NOTE Confidence: 0.872829148  
00:05:27.650 --> 00:05:30.950 I'm just abbreviating to save time.  
NOTE Confidence: 0.872829148  
00:05:30.950 --> 00:05:32.826 But you would also notice something here,  
NOTE Confidence: 0.872829148  
00:05:32.830 --> 00:05:33.964 which is unprecedented,  
NOTE Confidence: 0.872829148  
00:05:33.964 --> 00:05:36.610 that we were in a consensus meeting  
NOTE Confidence: 0.872829148  
00:05:36.679 --> 00:05:38.653 at NCI and we did not agree  
NOTE Confidence: 0.872829148  
00:05:38.653 --> 00:05:39.950 on having single names.  
NOTE Confidence: 0.872829148  
00:05:39.950 --> 00:05:42.068 Three of the six diagnostic categories,  
NOTE Confidence: 0.872829148  
00:05:42.070 --> 00:05:45.230 and the main reason was that that we  
NOTE Confidence: 0.872829148  
00:05:45.230 --> 00:05:48.018 wanted to be completely inclusive  
NOTE Confidence: 0.872829148  
00:05:48.018 --> 00:05:50.256 of everyone's concept and approach.  
NOTE Confidence: 0.872829148  
00:05:50.256 --> 00:05:53.426 And I build a group of us thought that  
NOTE Confidence: 0.872829148  
00:05:53.426 --> 00:05:55.946 non diagnostic is better than unset,  
NOTE Confidence: 0.872829148

00:05:55.950 --> 00:05:58.446 or AUS is better than flask,  
NOTE Confidence: 0.872829148

00:05:58.450 --> 00:05:59.450 so on and so forth.  
NOTE Confidence: 0.872829148

00:05:59.450 --> 00:06:01.610 So we endorse both terms would  
NOTE Confidence: 0.872829148

00:06:01.610 --> 00:06:03.483 be strongly recommended to the  
NOTE Confidence: 0.872829148

00:06:03.483 --> 00:06:06.024 cytopathologist that use one or the other.  
NOTE Confidence: 0.872829148

00:06:06.030 --> 00:06:09.290 Don't use the two terms  
NOTE Confidence: 0.872829148

00:06:09.290 --> 00:06:10.594 interchangeably because.  
NOTE Confidence: 0.872829148

00:06:10.600 --> 00:06:12.670 You will then confuse the  
NOTE Confidence: 0.872829148

00:06:12.670 --> 00:06:14.740 clinicians and defeat the purpose  
NOTE Confidence: 0.840449878333333

00:06:14.811 --> 00:06:16.826 of having a nice reporting  
NOTE Confidence: 0.840449878333333

00:06:16.826 --> 00:06:18.035 system as Bethesda.  
NOTE Confidence: 0.840449878333333

00:06:18.040 --> 00:06:19.944 But down the road we realized that  
NOTE Confidence: 0.840449878333333

00:06:19.944 --> 00:06:22.290 a UAS and frost was causing most  
NOTE Confidence: 0.840449878333333

00:06:22.290 --> 00:06:24.115 of the diagnostic confusion and  
NOTE Confidence: 0.840449878333333

00:06:24.115 --> 00:06:26.100 I'll address that in a minute.  
NOTE Confidence: 0.840449878333333

00:06:26.100 --> 00:06:27.780 The other thing which you will notice

NOTE Confidence: 0.840449878333333

00:06:27.780 --> 00:06:30.267 here is that there are no numbers written

NOTE Confidence: 0.840449878333333

00:06:30.267 --> 00:06:31.635 before these diagnostic categories.

NOTE Confidence: 0.840449878333333

00:06:31.640 --> 00:06:33.836 Bethesda System was never meant to

NOTE Confidence: 0.840449878333333

00:06:33.836 --> 00:06:35.800 be a numerical reporting system.

NOTE Confidence: 0.840449878333333

00:06:35.800 --> 00:06:37.960 It has beautiful names, brief names,

NOTE Confidence: 0.840449878333333

00:06:37.960 --> 00:06:39.700 easily memorizable.

NOTE Confidence: 0.840449878333333

00:06:39.700 --> 00:06:42.310 And and usable,

NOTE Confidence: 0.840449878333333

00:06:42.310 --> 00:06:44.766 and hence those of you who use numbers

NOTE Confidence: 0.840449878333333

00:06:44.766 --> 00:06:47.249 I would strongly urge that also puts

NOTE Confidence: 0.840449878333333

00:06:47.249 --> 00:06:49.590 the proper name after the number.

NOTE Confidence: 0.840449878333333

00:06:49.590 --> 00:06:52.166 But this number don't convey much meaning,

NOTE Confidence: 0.840449878333333

00:06:52.170 --> 00:06:54.875 and history has shown that

NOTE Confidence: 0.840449878333333

00:06:54.875 --> 00:06:57.039 numerical reporting systems often

NOTE Confidence: 0.840449878333333

00:06:57.039 --> 00:06:59.837 fail because of of that reason.

NOTE Confidence: 0.840449878333333

00:06:59.840 --> 00:07:03.458 So this is the update in 2017 with Tessa.

NOTE Confidence: 0.840449878333333

00:07:03.460 --> 00:07:05.220 So everything which is written  
NOTE Confidence: 0.8404498783333333

00:07:05.220 --> 00:07:06.980 and read was an update.  
NOTE Confidence: 0.8404498783333333

00:07:06.980 --> 00:07:08.840 And as you can see here,  
NOTE Confidence: 0.8404498783333333

00:07:08.840 --> 00:07:11.006 the risk of malignancies which are  
NOTE Confidence: 0.8404498783333333

00:07:11.006 --> 00:07:12.940 implicit in the Bethesda system.  
NOTE Confidence: 0.8404498783333333

00:07:12.940 --> 00:07:14.669 And that's the main reason of the  
NOTE Confidence: 0.8404498783333333

00:07:14.669 --> 00:07:16.229 success of the there's a system  
NOTE Confidence: 0.8404498783333333

00:07:16.229 --> 00:07:17.747 that was built on a framework  
NOTE Confidence: 0.8404498783333333

00:07:17.747 --> 00:07:19.240 of probabilistic approach,  
NOTE Confidence: 0.8404498783333333

00:07:19.240 --> 00:07:21.330 meaning probability of finding malignant  
NOTE Confidence: 0.8404498783333333

00:07:21.330 --> 00:07:24.281 tumor or ROM is built-in into each  
NOTE Confidence: 0.8404498783333333

00:07:24.281 --> 00:07:26.256 of the six diagnostic categories.  
NOTE Confidence: 0.8404498783333333

00:07:26.260 --> 00:07:28.210 So it was significantly revised  
NOTE Confidence: 0.8404498783333333

00:07:28.210 --> 00:07:29.380 based on prospectively.  
NOTE Confidence: 0.8404498783333333

00:07:29.380 --> 00:07:30.094 Analyze data,  
NOTE Confidence: 0.8404498783333333

00:07:30.094 --> 00:07:33.349 it went up from 1:00 to 4:00 to 5:00

NOTE Confidence: 0.8404498783333333  
00:07:33.349 --> 00:07:36.202 to 10:00 and and as you can see the  
NOTE Confidence: 0.8404498783333333  
00:07:36.288 --> 00:07:39.618 other three categories also showed a  
NOTE Confidence: 0.8404498783333333  
00:07:39.618 --> 00:07:42.536 significantly updated ROMs and also  
NOTE Confidence: 0.8404498783333333  
00:07:42.536 --> 00:07:45.028 the management algorithm change.  
NOTE Confidence: 0.8404498783333333  
00:07:45.030 --> 00:07:48.131 As you know that ATA American Thyroid  
NOTE Confidence: 0.8404498783333333  
00:07:48.131 --> 00:07:50.082 Association has completely endorsed  
NOTE Confidence: 0.8404498783333333  
00:07:50.082 --> 00:07:53.505 Bethesda System as as most of their  
NOTE Confidence: 0.8404498783333333  
00:07:53.505 --> 00:07:54.894 recommendations management plans  
NOTE Confidence: 0.8404498783333333  
00:07:54.894 --> 00:07:57.841 are based on the test a reporting  
NOTE Confidence: 0.8404498783333333  
00:07:57.841 --> 00:07:59.781 system and we realized that.  
NOTE Confidence: 0.8404498783333333  
00:07:59.790 --> 00:08:02.706 After 2015 when the IATA guidelines  
NOTE Confidence: 0.8404498783333333  
00:08:02.706 --> 00:08:03.678 were revised,  
NOTE Confidence: 0.8404498783333333  
00:08:03.680 --> 00:08:05.588 molecular testing was introduced,  
NOTE Confidence: 0.8404498783333333  
00:08:05.588 --> 00:08:07.973 a more conservative approach lobectomy  
NOTE Confidence: 0.8404498783333333  
00:08:07.973 --> 00:08:10.500 was introduced and again molecular  
NOTE Confidence: 0.8404498783333333

00:08:10.500 --> 00:08:12.480 testing for follicular neoplasm.  
NOTE Confidence: 0.8404498783333333

00:08:12.480 --> 00:08:15.252 And one of the recommendation 2015  
NOTE Confidence: 0.8404498783333333

00:08:15.252 --> 00:08:17.724 with Test 80A guidelines was that  
NOTE Confidence: 0.8404498783333333

00:08:17.724 --> 00:08:20.592 if the thyroid tumor or nodule is  
NOTE Confidence: 0.8404498783333333

00:08:20.592 --> 00:08:23.424 4 centimeters smaller with a well  
NOTE Confidence: 0.8404498783333333

00:08:23.424 --> 00:08:25.443 differentiated thyroid cancer either  
NOTE Confidence: 0.8404498783333333

00:08:25.443 --> 00:08:28.058 follicular and papillary with no  
NOTE Confidence: 0.8404498783333333

00:08:28.058 --> 00:08:30.486 extracapsular extension or nodal. Disease.  
NOTE Confidence: 0.8404498783333333

00:08:30.486 --> 00:08:32.838 In other words, see and not disease.  
NOTE Confidence: 0.8404498783333333

00:08:32.840 --> 00:08:35.336 The patient can benefit from lobectomy.  
NOTE Confidence: 0.8404498783333333

00:08:35.340 --> 00:08:38.265 So that was a big change and all these  
NOTE Confidence: 0.8404498783333333

00:08:38.265 --> 00:08:41.249 were incorporated in the 2017 Bethesda.  
NOTE Confidence: 0.8404498783333333

00:08:41.250 --> 00:08:44.130 So now after the publishing  
NOTE Confidence: 0.8404498783333333

00:08:44.130 --> 00:08:45.806 publication of the 2017,  
NOTE Confidence: 0.8404498783333333

00:08:45.806 --> 00:08:48.840 we realized that still we have new  
NOTE Confidence: 0.8404498783333333

00:08:48.840 --> 00:08:51.885 data which was coming in based on



NOTE Confidence: 0.840449878333333

00:08:51.885 --> 00:08:54.130 newer prospectively analyzed studies.

NOTE Confidence: 0.840449878333333

00:08:54.130 --> 00:08:56.138 Molecular testing although was

NOTE Confidence: 0.840449878333333

00:08:56.138 --> 00:08:58.673 available in 2017, the menu expanded.

NOTE Confidence: 0.840449878333333

00:08:58.673 --> 00:09:01.060 So now we have much more complex

NOTE Confidence: 0.840449878333333

00:09:01.136 --> 00:09:03.646 elaborate molecular tests not only

NOTE Confidence: 0.840449878333333

00:09:03.646 --> 00:09:06.156 providing information and diagnostic but

NOTE Confidence: 0.840449878333333

00:09:06.230 --> 00:09:08.710 prognostics and therapeutics as well.

NOTE Confidence: 0.840449878333333

00:09:08.710 --> 00:09:11.254 And as I mentioned the ATF guidelines are.

NOTE Confidence: 0.840449878333333

00:09:11.260 --> 00:09:13.700 Being revised later this year,

NOTE Confidence: 0.840449878333333

00:09:13.700 --> 00:09:16.240 there is some category named

NOTE Confidence: 0.840449878333333

00:09:16.240 --> 00:09:17.537 revision in 2023,

NOTE Confidence: 0.840449878333333

00:09:17.537 --> 00:09:20.030 the Tessa and we all know The Who Blue

NOTE Confidence: 0.840449878333333

00:09:20.098 --> 00:09:22.083 book for histologic classification of

NOTE Confidence: 0.840449878333333

00:09:22.083 --> 00:09:24.875 tumours just came out and we wanted

NOTE Confidence: 0.840449878333333

00:09:24.875 --> 00:09:27.095 to incorporate those changes as well.

NOTE Confidence: 0.840449878333333

00:09:27.100 --> 00:09:29.512 And we wanted to make Bethesda  
NOTE Confidence: 0.8404498783333333

00:09:29.512 --> 00:09:31.120 reporting system more global,  
NOTE Confidence: 0.8404498783333333

00:09:31.120 --> 00:09:33.020 although it's global as such.  
NOTE Confidence: 0.8404498783333333

00:09:33.020 --> 00:09:35.450 But we wanted to invite more  
NOTE Confidence: 0.8404498783333333

00:09:35.450 --> 00:09:37.070 international authors and all  
NOTE Confidence: 0.8404498783333333

00:09:37.140 --> 00:09:39.779 of these led to us rewriting the  
NOTE Confidence: 0.8404498783333333

00:09:39.779 --> 00:09:40.910 Bethesda system which  
NOTE Confidence: 0.872965422727273

00:09:40.981 --> 00:09:44.144 will be. All the 2023 that has the system.  
NOTE Confidence: 0.872965422727273

00:09:44.150 --> 00:09:46.328 I know a lot of you will be attending  
NOTE Confidence: 0.872965422727273

00:09:46.328 --> 00:09:47.979 the International Congress of  
NOTE Confidence: 0.872965422727273

00:09:47.979 --> 00:09:50.229 Psychology in Baltimore next month.  
NOTE Confidence: 0.872965422727273

00:09:50.230 --> 00:09:52.771 I would be moderating a special session  
NOTE Confidence: 0.872965422727273

00:09:52.771 --> 00:09:55.359 called Quest for Perfection Sack title,  
NOTE Confidence: 0.872965422727273

00:09:55.360 --> 00:09:57.328 which I'm presenting to you today.  
NOTE Confidence: 0.872965422727273

00:09:57.330 --> 00:09:59.754 And we'll be discussing the changes that we  
NOTE Confidence: 0.872965422727273

00:09:59.754 --> 00:10:02.684 will be implementing in the 2023 the tester.

NOTE Confidence: 0.872965422727273  
00:10:02.684 --> 00:10:04.952 So this is where we are  
NOTE Confidence: 0.872965422727273  
00:10:04.952 --> 00:10:06.752 heading with the 2023 Bethesda.  
NOTE Confidence: 0.872965422727273  
00:10:06.752 --> 00:10:09.600 One change you will notice is that doctor  
NOTE Confidence: 0.872965422727273  
00:10:09.666 --> 00:10:12.018 at Seabus is no longer the Co editor.  
NOTE Confidence: 0.872965422727273  
00:10:12.020 --> 00:10:14.488 I think, he said.  
NOTE Confidence: 0.872965422727273  
00:10:14.490 --> 00:10:16.338 Trying to make life easier now,  
NOTE Confidence: 0.872965422727273  
00:10:16.340 --> 00:10:17.688 so I Paul Vanderlaan,  
NOTE Confidence: 0.872965422727273  
00:10:17.688 --> 00:10:19.710 who's a very well known psychologist  
NOTE Confidence: 0.872965422727273  
00:10:19.769 --> 00:10:21.932 in the Howard system, will help me.  
NOTE Confidence: 0.872965422727273  
00:10:21.932 --> 00:10:25.240 I Co edit the book and since the book is  
NOTE Confidence: 0.872965422727273  
00:10:25.240 --> 00:10:28.400 expanded a little bit with two new chapters,  
NOTE Confidence: 0.872965422727273  
00:10:28.400 --> 00:10:30.878 I needed some good associate editors.  
NOTE Confidence: 0.872965422727273  
00:10:30.880 --> 00:10:33.760 So bad blows from Upenn theatrics  
NOTE Confidence: 0.872965422727273  
00:10:33.760 --> 00:10:36.160 go shaft relay from France,  
NOTE Confidence: 0.872965422727273  
00:10:36.160 --> 00:10:37.724 Fernando Schmidt from Portugal  
NOTE Confidence: 0.872965422727273

00:10:37.724 --> 00:10:39.679 and Philip Beal from Paris,  
NOTE Confidence: 0.872965422727273

00:10:39.680 --> 00:10:40.165 France.  
NOTE Confidence: 0.872965422727273

00:10:40.165 --> 00:10:42.590 All well known cytopathologist with  
NOTE Confidence: 0.872965422727273

00:10:42.590 --> 00:10:44.530 expertise in thyroid will.  
NOTE Confidence: 0.872965422727273

00:10:44.530 --> 00:10:48.170 Will assist US associate additives.  
NOTE Confidence: 0.872965422727273

00:10:48.170 --> 00:10:50.870 We will have a complete endorsement  
NOTE Confidence: 0.872965422727273

00:10:50.870 --> 00:10:52.670 by Yorgan Federation psychologist  
NOTE Confidence: 0.872965422727273

00:10:52.736 --> 00:10:55.706 societies authorship is increasing to 65.  
NOTE Confidence: 0.872965422727273

00:10:55.706 --> 00:10:57.930 There's becoming more complex.  
NOTE Confidence: 0.872965422727273

00:10:57.930 --> 00:11:00.156 For the first time we are involving  
NOTE Confidence: 0.872965422727273

00:11:00.156 --> 00:11:01.930 more clinicians and radiologists.  
NOTE Confidence: 0.872965422727273

00:11:01.930 --> 00:11:04.834 The two new chapters would be one on  
NOTE Confidence: 0.872965422727273

00:11:04.834 --> 00:11:07.427 molecular testing and ancillary studies and  
NOTE Confidence: 0.872965422727273

00:11:07.427 --> 00:11:10.127 one on clinical perspectives and imaging.  
NOTE Confidence: 0.872965422727273

00:11:10.130 --> 00:11:11.282 As I mentioned,  
NOTE Confidence: 0.872965422727273

00:11:11.282 --> 00:11:13.970 the risk of malignancies would be revised.

NOTE Confidence: 0.872965422727273  
00:11:13.970 --> 00:11:16.060 Pediatrics thyroid disease is managed  
NOTE Confidence: 0.872965422727273  
00:11:16.060 --> 00:11:19.119 very differently and if you look at their.  
NOTE Confidence: 0.872965422727273  
00:11:19.120 --> 00:11:19.408 ROM's,  
NOTE Confidence: 0.872965422727273  
00:11:19.408 --> 00:11:21.424 they are very different from adult patients.  
NOTE Confidence: 0.872965422727273  
00:11:21.430 --> 00:11:24.671 So for the first time we are  
NOTE Confidence: 0.872965422727273  
00:11:24.671 --> 00:11:27.038 addressing the issues of Rome's in  
NOTE Confidence: 0.872965422727273  
00:11:27.038 --> 00:11:28.783 pediatric patients and the management  
NOTE Confidence: 0.872965422727273  
00:11:28.783 --> 00:11:30.658 plan which is quite aggressive and  
NOTE Confidence: 0.872965422727273  
00:11:30.658 --> 00:11:32.920 I'll show it to you in a minute.  
NOTE Confidence: 0.872965422727273  
00:11:32.920 --> 00:11:34.824 The other thing for the first time  
NOTE Confidence: 0.872965422727273  
00:11:34.824 --> 00:11:36.777 we were able to convince everyone  
NOTE Confidence: 0.872965422727273  
00:11:36.777 --> 00:11:38.572 involved with the business system  
NOTE Confidence: 0.872965422727273  
00:11:38.572 --> 00:11:41.085 to have a single name for the  
NOTE Confidence: 0.872965422727273  
00:11:41.085 --> 00:11:42.126 six diagnostic categories.  
NOTE Confidence: 0.872965422727273  
00:11:42.130 --> 00:11:44.965 So I'm happy to report that we are keeping  
NOTE Confidence: 0.872965422727273

00:11:44.965 --> 00:11:47.619 non diagnostic unsatisfactory is out,  
NOTE Confidence: 0.872965422727273

00:11:47.620 --> 00:11:49.180 we are keeping a USB.  
NOTE Confidence: 0.872965422727273

00:11:49.180 --> 00:11:51.502 Which is a much more acceptable  
NOTE Confidence: 0.872965422727273

00:11:51.502 --> 00:11:52.663 term than plus,  
NOTE Confidence: 0.872965422727273

00:11:52.670 --> 00:11:54.890 which is out and suspicious for  
NOTE Confidence: 0.872965422727273

00:11:54.890 --> 00:11:56.370 follicular neoplasm is out,  
NOTE Confidence: 0.872965422727273

00:11:56.370 --> 00:11:59.065 and it will simply be follicular neoplasm.  
NOTE Confidence: 0.872965422727273

00:11:59.070 --> 00:12:00.729 So I think this is a major,  
NOTE Confidence: 0.872965422727273

00:12:00.730 --> 00:12:03.532 major change the way the six  
NOTE Confidence: 0.872965422727273

00:12:03.532 --> 00:12:05.400 terminologies will be used.  
NOTE Confidence: 0.872965422727273

00:12:05.400 --> 00:12:08.094 I strongly believed when I started  
NOTE Confidence: 0.872965422727273

00:12:08.094 --> 00:12:11.195 to work on this with Paul that  
NOTE Confidence: 0.872965422727273

00:12:11.195 --> 00:12:13.520 AUS has to be simplified.  
NOTE Confidence: 0.872965422727273

00:12:13.520 --> 00:12:16.400 Previously we had two big groups,  
NOTE Confidence: 0.872965422727273

00:12:16.400 --> 00:12:17.900 nuclear and architectural,  
NOTE Confidence: 0.872965422727273

00:12:17.900 --> 00:12:19.400 the micro follicular,

NOTE Confidence: 0.872965422727273  
00:12:19.400 --> 00:12:20.540 and then we have a long,  
NOTE Confidence: 0.872965422727273  
00:12:20.540 --> 00:12:22.960 long list of miscellaneous that  
NOTE Confidence: 0.872965422727273  
00:12:22.960 --> 00:12:24.896 put rare plasmacytoid cells,  
NOTE Confidence: 0.872965422727273  
00:12:24.900 --> 00:12:26.238 hurthle cell, atypia.  
NOTE Confidence: 0.872965422727273  
00:12:26.238 --> 00:12:28.812 We had cyst, lining cell,  
NOTE Confidence: 0.872965422727273  
00:12:28.812 --> 00:12:31.276 racimo bodies, atypical lymphocytes.  
NOTE Confidence: 0.872965422727273  
00:12:31.280 --> 00:12:34.112 So studies have shown that there  
NOTE Confidence: 0.872965422727273  
00:12:34.112 --> 00:12:35.528 are two distinct.  
NOTE Confidence: 0.872965422727273  
00:12:35.530 --> 00:12:36.850 Were low risk and high risk,  
NOTE Confidence: 0.872965422727273  
00:12:36.850 --> 00:12:38.645 and I'll mention those in  
NOTE Confidence: 0.872965422727273  
00:12:38.645 --> 00:12:40.440 more detail in a minute.  
NOTE Confidence: 0.872965422727273  
00:12:40.440 --> 00:12:42.666 We also wanted our reporting system  
NOTE Confidence: 0.872965422727273  
00:12:42.666 --> 00:12:45.476 to be in alignment with The Who  
NOTE Confidence: 0.872965422727273  
00:12:45.476 --> 00:12:47.571 classification and happy to report  
NOTE Confidence: 0.872965422727273  
00:12:47.571 --> 00:12:49.204 that although the publication  
NOTE Confidence: 0.872965422727273

00:12:49.204 --> 00:12:51.295 date would be June of 2023,  
NOTE Confidence: 0.872965422727273

00:12:51.295 --> 00:12:53.220 we are way ahead of the scheduled  
NOTE Confidence: 0.872965422727273

00:12:53.220 --> 00:12:54.777 time and we should definitely  
NOTE Confidence: 0.872965422727273

00:12:54.777 --> 00:12:56.982 have the box sometime in spring of  
NOTE Confidence: 0.895975035454545

00:12:57.046 --> 00:12:59.020 next year. So in most simple words  
NOTE Confidence: 0.895975035454545

00:12:59.020 --> 00:13:01.120 this is how it would look like,  
NOTE Confidence: 0.895975035454545

00:13:01.120 --> 00:13:03.000 as I mentioned non diagnostic  
NOTE Confidence: 0.895975035454545

00:13:03.000 --> 00:13:05.788 benign AUS which is a much more  
NOTE Confidence: 0.895975035454545

00:13:05.788 --> 00:13:08.266 flexible term accepted by a majority  
NOTE Confidence: 0.895975035454545

00:13:08.266 --> 00:13:10.648 of people as opposed to floss.  
NOTE Confidence: 0.895975035454545

00:13:10.650 --> 00:13:12.715 Because the the term follicular  
NOTE Confidence: 0.895975035454545

00:13:12.715 --> 00:13:15.373 sometime would not cover the atypical  
NOTE Confidence: 0.895975035454545

00:13:15.373 --> 00:13:17.958 lymphocytes or atypical cyst lining  
NOTE Confidence: 0.895975035454545

00:13:17.958 --> 00:13:20.510 cells or atypical plasmacytoid cells.  
NOTE Confidence: 0.895975035454545

00:13:20.510 --> 00:13:23.330 When you think of medullary carcinoma  
NOTE Confidence: 0.895975035454545

00:13:23.330 --> 00:13:25.210 follicular neoplasm would stay.



NOTE Confidence: 0.895975035454545  
00:13:25.210 --> 00:13:26.820 But we will definitely recommend  
NOTE Confidence: 0.895975035454545  
00:13:26.820 --> 00:13:29.167 to add a statement that 1/3 of  
NOTE Confidence: 0.895975035454545  
00:13:29.167 --> 00:13:30.862 the cases which are diagnosed  
NOTE Confidence: 0.895975035454545  
00:13:30.862 --> 00:13:32.587 floccular neoplasm and follow up  
NOTE Confidence: 0.895975035454545  
00:13:32.587 --> 00:13:34.525 turn out to be hyperplastic nodule.  
NOTE Confidence: 0.895975035454545  
00:13:34.530 --> 00:13:37.258 No matter how good you are and experience  
NOTE Confidence: 0.895975035454545  
00:13:37.258 --> 00:13:39.315 you are and thyroid psychology  
NOTE Confidence: 0.895975035454545  
00:13:39.315 --> 00:13:41.913 and SFM and malignant would stay.  
NOTE Confidence: 0.895975035454545  
00:13:41.920 --> 00:13:44.573 So now this is a table which  
NOTE Confidence: 0.895975035454545  
00:13:44.573 --> 00:13:47.330 essentially shows you the 2010 in  
NOTE Confidence: 0.895975035454545  
00:13:47.330 --> 00:13:52.305 Red 2017 and the in green the 2023,  
NOTE Confidence: 0.895975035454545  
00:13:52.305 --> 00:13:54.230 the upcoming risk of malignancies.  
NOTE Confidence: 0.895975035454545  
00:13:54.230 --> 00:13:56.734 And for the first time we have also  
NOTE Confidence: 0.895975035454545  
00:13:56.734 --> 00:13:59.117 calculated the average for for each group.  
NOTE Confidence: 0.895975035454545  
00:13:59.120 --> 00:14:01.872 So as you can see there is some  
NOTE Confidence: 0.895975035454545

00:14:01.872 --> 00:14:05.500 revision and especially with with the  
NOTE Confidence: 0.895975035454545

00:14:05.500 --> 00:14:09.556 benign ones slightly up to 6% from  
NOTE Confidence: 0.895975035454545

00:14:09.556 --> 00:14:12.272 3 and some change in the management.  
NOTE Confidence: 0.895975035454545

00:14:12.280 --> 00:14:12.811 Profile,  
NOTE Confidence: 0.895975035454545

00:14:12.811 --> 00:14:15.466 again a more conservative approach  
NOTE Confidence: 0.895975035454545

00:14:15.466 --> 00:14:18.751 because we have seen that the low  
NOTE Confidence: 0.895975035454545

00:14:18.751 --> 00:14:21.598 risk AUS the one which has which is  
NOTE Confidence: 0.895975035454545

00:14:21.598 --> 00:14:23.318 based on micro follicular architecture  
NOTE Confidence: 0.895975035454545

00:14:23.318 --> 00:14:25.133 or or other miscellaneous features  
NOTE Confidence: 0.895975035454545

00:14:25.133 --> 00:14:27.299 as opposed to the nuclear one  
NOTE Confidence: 0.895975035454545

00:14:27.299 --> 00:14:28.730 carries a lower risk.  
NOTE Confidence: 0.895975035454545

00:14:28.730 --> 00:14:30.928 And if patient does not have suspicious  
NOTE Confidence: 0.895975035454545

00:14:30.928 --> 00:14:32.410 imaging or clinical findings,  
NOTE Confidence: 0.895975035454545

00:14:32.410 --> 00:14:34.146 a lot of times they don't do even,  
NOTE Confidence: 0.895975035454545

00:14:34.150 --> 00:14:36.610 don't even repeat the efinancial  
NOTE Confidence: 0.895975035454545

00:14:36.610 --> 00:14:38.578 animations and patients simply

NOTE Confidence: 0.895975035454545  
00:14:38.578 --> 00:14:40.753 followed up by clinical examination  
NOTE Confidence: 0.895975035454545  
00:14:40.753 --> 00:14:43.380 or possibly with the addition of a.  
NOTE Confidence: 0.895975035454545  
00:14:43.380 --> 00:14:44.320 Repeat FNA,  
NOTE Confidence: 0.895975035454545  
00:14:44.320 --> 00:14:46.200 but diagnostic lobectomy is  
NOTE Confidence: 0.895975035454545  
00:14:46.200 --> 00:14:48.080 something which is strongly  
NOTE Confidence: 0.895975035454545  
00:14:48.154 --> 00:14:50.398 discouraged follicular neoplasm,  
NOTE Confidence: 0.895975035454545  
00:14:50.400 --> 00:14:52.505 again molecular testing is taking  
NOTE Confidence: 0.895975035454545  
00:14:52.505 --> 00:14:55.862 the the the front seat when it comes  
NOTE Confidence: 0.895975035454545  
00:14:55.862 --> 00:14:58.208 to working out these patients since  
NOTE Confidence: 0.895975035454545  
00:14:58.208 --> 00:15:00.182 we now have targeted treatments  
NOTE Confidence: 0.895975035454545  
00:15:00.182 --> 00:15:02.437 available and it's included in  
NOTE Confidence: 0.895975035454545  
00:15:02.437 --> 00:15:04.850 the manual of most of these.  
NOTE Confidence: 0.895975035454545  
00:15:04.850 --> 00:15:06.176 Commercially available molecular  
NOTE Confidence: 0.895975035454545  
00:15:06.176 --> 00:15:08.386 tests for the first time,  
NOTE Confidence: 0.895975035454545  
00:15:08.390 --> 00:15:10.544 the recommendation is to only to  
NOTE Confidence: 0.895975035454545

00:15:10.544 --> 00:15:13.558 also do it in SFM and in some  
NOTE Confidence: 0.895975035454545

00:15:13.558 --> 00:15:15.423 cases of malignant as well.  
NOTE Confidence: 0.895975035454545

00:15:15.430 --> 00:15:17.806 So these are the pediatric stroms,  
NOTE Confidence: 0.895975035454545

00:15:17.810 --> 00:15:20.717 the green one is would be for adults and  
NOTE Confidence: 0.895975035454545

00:15:20.717 --> 00:15:23.685 the red one are for pediatric patients.  
NOTE Confidence: 0.895975035454545

00:15:23.690 --> 00:15:26.812 And you can see there are significantly  
NOTE Confidence: 0.895975035454545

00:15:26.812 --> 00:15:30.374 higher for example a US 50% upper end,  
NOTE Confidence: 0.895975035454545

00:15:30.374 --> 00:15:32.630 100% for political neoplasm,  
NOTE Confidence: 0.895975035454545

00:15:32.630 --> 00:15:35.058 near 100% for SFM and malignant  
NOTE Confidence: 0.895975035454545

00:15:35.058 --> 00:15:36.643 and this is what happened.  
NOTE Confidence: 0.895975035454545

00:15:36.650 --> 00:15:38.580 They are treated very aggressively  
NOTE Confidence: 0.895975035454545

00:15:38.580 --> 00:15:41.359 with most of the time these patients  
NOTE Confidence: 0.895975035454545

00:15:41.359 --> 00:15:43.675 are going for a total thyroidectomy  
NOTE Confidence: 0.895975035454545

00:15:43.675 --> 00:15:45.629 or at least lobectomy.  
NOTE Confidence: 0.895975035454545

00:15:45.630 --> 00:15:47.560 So this would be adequately  
NOTE Confidence: 0.895975035454545

00:15:47.560 --> 00:15:50.200 covered in in the new edition.

NOTE Confidence: 0.895975035454545

00:15:50.200 --> 00:15:52.390 So as we all know that the World Cup of

NOTE Confidence: 0.895975035454545

00:15:52.452 --> 00:15:54.372 thyroid patient would would start with

NOTE Confidence: 0.895975035454545

00:15:54.372 --> 00:15:56.729 the looking at the clinical features,

NOTE Confidence: 0.895975035454545

00:15:56.730 --> 00:15:59.839 someone will palpate an audio in

NOTE Confidence: 0.895975035454545

00:15:59.839 --> 00:16:01.932 in a patient and then the patient

NOTE Confidence: 0.895975035454545

00:16:01.932 --> 00:16:03.620 is sent for ultrasound.

NOTE Confidence: 0.895975035454545

00:16:03.620 --> 00:16:05.445 So clinical features and imaging

NOTE Confidence: 0.895975035454545

00:16:05.445 --> 00:16:07.904 finding would be the pre afna workup

NOTE Confidence: 0.895975035454545

00:16:07.904 --> 00:16:10.160 and then based on if there is an

NOTE Confidence: 0.895975035454545

00:16:10.226 --> 00:16:12.333 indication to do an FDA patient will

NOTE Confidence: 0.895975035454545

00:16:12.333 --> 00:16:14.419 get an FNA cytopathology these days

NOTE Confidence: 0.895975035454545

00:16:14.419 --> 00:16:17.170 most of the time with the additional

NOTE Confidence: 0.8862809525

00:16:17.236 --> 00:16:18.460 molecular analysis.

NOTE Confidence: 0.8862809525

00:16:18.460 --> 00:16:20.140 So this is the most important.

NOTE Confidence: 0.8862809525

00:16:20.140 --> 00:16:21.790 One part of the equation,

NOTE Confidence: 0.8862809525

00:16:21.790 --> 00:16:24.380 because you will be the one deciding  
NOTE Confidence: 0.8862809525

00:16:24.380 --> 00:16:26.535 whether patient should be left with  
NOTE Confidence: 0.8862809525

00:16:26.535 --> 00:16:28.817 for clinical follow-up alone or needs a  
NOTE Confidence: 0.8862809525

00:16:28.884 --> 00:16:31.269 lobectomy or near total thyroidectomy.  
NOTE Confidence: 0.8862809525

00:16:31.270 --> 00:16:33.418 Again to emphasize that all thyroid  
NOTE Confidence: 0.8862809525

00:16:33.418 --> 00:16:35.663 hyphenates should be done under image  
NOTE Confidence: 0.8862809525

00:16:35.663 --> 00:16:37.548 guidance if imaging is available.  
NOTE Confidence: 0.8862809525

00:16:37.550 --> 00:16:39.975 And these days every institution  
NOTE Confidence: 0.8862809525

00:16:39.975 --> 00:16:41.430 has ultrasound available.  
NOTE Confidence: 0.8862809525

00:16:41.430 --> 00:16:42.750 As I said, seeing,  
NOTE Confidence: 0.8862809525

00:16:42.750 --> 00:16:45.069 seeing is believing you can see the  
NOTE Confidence: 0.8862809525

00:16:45.069 --> 00:16:47.229 tip of the needle when the FN is  
NOTE Confidence: 0.8862809525

00:16:47.229 --> 00:16:49.490 done because it appears echogenic,  
NOTE Confidence: 0.8862809525

00:16:49.490 --> 00:16:51.054 you know for sure.  
NOTE Confidence: 0.8862809525

00:16:51.054 --> 00:16:53.400 Where you are painting the sample  
NOTE Confidence: 0.8862809525

00:16:53.400 --> 00:16:55.410 and the other important thing would

NOTE Confidence: 0.8862809525

00:16:55.410 --> 00:16:57.923 be to stay away from vessels which

NOTE Confidence: 0.8862809525

00:16:57.923 --> 00:17:00.499 you can do often with palpation only.

NOTE Confidence: 0.8862809525

00:17:00.500 --> 00:17:03.512 And also it's interesting fact very

NOTE Confidence: 0.8862809525

00:17:03.512 --> 00:17:06.344 widely published at 50% of the time

NOTE Confidence: 0.8862809525

00:17:06.344 --> 00:17:08.892 when you do image guided FA you

NOTE Confidence: 0.8862809525

00:17:08.892 --> 00:17:10.804 discover more significant finding

NOTE Confidence: 0.8862809525

00:17:10.804 --> 00:17:13.690 other one or several new nodules

NOTE Confidence: 0.8862809525

00:17:13.690 --> 00:17:16.602 or you discover nodes in the neck

NOTE Confidence: 0.8862809525

00:17:16.602 --> 00:17:18.830 which assume a lot of importance in

NOTE Confidence: 0.8862809525

00:17:18.830 --> 00:17:20.919 a patient with a with a primary.

NOTE Confidence: 0.8862809525

00:17:20.920 --> 00:17:21.656 Other nodule.

NOTE Confidence: 0.8862809525

00:17:21.656 --> 00:17:23.496 So it's important that imaging

NOTE Confidence: 0.8862809525

00:17:23.496 --> 00:17:25.996 should be done in all cases which

NOTE Confidence: 0.8862809525

00:17:25.996 --> 00:17:27.651 are going for thyroid affinity

NOTE Confidence: 0.8862809525

00:17:27.651 --> 00:17:29.648 and ideally the thyroid affinity

NOTE Confidence: 0.8862809525

00:17:29.648 --> 00:17:32.048 itself should be done with imaging.  
NOTE Confidence: 0.8862809525

00:17:32.050 --> 00:17:34.978 The other fact is that one of six  
NOTE Confidence: 0.8862809525

00:17:34.978 --> 00:17:37.232 patients when you do image guided  
NOTE Confidence: 0.8862809525

00:17:37.232 --> 00:17:40.010 fmas you will not find the nodule.  
NOTE Confidence: 0.8862809525

00:17:40.010 --> 00:17:42.047 And I often give my own example.  
NOTE Confidence: 0.8862809525

00:17:42.050 --> 00:17:44.255 A couple of years ago my internist  
NOTE Confidence: 0.8862809525

00:17:44.255 --> 00:17:46.336 discovered a nodule in my thyroid and  
NOTE Confidence: 0.8862809525

00:17:46.336 --> 00:17:48.769 and he knows that thyroid is my main area.  
NOTE Confidence: 0.8862809525

00:17:48.770 --> 00:17:50.978 So smilingly said off you go.  
NOTE Confidence: 0.8862809525

00:17:50.980 --> 00:17:51.598 Parathyroid F&H.  
NOTE Confidence: 0.8862809525

00:17:51.598 --> 00:17:54.070 So I showed up in ultrasound as a  
NOTE Confidence: 0.8862809525

00:17:54.132 --> 00:17:56.172 patient and the radiologist who was  
NOTE Confidence: 0.8862809525

00:17:56.172 --> 00:17:58.830 doing the FDA could not find the nodule.  
NOTE Confidence: 0.8862809525

00:17:58.830 --> 00:18:03.267 So that really takes out a lot of burden,  
NOTE Confidence: 0.8862809525

00:18:03.270 --> 00:18:05.517 a lot of pressure from the patient  
NOTE Confidence: 0.8862809525

00:18:05.517 --> 00:18:06.964 and clinician because then there



NOTE Confidence: 0.8862809525

00:18:06.964 --> 00:18:09.030 is no need to do an FHA if there

NOTE Confidence: 0.8862809525

00:18:09.030 --> 00:18:10.266 is no nodule present.

NOTE Confidence: 0.8862809525

00:18:10.270 --> 00:18:12.180 So these are important factors

NOTE Confidence: 0.8862809525

00:18:12.180 --> 00:18:13.708 which should convince everyone

NOTE Confidence: 0.8862809525

00:18:13.708 --> 00:18:15.652 that all thyroid affinity should

NOTE Confidence: 0.8862809525

00:18:15.652 --> 00:18:17.532 be done under ultrasound guidance

NOTE Confidence: 0.8862809525

00:18:17.532 --> 00:18:19.994 and potentially you can also locate

NOTE Confidence: 0.8862809525

00:18:19.994 --> 00:18:21.209 complications which are.

NOTE Confidence: 0.8862809525

00:18:21.210 --> 00:18:21.560 Yeah,

NOTE Confidence: 0.8862809525

00:18:21.560 --> 00:18:23.660 like hematoma formation here you can

NOTE Confidence: 0.8862809525

00:18:23.660 --> 00:18:25.804 see between the calipers a isoechoic

NOTE Confidence: 0.8862809525

00:18:25.804 --> 00:18:27.868 hematoma you can actually see if

NOTE Confidence: 0.8862809525

00:18:27.868 --> 00:18:29.688 you got and the colour Doppler

NOTE Confidence: 0.8862809525

00:18:29.688 --> 00:18:31.612 on the source of the bleeding.

NOTE Confidence: 0.8862809525

00:18:31.612 --> 00:18:33.620 And these patients need

NOTE Confidence: 0.8862809525

00:18:33.620 --> 00:18:34.624 conservative management,  
NOTE Confidence: 0.8862809525

00:18:34.630 --> 00:18:36.982 just cold compresses that  
NOTE Confidence: 0.8862809525

00:18:36.982 --> 00:18:39.334 will treat the hematoma.  
NOTE Confidence: 0.8862809525

00:18:39.340 --> 00:18:40.342 So non diagnostic.  
NOTE Confidence: 0.8862809525

00:18:40.342 --> 00:18:43.227 As you can see it's not a trivial  
NOTE Confidence: 0.8862809525

00:18:43.227 --> 00:18:46.011 diagnosis because it does carry a  
NOTE Confidence: 0.8862809525

00:18:46.011 --> 00:18:49.025 significant risk of malignancies and hence  
NOTE Confidence: 0.8862809525

00:18:49.025 --> 00:18:52.115 these cases should always be repeated.  
NOTE Confidence: 0.8862809525

00:18:52.120 --> 00:18:54.120 And ideally like I said  
NOTE Confidence: 0.8862809525

00:18:54.120 --> 00:18:55.320 under ultrasound guidance.  
NOTE Confidence: 0.8862809525

00:18:55.320 --> 00:18:57.455 The contentious thing around 2017  
NOTE Confidence: 0.8862809525

00:18:57.455 --> 00:19:00.000 was which we actually corrected in  
NOTE Confidence: 0.8862809525

00:19:00.000 --> 00:19:02.387 2017 edition was what should be the  
NOTE Confidence: 0.8862809525

00:19:02.387 --> 00:19:04.404 time interval between the first non  
NOTE Confidence: 0.8862809525

00:19:04.404 --> 00:19:06.763 diagnostic F and A and the repeat  
NOTE Confidence: 0.8862809525

00:19:06.763 --> 00:19:09.333 FA and everyone agreed in 2010.

NOTE Confidence: 0.8862809525

00:19:09.333 --> 00:19:11.104 There should be 3 months or 12

NOTE Confidence: 0.8862809525

00:19:11.104 --> 00:19:12.607 weeks because you want to give

NOTE Confidence: 0.8862809525

00:19:12.607 --> 00:19:13.787 thyroid a chance to heal.

NOTE Confidence: 0.8862809525

00:19:13.790 --> 00:19:15.998 The trauma of the previous FN,

NOTE Confidence: 0.8862809525

00:19:16.000 --> 00:19:17.167 which in 2017,

NOTE Confidence: 0.8862809525

00:19:17.167 --> 00:19:19.112 based on several series which

NOTE Confidence: 0.8862809525

00:19:19.112 --> 00:19:21.080 were published was proven wrong.

NOTE Confidence: 0.8862809525

00:19:21.080 --> 00:19:22.710 You can actually bring back

NOTE Confidence: 0.8862809525

00:19:22.710 --> 00:19:24.014 the patient much sooner.

NOTE Confidence: 0.848515704285714

00:19:24.020 --> 00:19:26.449 At my institution I often get calls

NOTE Confidence: 0.848515704285714

00:19:26.449 --> 00:19:28.413 from radiologists when to bring the

NOTE Confidence: 0.848515704285714

00:19:28.413 --> 00:19:30.422 patient back and I always tell them

NOTE Confidence: 0.848515704285714

00:19:30.486 --> 00:19:32.934 three weeks or four weeks would be ideal.

NOTE Confidence: 0.848515704285714

00:19:32.940 --> 00:19:35.564 A patients would show up for repeat FA.

NOTE Confidence: 0.848515704285714

00:19:35.570 --> 00:19:37.796 Three months is a long time

NOTE Confidence: 0.848515704285714

00:19:37.800 --> 00:19:39.890 to put for the patient.  
NOTE Confidence: 0.848515704285714

00:19:39.890 --> 00:19:41.936 To undergo the agony of waiting.  
NOTE Confidence: 0.848515704285714

00:19:41.940 --> 00:19:43.584 Sometimes they don't even show up  
NOTE Confidence: 0.848515704285714

00:19:43.584 --> 00:19:45.538 after such a long period of time.  
NOTE Confidence: 0.848515704285714

00:19:45.540 --> 00:19:48.217 So again the conclusion in 2023  
NOTE Confidence: 0.848515704285714

00:19:48.217 --> 00:19:50.436 Bethesda which you will see is that  
NOTE Confidence: 0.848515704285714

00:19:50.436 --> 00:19:52.537 you can have much shorter interval  
NOTE Confidence: 0.848515704285714

00:19:52.537 --> 00:19:55.440 to repeat the FDA in terms of the  
NOTE Confidence: 0.848515704285714

00:19:55.440 --> 00:19:57.280 incidence of non diagnostic 10%.  
NOTE Confidence: 0.848515704285714

00:19:57.280 --> 00:19:59.939 Still the cut off that not more than  
NOTE Confidence: 0.848515704285714

00:19:59.939 --> 00:20:02.388 10% of all your thyroid FDA should be  
NOTE Confidence: 0.848515704285714

00:20:02.388 --> 00:20:04.380 non diagnostic was higher than 10%.  
NOTE Confidence: 0.848515704285714

00:20:04.380 --> 00:20:07.495 You have to modify the technique which  
NOTE Confidence: 0.848515704285714

00:20:07.495 --> 00:20:10.090 typically based on too much blood.  
NOTE Confidence: 0.848515704285714

00:20:10.090 --> 00:20:11.630 And very few cells.  
NOTE Confidence: 0.848515704285714

00:20:11.630 --> 00:20:13.170 So modify the technique,

NOTE Confidence: 0.848515704285714  
00:20:13.170 --> 00:20:14.900 shorten the needle dwell time  
NOTE Confidence: 0.848515704285714  
00:20:14.900 --> 00:20:16.630 to 6 seconds of faster,  
NOTE Confidence: 0.848515704285714  
00:20:16.630 --> 00:20:18.910 use a thin needle and Hopkins we use  
NOTE Confidence: 0.848515704285714  
00:20:18.910 --> 00:20:21.887 a 26 gauge ideal needle and also we  
NOTE Confidence: 0.848515704285714  
00:20:21.887 --> 00:20:24.339 don't apply suction which is common  
NOTE Confidence: 0.848515704285714  
00:20:24.339 --> 00:20:27.202 sense thing because thyroid is so vascular.  
NOTE Confidence: 0.848515704285714  
00:20:27.210 --> 00:20:29.405 Adequacy criteria remains the same  
NOTE Confidence: 0.848515704285714  
00:20:29.405 --> 00:20:32.410 although we had a very strong urge  
NOTE Confidence: 0.848515704285714  
00:20:32.410 --> 00:20:35.306 to change it from six group with 10  
NOTE Confidence: 0.848515704285714  
00:20:35.391 --> 00:20:38.086 cells each or roughly 60 cells and  
NOTE Confidence: 0.848515704285714  
00:20:38.086 --> 00:20:40.642 almost till the chapter was finalized.  
NOTE Confidence: 0.848515704285714  
00:20:40.642 --> 00:20:41.570 On adequacy,  
NOTE Confidence: 0.848515704285714  
00:20:41.570 --> 00:20:43.850 we wanted to revise it to say three  
NOTE Confidence: 0.848515704285714  
00:20:43.850 --> 00:20:46.449 groups of four groups were unfortunately,  
NOTE Confidence: 0.848515704285714  
00:20:46.450 --> 00:20:48.280 although most people agree that  
NOTE Confidence: 0.848515704285714

00:20:48.280 --> 00:20:50.702 it should be revised to a much  
NOTE Confidence: 0.848515704285714

00:20:50.702 --> 00:20:51.886 smaller count of cells,  
NOTE Confidence: 0.848515704285714

00:20:51.890 --> 00:20:54.590 there are no validation studies available.  
NOTE Confidence: 0.848515704285714

00:20:54.590 --> 00:20:57.595 So then in the end we concluded that the  
NOTE Confidence: 0.848515704285714

00:20:57.595 --> 00:21:00.010 criteria will remain the same as 2017,  
NOTE Confidence: 0.848515704285714

00:21:00.010 --> 00:21:03.886 although if it's clinically benign appearing,  
NOTE Confidence: 0.848515704285714

00:21:03.890 --> 00:21:05.213 imaging benign appearing,  
NOTE Confidence: 0.848515704285714

00:21:05.213 --> 00:21:07.859 you could certainly call something benign  
NOTE Confidence: 0.848515704285714

00:21:07.859 --> 00:21:10.257 with fewer than six groups of cells.  
NOTE Confidence: 0.848515704285714

00:21:10.260 --> 00:21:13.536 The contentious issue of cyst food only  
NOTE Confidence: 0.848515704285714

00:21:13.536 --> 00:21:16.537 remains for 2020 with test as well.  
NOTE Confidence: 0.848515704285714

00:21:16.540 --> 00:21:17.080 For example,  
NOTE Confidence: 0.848515704285714

00:21:17.080 --> 00:21:19.653 here you see a 10 Volt cyst which is  
NOTE Confidence: 0.848515704285714

00:21:19.653 --> 00:21:21.765 almost an aquatic because the ultrasound  
NOTE Confidence: 0.848515704285714

00:21:21.765 --> 00:21:24.058 waves are passed through and through,  
NOTE Confidence: 0.848515704285714

00:21:24.060 --> 00:21:25.188 they assist through it.

NOTE Confidence: 0.848515704285714  
00:21:25.188 --> 00:21:26.034 Not no protein,  
NOTE Confidence: 0.848515704285714  
00:21:26.040 --> 00:21:27.372 no solid component.  
NOTE Confidence: 0.848515704285714  
00:21:27.372 --> 00:21:30.480 What to call these cases and when  
NOTE Confidence: 0.848515704285714  
00:21:30.564 --> 00:21:33.058 you look at it under the microscope  
NOTE Confidence: 0.848515704285714  
00:21:33.058 --> 00:21:35.512 you will see these hemosiderin laden  
NOTE Confidence: 0.848515704285714  
00:21:35.512 --> 00:21:38.051 macrophages with these big clear zones on  
NOTE Confidence: 0.848515704285714  
00:21:38.051 --> 00:21:40.250 the slide signifying 10 watery colloid.  
NOTE Confidence: 0.848515704285714  
00:21:40.250 --> 00:21:42.250 Which will not stick to the to the  
NOTE Confidence: 0.848515704285714  
00:21:42.250 --> 00:21:44.240 slide but no follicular epithelium.  
NOTE Confidence: 0.848515704285714  
00:21:44.240 --> 00:21:47.414 So we again emphasize that you  
NOTE Confidence: 0.848515704285714  
00:21:47.414 --> 00:21:50.780 call these cases non diagnostic,  
NOTE Confidence: 0.848515704285714  
00:21:50.780 --> 00:21:52.684 but you will write a note to the  
NOTE Confidence: 0.848515704285714  
00:21:52.684 --> 00:21:54.575 clinician that if there are no  
NOTE Confidence: 0.848515704285714  
00:21:54.575 --> 00:21:55.595 suspicious clinical ultrasound,  
NOTE Confidence: 0.848515704285714  
00:21:55.600 --> 00:21:57.470 finding them will nodule no  
NOTE Confidence: 0.848515704285714

00:21:57.470 --> 00:21:58.966 calcification in the world,  
NOTE Confidence: 0.848515704285714

00:21:58.970 --> 00:21:59.974 no irregularly thickened wall,  
NOTE Confidence: 0.848515704285714

00:21:59.974 --> 00:22:01.229 so on and so forth.  
NOTE Confidence: 0.848515704285714

00:22:01.230 --> 00:22:02.985 These cases could be deemed  
NOTE Confidence: 0.848515704285714

00:22:02.985 --> 00:22:04.038 adequate and benign,  
NOTE Confidence: 0.848515704285714

00:22:04.040 --> 00:22:06.378 but the decision should be with the  
NOTE Confidence: 0.848515704285714

00:22:06.378 --> 00:22:08.458 clinicians from your end you will  
NOTE Confidence: 0.848515704285714

00:22:08.458 --> 00:22:10.486 still call them non diagnostic system.  
NOTE Confidence: 0.848515704285714

00:22:10.490 --> 00:22:12.596 Wrongly, and the reason is simple.  
NOTE Confidence: 0.848515704285714

00:22:12.600 --> 00:22:15.048 For example this this nodule was  
NOTE Confidence: 0.848515704285714

00:22:15.048 --> 00:22:17.039 done under palpation guidance and  
NOTE Confidence: 0.848515704285714

00:22:17.039 --> 00:22:19.375 hence the cystic part was of an aid.  
NOTE Confidence: 0.848515704285714

00:22:19.380 --> 00:22:21.540 The mural nodule and the solid  
NOTE Confidence: 0.848515704285714

00:22:21.540 --> 00:22:23.200 component was not FN 8.  
NOTE Confidence: 0.848515704285714

00:22:23.200 --> 00:22:24.800 Typically these are complexes  
NOTE Confidence: 0.848515704285714

00:22:24.800 --> 00:22:26.400 with solid cystic areas,



NOTE Confidence: 0.848515704285714  
00:22:26.400 --> 00:22:29.599 but look at these punctate echogenic foci.  
NOTE Confidence: 0.671388142416667  
00:22:29.600 --> 00:22:31.624 Translating, translating to my  
NOTE Confidence: 0.671388142416667  
00:22:31.624 --> 00:22:34.154 calcification or aggregates of some  
NOTE Confidence: 0.671388142416667  
00:22:34.154 --> 00:22:36.454 bodies are very specific imaging  
NOTE Confidence: 0.671388142416667  
00:22:36.454 --> 00:22:38.604 sign of apparitia carcinoma and  
NOTE Confidence: 0.671388142416667  
00:22:38.604 --> 00:22:40.769 when you aspirate such cases.  
NOTE Confidence: 0.671388142416667  
00:22:40.770 --> 00:22:42.216 Again you will end up with  
NOTE Confidence: 0.671388142416667  
00:22:42.216 --> 00:22:43.610 a lot of cyst fluid,  
NOTE Confidence: 0.671388142416667  
00:22:43.610 --> 00:22:46.250 very transparent zones on the slide,  
NOTE Confidence: 0.671388142416667  
00:22:46.250 --> 00:22:47.372 hemosiderin laden macrophages.  
NOTE Confidence: 0.671388142416667  
00:22:47.372 --> 00:22:49.990 And if you look at these cells,  
NOTE Confidence: 0.671388142416667  
00:22:49.990 --> 00:22:52.275 which look very histiocytic because  
NOTE Confidence: 0.671388142416667  
00:22:52.275 --> 00:22:54.103 of their cytoplasmic appearance,  
NOTE Confidence: 0.671388142416667  
00:22:54.110 --> 00:22:56.588 the nuclei are not those of histiocyte,  
NOTE Confidence: 0.671388142416667  
00:22:56.590 --> 00:22:57.532 these are over,  
NOTE Confidence: 0.671388142416667

00:22:57.532 --> 00:22:59.416 they show grooves and in some  
NOTE Confidence: 0.671388142416667

00:22:59.416 --> 00:23:01.882 cases you will see these beautiful  
NOTE Confidence: 0.671388142416667

00:23:01.882 --> 00:23:03.554 intranuclear inclusion despite the  
NOTE Confidence: 0.671388142416667

00:23:03.554 --> 00:23:05.946 fact that they look mysterious sick.  
NOTE Confidence: 0.671388142416667

00:23:05.950 --> 00:23:08.750 So this is a book picture of cystic  
NOTE Confidence: 0.671388142416667

00:23:08.750 --> 00:23:11.658 variant of papillary thyroid carcinoma.  
NOTE Confidence: 0.671388142416667

00:23:11.660 --> 00:23:13.680 Sometimes people who do only  
NOTE Confidence: 0.671388142416667

00:23:13.680 --> 00:23:15.296 histopathology as the question,  
NOTE Confidence: 0.671388142416667

00:23:15.300 --> 00:23:17.568 well, WHO does not endorse the  
NOTE Confidence: 0.671388142416667

00:23:17.568 --> 00:23:19.575 cystic variant of papillary carcinoma  
NOTE Confidence: 0.671388142416667

00:23:19.575 --> 00:23:22.119 where we as syrup pathologists and  
NOTE Confidence: 0.671388142416667

00:23:22.119 --> 00:23:24.255 radiologists like to consider it  
NOTE Confidence: 0.671388142416667

00:23:24.255 --> 00:23:26.643 separately because it helps us with  
NOTE Confidence: 0.671388142416667

00:23:26.643 --> 00:23:28.556 our diagnosis and differential diagnosis.  
NOTE Confidence: 0.671388142416667

00:23:28.556 --> 00:23:30.788 We try to exclude the possibility  
NOTE Confidence: 0.671388142416667

00:23:30.788 --> 00:23:32.759 of cystic change in an abnormal

NOTE Confidence: 0.671388142416667  
00:23:32.759 --> 00:23:34.765 roid nodule when we talk about  
NOTE Confidence: 0.671388142416667  
00:23:34.765 --> 00:23:36.800 cystic variant of papatya carcinoma.  
NOTE Confidence: 0.671388142416667  
00:23:36.800 --> 00:23:37.916 And just to let you know,  
NOTE Confidence: 0.671388142416667  
00:23:37.920 --> 00:23:40.185 I have never seen intranuclear  
NOTE Confidence: 0.671388142416667  
00:23:40.185 --> 00:23:41.544 inclusions in histiocytes.  
NOTE Confidence: 0.671388142416667  
00:23:41.550 --> 00:23:44.105 So the moment I start to see  
NOTE Confidence: 0.671388142416667  
00:23:44.105 --> 00:23:45.654 Intranuclear inclusion and histiocytic  
NOTE Confidence: 0.671388142416667  
00:23:45.654 --> 00:23:47.589 cells in a thyroid FNA,  
NOTE Confidence: 0.671388142416667  
00:23:47.590 --> 00:23:49.300 I think of parathyroid carcinoma  
NOTE Confidence: 0.671388142416667  
00:23:49.300 --> 00:23:51.010 and these are further examples.  
NOTE Confidence: 0.671388142416667  
00:23:51.010 --> 00:23:54.266 Even on air dried beef which stain smear,  
NOTE Confidence: 0.671388142416667  
00:23:54.270 --> 00:23:56.250 you will see beautiful intranuclear  
NOTE Confidence: 0.671388142416667  
00:23:56.250 --> 00:23:58.587 inclusions and these cells imbibe fluid  
NOTE Confidence: 0.671388142416667  
00:23:58.587 --> 00:24:00.345 when they are in fluid environment  
NOTE Confidence: 0.671388142416667  
00:24:00.345 --> 00:24:02.573 for a long period of time and they  
NOTE Confidence: 0.671388142416667

00:24:02.573 --> 00:24:05.758 begin to look like so bubble cells  
NOTE Confidence: 0.671388142416667

00:24:05.758 --> 00:24:09.631 the classic appearance but because of  
NOTE Confidence: 0.671388142416667

00:24:09.631 --> 00:24:11.713 the nuclear features it's it's papillary.  
NOTE Confidence: 0.671388142416667

00:24:11.720 --> 00:24:13.512 Liquid based cytology further  
NOTE Confidence: 0.671388142416667

00:24:13.512 --> 00:24:15.752 complicates the issue because everything  
NOTE Confidence: 0.671388142416667

00:24:15.752 --> 00:24:17.619 looks ascitic in these cases.  
NOTE Confidence: 0.671388142416667

00:24:17.620 --> 00:24:19.112 So that's a histiocyte.  
NOTE Confidence: 0.671388142416667

00:24:19.112 --> 00:24:21.350 Histiocyte where most of these cells  
NOTE Confidence: 0.671388142416667

00:24:21.417 --> 00:24:23.457 with beautiful internuclear inclusions  
NOTE Confidence: 0.671388142416667

00:24:23.457 --> 00:24:26.517 are cystic variant of Appalachia carcinoma.  
NOTE Confidence: 0.671388142416667

00:24:26.520 --> 00:24:28.368 They're simply undergoing this  
NOTE Confidence: 0.671388142416667

00:24:28.368 --> 00:24:30.678 phenomenon what is called hyper  
NOTE Confidence: 0.671388142416667

00:24:30.678 --> 00:24:32.580 regularization that they absorb fluid,  
NOTE Confidence: 0.671388142416667

00:24:32.580 --> 00:24:34.815 develop vacuoles and begin to  
NOTE Confidence: 0.671388142416667

00:24:34.815 --> 00:24:36.156 look like histiocytes.  
NOTE Confidence: 0.671388142416667

00:24:36.160 --> 00:24:36.537 Benign,

NOTE Confidence: 0.671388142416667

00:24:36.537 --> 00:24:38.045 very satisfying category because

NOTE Confidence: 0.671388142416667

00:24:38.045 --> 00:24:40.719 we know the risk of being agency

NOTE Confidence: 0.671388142416667

00:24:40.719 --> 00:24:42.514 is low these four entities.

NOTE Confidence: 0.671388142416667

00:24:42.520 --> 00:24:43.860 Are diagnosed on FNA.

NOTE Confidence: 0.671388142416667

00:24:43.860 --> 00:24:45.870 The most common one we know

NOTE Confidence: 0.671388142416667

00:24:45.944 --> 00:24:47.450 is adenomatoid nodule.

NOTE Confidence: 0.671388142416667

00:24:47.450 --> 00:24:49.030 Again the same recommendation

NOTE Confidence: 0.671388142416667

00:24:49.030 --> 00:24:51.770 that these patients do not need a

NOTE Confidence: 0.671388142416667

00:24:51.770 --> 00:24:53.863 repeat FNA or a biopsy or anything,

NOTE Confidence: 0.671388142416667

00:24:53.870 --> 00:24:56.330 simply followed up by clinical

NOTE Confidence: 0.671388142416667

00:24:56.330 --> 00:24:59.120 with or without imaging follow up.

NOTE Confidence: 0.671388142416667

00:24:59.120 --> 00:25:01.238 We all know that imaging helps.

NOTE Confidence: 0.671388142416667

00:25:01.240 --> 00:25:02.564 This is a number.

NOTE Confidence: 0.671388142416667

00:25:02.564 --> 00:25:04.219 Nodule is a disfiguring disease.

NOTE Confidence: 0.671388142416667

00:25:04.220 --> 00:25:05.768 Multinodular, often bilateral,

NOTE Confidence: 0.671388142416667

00:25:05.768 --> 00:25:08.348 often can have eggshell calcification  
NOTE Confidence: 0.671388142416667

00:25:08.348 --> 00:25:10.240 and gross examination.  
NOTE Confidence: 0.671388142416667

00:25:10.240 --> 00:25:12.616 We have all seen how it looks like.  
NOTE Confidence: 0.671388142416667

00:25:12.620 --> 00:25:14.900 It's very cellular on psychology  
NOTE Confidence: 0.671388142416667

00:25:14.900 --> 00:25:17.180 because it's a hyperplastic process.  
NOTE Confidence: 0.671388142416667

00:25:17.180 --> 00:25:19.724 I hate to add the word cellular before  
NOTE Confidence: 0.671388142416667

00:25:19.724 --> 00:25:21.820 adenomatoid nodule because it's meaningless.  
NOTE Confidence: 0.671388142416667

00:25:21.820 --> 00:25:23.218 They're all cellular.  
NOTE Confidence: 0.671388142416667

00:25:23.218 --> 00:25:24.616 Sometimes they are.  
NOTE Confidence: 0.671388142416667

00:25:24.620 --> 00:25:25.763 They are macro.  
NOTE Confidence: 0.671388142416667

00:25:25.763 --> 00:25:27.287 Follicles are gigantic follicles,  
NOTE Confidence: 0.671388142416667

00:25:27.290 --> 00:25:30.030 and when you repeatedly.  
NOTE Confidence: 0.671388142416667

00:25:30.030 --> 00:25:31.490 Puncture them with an FNA,  
NOTE Confidence: 0.671388142416667

00:25:31.490 --> 00:25:33.478 you will disrupt the wall and they  
NOTE Confidence: 0.671388142416667

00:25:33.478 --> 00:25:35.535 will become flat monolayers but with  
NOTE Confidence: 0.671388142416667

00:25:35.535 --> 00:25:37.450 abundant colloid in the background.

NOTE Confidence: 0.671388142416667  
00:25:37.450 --> 00:25:40.665 So reassuring finding if you  
NOTE Confidence: 0.671388142416667  
00:25:40.665 --> 00:25:42.594 see abundant colloid.  
NOTE Confidence: 0.671388142416667  
00:25:42.600 --> 00:25:44.442 The other thing which you would  
NOTE Confidence: 0.671388142416667  
00:25:44.442 --> 00:25:46.081 sometimes see would be over  
NOTE Confidence: 0.671388142416667  
00:25:46.081 --> 00:25:47.841 abundance of colloid and again  
NOTE Confidence: 0.671388142416667  
00:25:47.841 --> 00:25:49.249 your radiologist will help  
NOTE Confidence: 0.836979929714286  
00:25:49.312 --> 00:25:52.487 you. For example in this case it's a  
NOTE Confidence: 0.836979929714286  
00:25:52.487 --> 00:25:54.655 multi septated nodule looks anechoic  
NOTE Confidence: 0.836979929714286  
00:25:54.655 --> 00:25:57.852 but it has these four side of an  
NOTE Confidence: 0.836979929714286  
00:25:57.852 --> 00:25:59.792 artifact called Comet Tail artifact.  
NOTE Confidence: 0.836979929714286  
00:25:59.800 --> 00:26:02.775 They have small tails and this typically  
NOTE Confidence: 0.836979929714286  
00:26:02.775 --> 00:26:05.500 happens when the ultrasound waves hit  
NOTE Confidence: 0.836979929714286  
00:26:05.500 --> 00:26:08.236 a protein rich fluid like colloid.  
NOTE Confidence: 0.836979929714286  
00:26:08.240 --> 00:26:10.116 It creates this artifact  
NOTE Confidence: 0.836979929714286  
00:26:10.116 --> 00:26:12.930 reassuring finding and if you see.  
NOTE Confidence: 0.836979929714286

00:26:12.930 --> 00:26:16.430 Even a lot of cells, such as in this case,  
NOTE Confidence: 0.836979929714286

00:26:16.430 --> 00:26:18.134 you know that you are dealing  
NOTE Confidence: 0.836979929714286

00:26:18.134 --> 00:26:19.270 with a benign diagnosis.  
NOTE Confidence: 0.836979929714286

00:26:19.270 --> 00:26:20.830 So it's an easy diagnosis,  
NOTE Confidence: 0.836979929714286

00:26:20.830 --> 00:26:22.306 very specific diagnosis.  
NOTE Confidence: 0.836979929714286

00:26:22.306 --> 00:26:25.750 Very few cases will have malignant tumor,  
NOTE Confidence: 0.836979929714286

00:26:25.750 --> 00:26:27.302 but there are issues.  
NOTE Confidence: 0.836979929714286

00:26:27.302 --> 00:26:30.212 We all know if overabundance of composites  
NOTE Confidence: 0.836979929714286

00:26:30.212 --> 00:26:33.740 can lead to an oncocytic neoplasm diagnosis.  
NOTE Confidence: 0.836979929714286

00:26:33.740 --> 00:26:35.560 If your tip of the needle hits  
NOTE Confidence: 0.836979929714286

00:26:35.560 --> 00:26:37.610 an area with all micro follicles,  
NOTE Confidence: 0.836979929714286

00:26:37.610 --> 00:26:40.320 you can over diagnose it  
NOTE Confidence: 0.836979929714286

00:26:40.320 --> 00:26:41.946 as follicular neoplasm.  
NOTE Confidence: 0.836979929714286

00:26:41.950 --> 00:26:43.462 Sometime with cystic component  
NOTE Confidence: 0.836979929714286

00:26:43.462 --> 00:26:45.730 you can have cyst lining cells  
NOTE Confidence: 0.836979929714286

00:26:45.797 --> 00:26:47.409 that look fairly atypical.



NOTE Confidence: 0.836979929714286  
00:26:47.410 --> 00:26:48.445 Occasionally with cytoplasmic  
NOTE Confidence: 0.836979929714286  
00:26:48.445 --> 00:26:50.860 tales I I shared this case with  
NOTE Confidence: 0.836979929714286  
00:26:50.926 --> 00:26:52.398 the resident this morning.  
NOTE Confidence: 0.836979929714286  
00:26:52.400 --> 00:26:53.822 This famous metaplasia,  
NOTE Confidence: 0.836979929714286  
00:26:53.822 --> 00:26:55.718 you can get intranuclear  
NOTE Confidence: 0.836979929714286  
00:26:55.718 --> 00:26:58.229 inclusions and of course capillary  
NOTE Confidence: 0.836979929714286  
00:26:58.229 --> 00:27:00.774 architecture can confuse you with  
NOTE Confidence: 0.836979929714286  
00:27:00.774 --> 00:27:03.100 the appellate higher carcinoma.  
NOTE Confidence: 0.836979929714286  
00:27:03.100 --> 00:27:05.214 So this is my favorite slide to  
NOTE Confidence: 0.836979929714286  
00:27:05.214 --> 00:27:07.544 show and remind people that the most  
NOTE Confidence: 0.836979929714286  
00:27:07.544 --> 00:27:09.584 common cause of a false positive  
NOTE Confidence: 0.836979929714286  
00:27:09.654 --> 00:27:11.964 diagnosis in thyroid cytology is  
NOTE Confidence: 0.836979929714286  
00:27:11.964 --> 00:27:13.812 Hashimoto thyroiditis over diagnosed  
NOTE Confidence: 0.836979929714286  
00:27:13.812 --> 00:27:16.072 as suspicious for papillary papillary.  
NOTE Confidence: 0.836979929714286  
00:27:16.072 --> 00:27:18.312 So if you're not careful,  
NOTE Confidence: 0.836979929714286

00:27:18.320 --> 00:27:20.357 you can have a bad diagnosis as  
NOTE Confidence: 0.836979929714286

00:27:20.357 --> 00:27:22.603 far as long as you remember that  
NOTE Confidence: 0.836979929714286

00:27:22.603 --> 00:27:25.053 you have to be very careful with  
NOTE Confidence: 0.836979929714286

00:27:25.053 --> 00:27:27.198 Hashimoto again imaging can help.  
NOTE Confidence: 0.836979929714286

00:27:27.200 --> 00:27:29.960 It's a bilateral symmetrical process,  
NOTE Confidence: 0.836979929714286

00:27:29.960 --> 00:27:31.268 it's a lobulated.  
NOTE Confidence: 0.760655175923077

00:27:33.330 --> 00:27:36.417 Lobulation that you will see on imaging  
NOTE Confidence: 0.760655175923077

00:27:36.417 --> 00:27:38.729 micro mobilizations because of these Gray,  
NOTE Confidence: 0.760655175923077

00:27:38.730 --> 00:27:40.820 white lymphoid nodules and very  
NOTE Confidence: 0.760655175923077

00:27:40.820 --> 00:27:43.303 often the estimate would be widely  
NOTE Confidence: 0.760655175923077

00:27:43.303 --> 00:27:45.855 dilated as you can see here and in  
NOTE Confidence: 0.760655175923077

00:27:45.855 --> 00:27:48.229 the initial phases of Hashimoto.  
NOTE Confidence: 0.760655175923077

00:27:48.230 --> 00:27:49.658 If you do color Doppler it's  
NOTE Confidence: 0.760655175923077

00:27:49.658 --> 00:27:51.292 very vast or it's late stages  
NOTE Confidence: 0.760655175923077

00:27:51.292 --> 00:27:52.847 that you lose the vascularity.  
NOTE Confidence: 0.760655175923077

00:27:52.850 --> 00:27:54.590 Sometime adding up these features

NOTE Confidence: 0.760655175923077  
00:27:54.590 --> 00:27:56.909 even before you get DF and A  
NOTE Confidence: 0.760655175923077  
00:27:56.909 --> 00:27:58.694 will will give you a good idea  
NOTE Confidence: 0.760655175923077  
00:27:58.694 --> 00:28:00.916 that is going to be a lymphocytic  
NOTE Confidence: 0.760655175923077  
00:28:00.916 --> 00:28:03.189 thyroiditis and if you are lucky you.  
NOTE Confidence: 0.760655175923077  
00:28:03.189 --> 00:28:04.854 We get this beautiful biphasic  
NOTE Confidence: 0.760655175923077  
00:28:04.854 --> 00:28:06.575 admixture of hurthle cells  
NOTE Confidence: 0.760655175923077  
00:28:06.575 --> 00:28:08.060 and polymorphous lymphocytes,  
NOTE Confidence: 0.760655175923077  
00:28:08.060 --> 00:28:10.740 which may appear singly or in the form  
NOTE Confidence: 0.760655175923077  
00:28:10.740 --> 00:28:13.530 of this lymphohistiocytic aggregate,  
NOTE Confidence: 0.760655175923077  
00:28:13.530 --> 00:28:15.870 as I'm showing you here.  
NOTE Confidence: 0.760655175923077  
00:28:15.870 --> 00:28:17.875 Problems usually arise when you  
NOTE Confidence: 0.760655175923077  
00:28:17.875 --> 00:28:19.880 have reactive changes in the  
NOTE Confidence: 0.760655175923077  
00:28:19.950 --> 00:28:22.090 nuclei of the metaplastic cells.  
NOTE Confidence: 0.760655175923077  
00:28:22.090 --> 00:28:24.772 So for example here the background  
NOTE Confidence: 0.760655175923077  
00:28:24.772 --> 00:28:25.666 is lymphocytic.  
NOTE Confidence: 0.760655175923077

00:28:25.670 --> 00:28:27.745 These cells have markedly enlarged  
NOTE Confidence: 0.760655175923077

00:28:27.745 --> 00:28:30.320 nuclei which are over in shape.  
NOTE Confidence: 0.760655175923077

00:28:30.320 --> 00:28:32.024 Look at this case.  
NOTE Confidence: 0.760655175923077

00:28:32.024 --> 00:28:34.154 All nuclei with beautiful grooves,  
NOTE Confidence: 0.760655175923077

00:28:34.160 --> 00:28:35.650 intranuclear inclusions,  
NOTE Confidence: 0.760655175923077

00:28:35.650 --> 00:28:39.375 fine powdery chromatin Oval nuclei,  
NOTE Confidence: 0.760655175923077

00:28:39.380 --> 00:28:40.715 beautiful intranuclear inclusions.  
NOTE Confidence: 0.760655175923077

00:28:40.715 --> 00:28:44.094 So it's very hard to suppress the  
NOTE Confidence: 0.760655175923077

00:28:44.094 --> 00:28:46.698 temptation not to call these three  
NOTE Confidence: 0.760655175923077

00:28:46.698 --> 00:28:49.680 scenarios or cases as suspicious of PTC.  
NOTE Confidence: 0.760655175923077

00:28:49.680 --> 00:28:53.054 PTC for all three cases on resection  
NOTE Confidence: 0.760655175923077

00:28:53.054 --> 00:28:55.440 was simply Hashimoto Paraditas.  
NOTE Confidence: 0.760655175923077

00:28:55.440 --> 00:28:57.368 So what I'm trying to tell you is  
NOTE Confidence: 0.760655175923077

00:28:57.368 --> 00:28:59.142 that have a very high threshold  
NOTE Confidence: 0.760655175923077

00:28:59.142 --> 00:29:00.374 for committing to PTC.  
NOTE Confidence: 0.760655175923077

00:29:00.380 --> 00:29:02.660 There's a special BDC diagnosis when

NOTE Confidence: 0.760655175923077  
00:29:02.660 --> 00:29:05.027 you have previous history of Hashimoto  
NOTE Confidence: 0.760655175923077  
00:29:05.027 --> 00:29:07.750 or use seem concurrent changes of Hashimoto,  
NOTE Confidence: 0.760655175923077  
00:29:07.750 --> 00:29:09.676 even with the knowledge that patients  
NOTE Confidence: 0.760655175923077  
00:29:09.676 --> 00:29:11.378 who have long standing Hashimoto  
NOTE Confidence: 0.760655175923077  
00:29:11.378 --> 00:29:13.173 have a much higher incidence  
NOTE Confidence: 0.760655175923077  
00:29:13.173 --> 00:29:14.609 of typhoid higher carcinoma.  
NOTE Confidence: 0.760655175923077  
00:29:14.610 --> 00:29:16.155 Just tell yourself that you're  
NOTE Confidence: 0.760655175923077  
00:29:16.155 --> 00:29:18.710 not going to call it PTC unless  
NOTE Confidence: 0.760655175923077  
00:29:18.710 --> 00:29:20.129 you're absolutely convinced,  
NOTE Confidence: 0.760655175923077  
00:29:20.130 --> 00:29:22.490 so I'm not stopping you from doing that.  
NOTE Confidence: 0.760655175923077  
00:29:22.490 --> 00:29:23.615 In my case,  
NOTE Confidence: 0.760655175923077  
00:29:23.615 --> 00:29:25.865 when I see such focal changes,  
NOTE Confidence: 0.760655175923077  
00:29:25.870 --> 00:29:29.470 I call it a US nuclear tipi in a  
NOTE Confidence: 0.760655175923077  
00:29:29.470 --> 00:29:30.610 background of Hashimoto.  
NOTE Confidence: 0.760655175923077  
00:29:30.610 --> 00:29:33.960 Or I go up to suspicious for PTC if several  
NOTE Confidence: 0.760655175923077

00:29:34.048 --> 00:29:36.860 slides show internuclear inclusions.  
NOTE Confidence: 0.760655175923077

00:29:36.860 --> 00:29:39.887 But if I have edge to edge carcinoma,  
NOTE Confidence: 0.760655175923077

00:29:39.887 --> 00:29:42.666 those are the cases where I feel  
NOTE Confidence: 0.760655175923077

00:29:42.666 --> 00:29:45.301 comfortable calling TTC rising in the  
NOTE Confidence: 0.760655175923077

00:29:45.301 --> 00:29:47.069 background of Hashimoto's thyroiditis.  
NOTE Confidence: 0.760655175923077

00:29:47.070 --> 00:29:49.566 So you all know AUS has a lot  
NOTE Confidence: 0.760655175923077

00:29:49.566 --> 00:29:50.890 of subjectivity involved.  
NOTE Confidence: 0.760655175923077

00:29:50.890 --> 00:29:53.466 There are many phases of this diagnosis.  
NOTE Confidence: 0.760655175923077

00:29:53.470 --> 00:29:55.444 So these are the cases which are  
NOTE Confidence: 0.760655175923077

00:29:55.444 --> 00:29:57.227 typically have very subtle focal atypia  
NOTE Confidence: 0.760655175923077

00:29:57.227 --> 00:29:59.278 that you don't want to call benign  
NOTE Confidence: 0.760655175923077

00:29:59.334 --> 00:30:01.175 and lose the patient to follow up.  
NOTE Confidence: 0.760655175923077

00:30:01.180 --> 00:30:02.200 On the other hand,  
NOTE Confidence: 0.760655175923077

00:30:02.200 --> 00:30:04.733 you don't want to go all the way to  
NOTE Confidence: 0.760655175923077

00:30:04.733 --> 00:30:06.617 Flagler Neoplasma SFM and have the  
NOTE Confidence: 0.760655175923077

00:30:06.617 --> 00:30:09.187 patient undergo polypectomy or thyroidectomy.

NOTE Confidence: 0.760655175923077  
00:30:09.190 --> 00:30:11.506 So you use the term AUS.  
NOTE Confidence: 0.760655175923077  
00:30:11.510 --> 00:30:13.379 And now this is the major change  
NOTE Confidence: 0.760655175923077  
00:30:13.379 --> 00:30:15.312 that you will see now are based  
NOTE Confidence: 0.760655175923077  
00:30:15.312 --> 00:30:16.914 on our own study at Hopkins.  
NOTE Confidence: 0.760655175923077  
00:30:16.920 --> 00:30:18.756 We showed that there are two  
NOTE Confidence: 0.760655175923077  
00:30:18.756 --> 00:30:19.980 distinct groups of AUS.  
NOTE Confidence: 0.760655175923077  
00:30:19.980 --> 00:30:22.584 The one which are based on nuclear  
NOTE Confidence: 0.760655175923077  
00:30:22.584 --> 00:30:26.290 tipiya has an ROM of 48% in our study,  
NOTE Confidence: 0.760655175923077  
00:30:26.290 --> 00:30:29.440 23% of all other subtypes of AUS.  
NOTE Confidence: 0.760655175923077  
00:30:29.440 --> 00:30:32.079 And now we have support of several  
NOTE Confidence: 0.760655175923077  
00:30:32.079 --> 00:30:34.038 molecular studies which have clearly  
NOTE Confidence: 0.760655175923077  
00:30:34.038 --> 00:30:36.677 shown that the high risk group have  
NOTE Confidence: 0.760655175923077  
00:30:36.677 --> 00:30:38.870 mutations more specific like B RAF  
NOTE Confidence: 0.760655175923077  
00:30:38.870 --> 00:30:41.150 V600E and the other group which we call  
NOTE Confidence: 0.8110541875  
00:30:41.221 --> 00:30:42.299 micro follicular.  
NOTE Confidence: 0.8110541875

00:30:42.300 --> 00:30:45.078 Or miscellaneous have the low risk  
NOTE Confidence: 0.8110541875

00:30:45.078 --> 00:30:48.482 mutations such as KSP 10 taxi PPR  
NOTE Confidence: 0.8110541875

00:30:48.482 --> 00:30:51.410 gamma pointing more towards nifty or  
NOTE Confidence: 0.8110541875

00:30:51.410 --> 00:30:53.970 flocculant neoplasm type diagnosis.  
NOTE Confidence: 0.8110541875

00:30:53.970 --> 00:30:57.365 So that prompted us to have in  
NOTE Confidence: 0.8110541875

00:30:57.370 --> 00:31:00.090 2023 editions simply two AUS,  
NOTE Confidence: 0.8110541875

00:31:00.090 --> 00:31:02.659 AUS nuclear this is the highest and  
NOTE Confidence: 0.8110541875

00:31:02.659 --> 00:31:04.989 AUS other which is the low risk.  
NOTE Confidence: 0.8110541875

00:31:04.990 --> 00:31:06.934 If you want you can certainly  
NOTE Confidence: 0.8110541875

00:31:06.934 --> 00:31:08.672 put a descriptor after your  
NOTE Confidence: 0.8110541875

00:31:08.672 --> 00:31:10.168 diagnosis based on micro,  
NOTE Confidence: 0.8110541875

00:31:10.170 --> 00:31:13.176 follicular or plasmacytoid cells or cyst.  
NOTE Confidence: 0.8110541875

00:31:13.180 --> 00:31:16.042 Lining cells, but the top line would be AUS,  
NOTE Confidence: 0.8110541875

00:31:16.050 --> 00:31:17.451 nuclear or AUS.  
NOTE Confidence: 0.8110541875

00:31:17.451 --> 00:31:20.253 All other benchmark is the same  
NOTE Confidence: 0.8110541875

00:31:20.253 --> 00:31:23.164 and not more than 10% of your



NOTE Confidence: 0.8110541875

00:31:23.164 --> 00:31:25.546 cases should be called the US.

NOTE Confidence: 0.8110541875

00:31:25.550 --> 00:31:27.138 If it's significantly higher,

NOTE Confidence: 0.8110541875

00:31:27.138 --> 00:31:29.520 you have to bring it down.

NOTE Confidence: 0.8110541875

00:31:29.520 --> 00:31:30.242 Polyclar neoplasm,

NOTE Confidence: 0.8110541875

00:31:30.242 --> 00:31:31.686 again imaging may help.

NOTE Confidence: 0.8110541875

00:31:31.690 --> 00:31:33.400 They typically oval in shape.

NOTE Confidence: 0.8110541875

00:31:33.400 --> 00:31:35.264 They could be ISO,

NOTE Confidence: 0.8110541875

00:31:35.264 --> 00:31:37.594 equate or high bit hypoechoic.

NOTE Confidence: 0.8110541875

00:31:37.600 --> 00:31:39.528 They're very vascular when

NOTE Confidence: 0.8110541875

00:31:39.528 --> 00:31:41.456 you initially read them,

NOTE Confidence: 0.8110541875

00:31:41.460 --> 00:31:42.891 typically very irregular

NOTE Confidence: 0.8110541875

00:31:42.891 --> 00:31:44.799 vascularity in the middle.

NOTE Confidence: 0.8110541875

00:31:44.800 --> 00:31:46.172 This is a case which turned

NOTE Confidence: 0.8110541875

00:31:46.172 --> 00:31:47.720 out to be Flagler Red Norma.

NOTE Confidence: 0.8110541875

00:31:47.720 --> 00:31:49.708 You can actually see the needle track

NOTE Confidence: 0.8110541875

00:31:49.708 --> 00:31:51.138 and hemorrhage caused by the FNA.

NOTE Confidence: 0.8110541875

00:31:51.140 --> 00:31:53.352 This turned out to be a minimally

NOTE Confidence: 0.8110541875

00:31:53.352 --> 00:31:54.300 invasive follicular carcinoma.

NOTE Confidence: 0.8110541875

00:31:54.300 --> 00:31:55.785 You can see the disruption

NOTE Confidence: 0.8110541875

00:31:55.785 --> 00:31:56.973 of the capsule here,

NOTE Confidence: 0.8110541875

00:31:56.980 --> 00:31:59.668 but these features cannot be seen.

NOTE Confidence: 0.8110541875

00:31:59.670 --> 00:32:01.582 Accurately on imaging and

NOTE Confidence: 0.8110541875

00:32:01.582 --> 00:32:03.972 certainly cannot be seen on

NOTE Confidence: 0.8110541875

00:32:03.972 --> 00:32:05.800 psychology and even in Histology.

NOTE Confidence: 0.8110541875

00:32:05.800 --> 00:32:08.145 You really have to look hard for

NOTE Confidence: 0.8110541875

00:32:08.145 --> 00:32:10.554 this penetration of the capsule with

NOTE Confidence: 0.8110541875

00:32:10.554 --> 00:32:13.053 mushrooming of the tumor into the

NOTE Confidence: 0.8110541875

00:32:13.053 --> 00:32:14.761 lymphovascular spaces before you

NOTE Confidence: 0.8110541875

00:32:14.761 --> 00:32:17.348 will commit to the diagnosis flula

NOTE Confidence: 0.8110541875

00:32:17.348 --> 00:32:20.036 carcinoma and hence we simply call

NOTE Confidence: 0.8110541875

00:32:20.036 --> 00:32:22.030 them cellular neoplasm and then

NOTE Confidence: 0.8110541875

00:32:22.030 --> 00:32:24.310 they do a diagnostic lobectomy.

NOTE Confidence: 0.8110541875

00:32:24.310 --> 00:32:26.080 These days molecular tests are done

NOTE Confidence: 0.8110541875

00:32:26.080 --> 00:32:28.843 1st and if they are negative within 96%.

NOTE Confidence: 0.8110541875

00:32:28.843 --> 00:32:30.082 Very predictive value.

NOTE Confidence: 0.8110541875

00:32:30.082 --> 00:32:32.560 You avoid the need to do

NOTE Confidence: 0.8110541875

00:32:32.649 --> 00:32:34.479 a diagnostic lobectomy.

NOTE Confidence: 0.8110541875

00:32:34.480 --> 00:32:37.156 A very important thing happened in

NOTE Confidence: 0.8110541875

00:32:37.156 --> 00:32:40.188 2017 edition which will remain in 2023,

NOTE Confidence: 0.8110541875

00:32:40.188 --> 00:32:43.464 which is how to diagnose or screen

NOTE Confidence: 0.8110541875

00:32:43.464 --> 00:32:46.360 for nift P and the answer is simple.

NOTE Confidence: 0.8110541875

00:32:46.360 --> 00:32:49.216 The cases where you see mild nuclear

NOTE Confidence: 0.8110541875

00:32:49.216 --> 00:32:51.755 changes with the philar based

NOTE Confidence: 0.8110541875

00:32:51.755 --> 00:32:54.835 architecture call them follicular neoplasm.

NOTE Confidence: 0.8110541875

00:32:54.840 --> 00:32:57.018 In 2010 we recommended those cases

NOTE Confidence: 0.8110541875

00:32:57.018 --> 00:32:59.887 should be bumped up to to suspicious of.

NOTE Confidence: 0.8110541875

00:32:59.890 --> 00:33:00.914 Primary carcinoma,  
NOTE Confidence: 0.8110541875

00:33:00.914 --> 00:33:04.302 but in 2017 and in 2023 Bethesda  
NOTE Confidence: 0.8110541875

00:33:04.302 --> 00:33:06.357 we allow minor nuclear changes  
NOTE Confidence: 0.8110541875

00:33:06.357 --> 00:33:08.500 to be present in follicular  
NOTE Confidence: 0.8110541875

00:33:08.500 --> 00:33:11.008 neoplasm because we want to put  
NOTE Confidence: 0.8110541875

00:33:11.008 --> 00:33:13.938 all potential cases of nift P in  
NOTE Confidence: 0.8110541875

00:33:13.938 --> 00:33:15.150 follicular neoplasm categories  
NOTE Confidence: 0.8110541875

00:33:15.150 --> 00:33:17.072 so they get the right treatment  
NOTE Confidence: 0.8110541875

00:33:17.072 --> 00:33:18.740 which is lobectomy for next week.  
NOTE Confidence: 0.8110541875

00:33:18.740 --> 00:33:20.360 So it's very important to realize.  
NOTE Confidence: 0.8110541875

00:33:20.360 --> 00:33:23.952 So if I would see a curricular pattern  
NOTE Confidence: 0.8110541875

00:33:23.952 --> 00:33:26.782 lesion with rare intranuclear inclusions  
NOTE Confidence: 0.8110541875

00:33:26.782 --> 00:33:29.898 or groups or some over nuclei.  
NOTE Confidence: 0.8110541875

00:33:29.900 --> 00:33:32.108 I would call it follicular neoplasm,  
NOTE Confidence: 0.8110541875

00:33:32.110 --> 00:33:33.585 even knowing that potentially this  
NOTE Confidence: 0.8110541875

00:33:33.585 --> 00:33:35.589 case will turn out to be nifty.

NOTE Confidence: 0.8110541875

00:33:35.590 --> 00:33:37.306 But I'll write a simple note.

NOTE Confidence: 0.8110541875

00:33:37.310 --> 00:33:39.340 Differential diagnosis includes an FPN

NOTE Confidence: 0.8110541875

00:33:39.340 --> 00:33:41.990 collision that happy surgeons are happy for.

NOTE Confidence: 0.8110541875

00:33:41.990 --> 00:33:45.596 Lobectomy will only show a nifty.

NOTE Confidence: 0.8110541875

00:33:45.600 --> 00:33:47.656 So that's the psychology

NOTE Confidence: 0.8110541875

00:33:47.656 --> 00:33:49.198 of cellular neoplasm.

NOTE Confidence: 0.8110541875

00:33:49.200 --> 00:33:51.342 Again the criteria remains the same

NOTE Confidence: 0.8110541875

00:33:51.342 --> 00:33:53.752 that it should show a predominantly

NOTE Confidence: 0.8110541875

00:33:53.752 --> 00:33:55.572 micro floccular architecture as

NOTE Confidence: 0.8110541875

00:33:55.572 --> 00:33:58.480 shown here that more than 50% of

NOTE Confidence: 0.8110541875

00:33:58.480 --> 00:34:01.871 the cells will be in the form of

NOTE Confidence: 0.8110541875

00:34:01.871 --> 00:34:04.528 these very uniform equal size micro

NOTE Confidence: 0.8110541875

00:34:04.528 --> 00:34:07.300 follicles with 15 or fewer nuclei in

NOTE Confidence: 0.808348917666667

00:34:07.381 --> 00:34:10.549 the form of a complete circle or near

NOTE Confidence: 0.808348917666667

00:34:10.549 --> 00:34:13.529 complete circle with no hole oil in the

NOTE Confidence: 0.808348917666667

00:34:13.529 --> 00:34:16.230 middle of the follicles they can have.  
NOTE Confidence: 0.808348917666667

00:34:16.230 --> 00:34:17.950 Get your bachelor architecture.  
NOTE Confidence: 0.808348917666667

00:34:17.950 --> 00:34:19.972 But whatever the case can colloid  
NOTE Confidence: 0.808348917666667

00:34:19.972 --> 00:34:22.316 more than 50% of popular component  
NOTE Confidence: 0.808348917666667

00:34:22.316 --> 00:34:24.084 in micro follicular architecture.  
NOTE Confidence: 0.808348917666667

00:34:24.090 --> 00:34:27.150 You will call it follicular neoplasm.  
NOTE Confidence: 0.808348917666667

00:34:27.150 --> 00:34:28.870 Some change changes happen  
NOTE Confidence: 0.808348917666667

00:34:28.870 --> 00:34:30.590 with Hercule cell neoplasm.  
NOTE Confidence: 0.808348917666667

00:34:30.590 --> 00:34:32.990 Again, this is a diagnosis that  
NOTE Confidence: 0.808348917666667

00:34:32.990 --> 00:34:35.876 you will base on near exclusive  
NOTE Confidence: 0.808348917666667

00:34:35.876 --> 00:34:38.268 population of further cells.  
NOTE Confidence: 0.808348917666667

00:34:38.270 --> 00:34:40.643 I know in Histology it could be 70%  
NOTE Confidence: 0.808348917666667

00:34:40.643 --> 00:34:42.808 or whatever percentage cut off.  
NOTE Confidence: 0.808348917666667

00:34:42.810 --> 00:34:43.854 People would decide,  
NOTE Confidence: 0.808348917666667

00:34:43.854 --> 00:34:46.290 but it's inside a path we like  
NOTE Confidence: 0.808348917666667

00:34:46.367 --> 00:34:48.704 to see near 100% of the cells

NOTE Confidence: 0.808348917666667  
00:34:48.704 --> 00:34:50.684 as appearing as ankle slides.  
NOTE Confidence: 0.808348917666667  
00:34:50.690 --> 00:34:52.280 The other change which happened  
NOTE Confidence: 0.808348917666667  
00:34:52.280 --> 00:34:54.434 with this category is that as you  
NOTE Confidence: 0.808348917666667  
00:34:54.434 --> 00:34:55.946 know WHO junk the term hurthle  
NOTE Confidence: 0.808348917666667  
00:34:55.946 --> 00:34:57.498 cell and everyone is happy.  
NOTE Confidence: 0.808348917666667  
00:34:57.500 --> 00:34:59.428 That they're simply call  
NOTE Confidence: 0.808348917666667  
00:34:59.428 --> 00:35:00.874 on cosmetic neoplasm.  
NOTE Confidence: 0.808348917666667  
00:35:00.880 --> 00:35:02.960 So using Bethesda system,  
NOTE Confidence: 0.808348917666667  
00:35:02.960 --> 00:35:04.000 perspectively speaking,  
NOTE Confidence: 0.808348917666667  
00:35:04.000 --> 00:35:06.215 you will simply call them  
NOTE Confidence: 0.808348917666667  
00:35:06.215 --> 00:35:07.544 oncocytic follicular neoplasm.  
NOTE Confidence: 0.808348917666667  
00:35:07.550 --> 00:35:10.160 A very simple diagnosis are very  
NOTE Confidence: 0.808348917666667  
00:35:10.160 --> 00:35:12.475 commonly asked question is how  
NOTE Confidence: 0.808348917666667  
00:35:12.475 --> 00:35:14.876 to differentiate hurt a oncocytic  
NOTE Confidence: 0.808348917666667  
00:35:14.876 --> 00:35:17.708 hyperplasia as part of a hyperplastic  
NOTE Confidence: 0.808348917666667

00:35:17.708 --> 00:35:20.660 nodule from a true oncocytic neoplasm.  
NOTE Confidence: 0.808348917666667

00:35:20.660 --> 00:35:22.280 2 features that I pay.  
NOTE Confidence: 0.808348917666667

00:35:22.280 --> 00:35:25.208 Due importance would be the proliferation  
NOTE Confidence: 0.808348917666667

00:35:25.208 --> 00:35:27.620 of capillaries as shown here.  
NOTE Confidence: 0.808348917666667

00:35:27.620 --> 00:35:28.972 And frequent binucleation.  
NOTE Confidence: 0.808348917666667

00:35:28.972 --> 00:35:31.480 If every other cell has two nuclei,  
NOTE Confidence: 0.808348917666667

00:35:31.480 --> 00:35:34.320 especially with the nucleolar prominence,  
NOTE Confidence: 0.808348917666667

00:35:34.320 --> 00:35:37.758 I would be very comfortable calling  
NOTE Confidence: 0.808348917666667

00:35:37.758 --> 00:35:40.050 it oncocytic follicular neoplasm.  
NOTE Confidence: 0.808348917666667

00:35:40.050 --> 00:35:41.780 A major differential diagnosis  
NOTE Confidence: 0.808348917666667

00:35:41.780 --> 00:35:44.360 of a follicular neoplasm.  
NOTE Confidence: 0.808348917666667

00:35:44.360 --> 00:35:47.918 Is with a parathyroid lesion typically  
NOTE Confidence: 0.808348917666667

00:35:47.918 --> 00:35:50.999 a parathyroid Noma rule of thumb,  
NOTE Confidence: 0.808348917666667

00:35:50.999 --> 00:35:53.597 which I usually teach my fellows,  
NOTE Confidence: 0.808348917666667

00:35:53.600 --> 00:35:55.364 is that if you're going after  
NOTE Confidence: 0.808348917666667

00:35:55.364 --> 00:35:57.791 a hard F and a nodule and you



NOTE Confidence: 0.808348917666667

00:35:57.791 --> 00:35:59.980 have zero call or no call roid,

NOTE Confidence: 0.808348917666667

00:35:59.980 --> 00:36:01.591 think parathyroid medullary

NOTE Confidence: 0.808348917666667

00:36:01.591 --> 00:36:04.276 and metastasis in that order.

NOTE Confidence: 0.808348917666667

00:36:04.280 --> 00:36:06.148 And certainly intra parathyroids

NOTE Confidence: 0.808348917666667

00:36:06.148 --> 00:36:08.016 could be intra thyroidal.

NOTE Confidence: 0.808348917666667

00:36:08.020 --> 00:36:09.790 Even the best radiologists cannot

NOTE Confidence: 0.808348917666667

00:36:09.790 --> 00:36:12.211 distinguish them and we will come to

NOTE Confidence: 0.808348917666667

00:36:12.211 --> 00:36:14.255 your attention as as a thyroid nodule.

NOTE Confidence: 0.808348917666667

00:36:14.260 --> 00:36:15.976 So they are very cellular because

NOTE Confidence: 0.808348917666667

00:36:15.976 --> 00:36:17.530 they are stronger poor tumors.

NOTE Confidence: 0.808348917666667

00:36:17.530 --> 00:36:19.987 They have a diffuse population of cells,

NOTE Confidence: 0.808348917666667

00:36:19.990 --> 00:36:22.306 some of which may form follicles,

NOTE Confidence: 0.808348917666667

00:36:22.310 --> 00:36:24.420 but large population of naked

NOTE Confidence: 0.808348917666667

00:36:24.420 --> 00:36:26.530 nuclei because when you smear

NOTE Confidence: 0.808348917666667

00:36:26.605 --> 00:36:28.610 them you lose the cytoplasm.

NOTE Confidence: 0.808348917666667

00:36:28.610 --> 00:36:31.424 Very vascular as you can see here.  
NOTE Confidence: 0.808348917666667

00:36:31.430 --> 00:36:33.454 So at Hopkins what we do is that  
NOTE Confidence: 0.808348917666667

00:36:33.454 --> 00:36:35.503 we keep this small bullet tubes  
NOTE Confidence: 0.808348917666667

00:36:35.503 --> 00:36:37.711 plastic tube prefilled with one CC  
NOTE Confidence: 0.808348917666667

00:36:37.774 --> 00:36:39.712 of Hanks balanced salt solution on  
NOTE Confidence: 0.808348917666667

00:36:39.712 --> 00:36:42.231 the FSA card and whenever we suspect  
NOTE Confidence: 0.808348917666667

00:36:42.231 --> 00:36:44.266 something could be a parathyroid.  
NOTE Confidence: 0.808348917666667

00:36:44.270 --> 00:36:46.688 That's the radiologists do one extra  
NOTE Confidence: 0.808348917666667

00:36:46.688 --> 00:36:48.925 dedicated task and then we rinse  
NOTE Confidence: 0.808348917666667

00:36:48.925 --> 00:36:51.125 that pass in this one CC of hand  
NOTE Confidence: 0.808348917666667

00:36:51.201 --> 00:36:53.230 down substitutions, Andrew Chemistry.  
NOTE Confidence: 0.808348917666667

00:36:53.230 --> 00:36:55.855 And next day when the PTH level  
NOTE Confidence: 0.808348917666667

00:36:55.855 --> 00:36:58.685 comes back higher than the patient  
NOTE Confidence: 0.808348917666667

00:36:58.685 --> 00:37:00.593 peripheral blood that's highly  
NOTE Confidence: 0.808348917666667

00:37:00.593 --> 00:37:02.779 protective of a parathyroid lesion.  
NOTE Confidence: 0.808348917666667

00:37:02.780 --> 00:37:04.640 I use the term parathyroid lesion.

NOTE Confidence: 0.808348917666667  
00:37:04.640 --> 00:37:07.208 I don't call it parathyroid neoplasm  
NOTE Confidence: 0.808348917666667  
00:37:07.208 --> 00:37:09.545 because you could certainly have  
NOTE Confidence: 0.808348917666667  
00:37:09.545 --> 00:37:11.611 isolated hyperplasia recently or you  
NOTE Confidence: 0.808348917666667  
00:37:11.611 --> 00:37:14.769 can make a cell block and do for example.  
NOTE Confidence: 0.808348917666667  
00:37:14.770 --> 00:37:15.590 PTH immunostaining,  
NOTE Confidence: 0.808348917666667  
00:37:15.590 --> 00:37:18.870 these eight people love to do GATA 3,  
NOTE Confidence: 0.808348917666667  
00:37:18.870 --> 00:37:20.430 which is an excellent marker  
NOTE Confidence: 0.808348917666667  
00:37:20.430 --> 00:37:21.990 because it's saying the nucleus.  
NOTE Confidence: 0.808348917666667  
00:37:21.990 --> 00:37:23.565 So even if you don't have much  
NOTE Confidence: 0.808348917666667  
00:37:23.565 --> 00:37:25.050 cytoplasm in a limited sample,  
NOTE Confidence: 0.808348917666667  
00:37:25.050 --> 00:37:27.426 you can still get nuclear staining.  
NOTE Confidence: 0.904999179166667  
00:37:27.430 --> 00:37:30.286 So one thing I wanted to tell you  
NOTE Confidence: 0.904999179166667  
00:37:30.286 --> 00:37:32.866 all is that recently people have  
NOTE Confidence: 0.904999179166667  
00:37:32.866 --> 00:37:34.406 started to ask this question.  
NOTE Confidence: 0.904999179166667  
00:37:34.410 --> 00:37:36.645 Well, you're calling it parathyroid  
NOTE Confidence: 0.904999179166667

00:37:36.645 --> 00:37:39.689 lesion patient also has a neck node.  
NOTE Confidence: 0.904999179166667

00:37:39.690 --> 00:37:41.688 Could this be a parathyroid carcinoma  
NOTE Confidence: 0.904999179166667

00:37:41.688 --> 00:37:44.489 or is it a parathyroid adenoma?  
NOTE Confidence: 0.904999179166667

00:37:44.490 --> 00:37:46.522 Unfortunately we have this  
NOTE Confidence: 0.904999179166667

00:37:46.522 --> 00:37:48.046 excellent immunostain now,  
NOTE Confidence: 0.904999179166667

00:37:48.050 --> 00:37:50.888 a pair of fibrominn which is  
NOTE Confidence: 0.904999179166667

00:37:50.890 --> 00:37:54.676 extracted from a tumor suppressor gene  
NOTE Confidence: 0.904999179166667

00:37:54.676 --> 00:37:57.850 hyperparathyroidism 2 HPT two which?  
NOTE Confidence: 0.904999179166667

00:37:57.850 --> 00:38:00.490 Which is lost in parathyroid carcinomas.  
NOTE Confidence: 0.904999179166667

00:38:00.490 --> 00:38:03.742 And look at the impressive profile  
NOTE Confidence: 0.904999179166667

00:38:03.742 --> 00:38:07.030 for 96% sensitivity and 99%  
NOTE Confidence: 0.904999179166667

00:38:07.030 --> 00:38:09.770 specificity for parathyroid carcinoma.  
NOTE Confidence: 0.904999179166667

00:38:09.770 --> 00:38:12.670 So this is a neck node that was sent to me.  
NOTE Confidence: 0.904999179166667

00:38:12.670 --> 00:38:14.364 There's a smear and the cell block.  
NOTE Confidence: 0.904999179166667

00:38:14.370 --> 00:38:16.484 So we knew right away it was  
NOTE Confidence: 0.904999179166667

00:38:16.490 --> 00:38:17.567 a parathyroid tissue.

NOTE Confidence: 0.904999179166667  
00:38:17.567 --> 00:38:19.721 Patient also had a thyroid nodule  
NOTE Confidence: 0.904999179166667  
00:38:19.721 --> 00:38:21.900 and you were asked the question  
NOTE Confidence: 0.904999179166667  
00:38:21.900 --> 00:38:23.660 is it a metastatic parathyroid  
NOTE Confidence: 0.904999179166667  
00:38:23.730 --> 00:38:25.190 carcinoma to a net node.  
NOTE Confidence: 0.904999179166667  
00:38:25.190 --> 00:38:27.950 So we did a part of Fibrominn as you can see.  
NOTE Confidence: 0.904999179166667  
00:38:27.950 --> 00:38:29.546 Beautifully, strongly positive.  
NOTE Confidence: 0.904999179166667  
00:38:29.546 --> 00:38:32.206 So we excluded carcinoma based  
NOTE Confidence: 0.904999179166667  
00:38:32.206 --> 00:38:35.180 on this very impressive profile.  
NOTE Confidence: 0.904999179166667  
00:38:35.180 --> 00:38:36.818 They went after the thyroid nodule.  
NOTE Confidence: 0.904999179166667  
00:38:36.820 --> 00:38:40.397 It was simply a benign hyperplastic nodule.  
NOTE Confidence: 0.904999179166667  
00:38:40.400 --> 00:38:41.948 So this is a very important  
NOTE Confidence: 0.904999179166667  
00:38:41.948 --> 00:38:42.980 part of my presentation.  
NOTE Confidence: 0.904999179166667  
00:38:42.980 --> 00:38:44.552 The so-called indeterminate thyroid  
NOTE Confidence: 0.904999179166667  
00:38:44.552 --> 00:38:47.451 nodules as you know is a very  
NOTE Confidence: 0.904999179166667  
00:38:47.451 --> 00:38:49.339 frustrating diagnosis for pathologists  
NOTE Confidence: 0.904999179166667

00:38:49.339 --> 00:38:51.699 and also for the clinicians.  
NOTE Confidence: 0.904999179166667

00:38:51.700 --> 00:38:55.046 15 to 30% of them are indeterminate.  
NOTE Confidence: 0.904999179166667

00:38:55.050 --> 00:38:57.110 Majority unfortunately are still resected  
NOTE Confidence: 0.904999179166667

00:38:57.110 --> 00:39:00.050 and majority do turn out to be benign.  
NOTE Confidence: 0.904999179166667

00:39:00.050 --> 00:39:02.540 So it's an unnecessary procedure.  
NOTE Confidence: 0.904999179166667

00:39:02.540 --> 00:39:05.312 AUS and pap smear and neoplasm are  
NOTE Confidence: 0.904999179166667

00:39:05.312 --> 00:39:08.320 typically taken as as a categories  
NOTE Confidence: 0.904999179166667

00:39:08.320 --> 00:39:10.480 within the indeterminate diagnosis.  
NOTE Confidence: 0.904999179166667

00:39:10.480 --> 00:39:12.489 I love to show this slide because  
NOTE Confidence: 0.904999179166667

00:39:12.489 --> 00:39:14.720 now there are molecular tests which  
NOTE Confidence: 0.904999179166667

00:39:14.720 --> 00:39:16.890 people are afraid will replace  
NOTE Confidence: 0.904999179166667

00:39:16.890 --> 00:39:18.620 cytopathologist or thyroid FN's.  
NOTE Confidence: 0.904999179166667

00:39:18.620 --> 00:39:21.896 Just like HPV stole a lot of GYN pathology.  
NOTE Confidence: 0.904999179166667

00:39:21.900 --> 00:39:24.284 So I often show this slide that you  
NOTE Confidence: 0.904999179166667

00:39:24.284 --> 00:39:26.785 will not get to this stage that you  
NOTE Confidence: 0.904999179166667

00:39:26.785 --> 00:39:29.344 will find work for food because you

NOTE Confidence: 0.904999179166667  
00:39:29.344 --> 00:39:31.876 will always have your thyroid cytology.  
NOTE Confidence: 0.904999179166667  
00:39:31.880 --> 00:39:33.872 These tests are expensive so they  
NOTE Confidence: 0.904999179166667  
00:39:33.872 --> 00:39:36.340 will not be offered to every patient.  
NOTE Confidence: 0.904999179166667  
00:39:36.340 --> 00:39:38.620 With a thyroid nodule you will  
NOTE Confidence: 0.904999179166667  
00:39:38.620 --> 00:39:40.580 still do your critical role.  
NOTE Confidence: 0.904999179166667  
00:39:40.580 --> 00:39:41.770 You will do the FDA,  
NOTE Confidence: 0.904999179166667  
00:39:41.770 --> 00:39:44.605 read the FN as in determine it and then  
NOTE Confidence: 0.904999179166667  
00:39:44.605 --> 00:39:47.487 the patient will get a molecular test.  
NOTE Confidence: 0.904999179166667  
00:39:47.490 --> 00:39:51.130 But we all agree that they do  
NOTE Confidence: 0.904999179166667  
00:39:51.130 --> 00:39:52.690 increase significantly preoperative  
NOTE Confidence: 0.904999179166667  
00:39:52.770 --> 00:39:55.490 diagnostic accuracy and FN sample,  
NOTE Confidence: 0.904999179166667  
00:39:55.490 --> 00:39:57.681 the liquid sample is a great sample  
NOTE Confidence: 0.904999179166667  
00:39:57.681 --> 00:39:59.890 to do these molecular testing.  
NOTE Confidence: 0.904999179166667  
00:39:59.890 --> 00:40:01.666 So equation will always flow this  
NOTE Confidence: 0.904999179166667  
00:40:01.666 --> 00:40:03.998 way that we will have an affinity  
NOTE Confidence: 0.904999179166667

00:40:03.998 --> 00:40:06.170 diagnosis leading to a molecular test.  
NOTE Confidence: 0.904999179166667

00:40:06.170 --> 00:40:08.618 And again these molecular tests as  
NOTE Confidence: 0.904999179166667

00:40:08.618 --> 00:40:10.590 I mentioned before reduced the.  
NOTE Confidence: 0.904999179166667

00:40:10.590 --> 00:40:12.130 Number of so-called diagnostic  
NOTE Confidence: 0.904999179166667

00:40:12.130 --> 00:40:14.440 lobectomies which we used to do,  
NOTE Confidence: 0.904999179166667

00:40:14.440 --> 00:40:16.148 again not enough time to go into  
NOTE Confidence: 0.904999179166667

00:40:16.148 --> 00:40:17.230 details of these tests.  
NOTE Confidence: 0.904999179166667

00:40:17.230 --> 00:40:19.262 We all know that there are three major  
NOTE Confidence: 0.904999179166667

00:40:19.262 --> 00:40:21.714 tests that are often used in pharma, tyroc,  
NOTE Confidence: 0.904999179166667

00:40:21.714 --> 00:40:25.278 Dynex, all three are very comfortable.  
NOTE Confidence: 0.904999179166667

00:40:25.280 --> 00:40:28.376 At Hopkins, we use a pharma.  
NOTE Confidence: 0.904999179166667

00:40:28.380 --> 00:40:31.494 Title seek and Thai jennex provide  
NOTE Confidence: 0.904999179166667

00:40:31.494 --> 00:40:33.164 an additional advantage that you  
NOTE Confidence: 0.904999179166667

00:40:33.164 --> 00:40:35.598 can do on paraffin block or you can  
NOTE Confidence: 0.904999179166667

00:40:35.598 --> 00:40:37.560 escape the cells off or glass slide.  
NOTE Confidence: 0.904999179166667

00:40:37.560 --> 00:40:40.808 But keep in mind they do offer a



NOTE Confidence: 0.904999179166667  
00:40:40.808 --> 00:40:43.700 much lower success rate when you  
NOTE Confidence: 0.904999179166667  
00:40:43.700 --> 00:40:46.780 don't do it on on a liquid sample.  
NOTE Confidence: 0.868188861764706  
00:40:46.780 --> 00:40:50.497 So whichever test you do they all give you  
NOTE Confidence: 0.868188861764706  
00:40:50.497 --> 00:40:54.259 good results and this is a very important.  
NOTE Confidence: 0.868188861764706  
00:40:54.260 --> 00:40:57.360 Editorial which was written by.  
NOTE Confidence: 0.868188861764706  
00:40:57.360 --> 00:41:00.251 The well known endocrinologist who had helped  
NOTE Confidence: 0.868188861764706  
00:41:00.251 --> 00:41:02.809 us tremendously with the Testa book also.  
NOTE Confidence: 0.868188861764706  
00:41:02.810 --> 00:41:06.050 And as you can see here that he's clearly  
NOTE Confidence: 0.868188861764706  
00:41:06.050 --> 00:41:08.821 telling the readers that these tests will  
NOTE Confidence: 0.868188861764706  
00:41:08.821 --> 00:41:12.149 not replace what we do the imaging and FNA,  
NOTE Confidence: 0.868188861764706  
00:41:12.150 --> 00:41:16.534 it would simply support the FN a  
NOTE Confidence: 0.868188861764706  
00:41:16.534 --> 00:41:18.914 diagnosis or a clinical diagnosis  
NOTE Confidence: 0.868188861764706  
00:41:18.914 --> 00:41:21.910 or higher diagnostic accuracy.  
NOTE Confidence: 0.868188861764706  
00:41:21.910 --> 00:41:24.535 So we are looking for a synergistic  
NOTE Confidence: 0.868188861764706  
00:41:24.535 --> 00:41:26.769 partnership with these molecular tests.  
NOTE Confidence: 0.868188861764706

00:41:26.770 --> 00:41:28.282 They're not here.  
NOTE Confidence: 0.868188861764706

00:41:28.282 --> 00:41:31.810 To replace us or replace the radiologist.  
NOTE Confidence: 0.868188861764706

00:41:31.810 --> 00:41:33.310 So suspicious malignancy,  
NOTE Confidence: 0.868188861764706

00:41:33.310 --> 00:41:34.810 no major change.  
NOTE Confidence: 0.868188861764706

00:41:34.810 --> 00:41:37.752 But just to remind you that the cases  
NOTE Confidence: 0.868188861764706

00:41:37.752 --> 00:41:40.308 previously what we used to call  
NOTE Confidence: 0.868188861764706

00:41:40.308 --> 00:41:43.153 suspicious for PTC based on focal  
NOTE Confidence: 0.868188861764706

00:41:43.153 --> 00:41:45.548 nuclear features with fine powdery  
NOTE Confidence: 0.868188861764706

00:41:45.548 --> 00:41:48.502 chromatin or grooves or rare intranuclear  
NOTE Confidence: 0.868188861764706

00:41:48.502 --> 00:41:51.660 inclusions now should be called AU for,  
NOTE Confidence: 0.868188861764706

00:41:51.660 --> 00:41:53.560 should be called follicular neoplasm  
NOTE Confidence: 0.868188861764706

00:41:53.560 --> 00:41:55.382 because these are potential cases  
NOTE Confidence: 0.868188861764706

00:41:55.382 --> 00:41:57.838 that will turn out to be nifty and  
NOTE Confidence: 0.868188861764706

00:41:57.900 --> 00:42:00.049 you want these patients to get a  
NOTE Confidence: 0.868188861764706

00:42:00.049 --> 00:42:01.966 lobectomy and not a total thyroidectomy.  
NOTE Confidence: 0.868188861764706

00:42:01.966 --> 00:42:04.705 So that's the only message I have for

NOTE Confidence: 0.868188861764706

00:42:04.705 --> 00:42:06.835 you when you entertain that diagnosis,

NOTE Confidence: 0.868188861764706

00:42:06.840 --> 00:42:08.295 suspicious for malignancy,

NOTE Confidence: 0.868188861764706

00:42:08.295 --> 00:42:10.720 that be conservative for lesions

NOTE Confidence: 0.868188861764706

00:42:10.720 --> 00:42:13.432 which have a follicular pattern and

NOTE Confidence: 0.868188861764706

00:42:13.432 --> 00:42:15.512 all these showing focal features

NOTE Confidence: 0.868188861764706

00:42:15.512 --> 00:42:17.390 of papillary carcinoma.

NOTE Confidence: 0.868188861764706

00:42:17.390 --> 00:42:21.152 So malignant remains a very accurate

NOTE Confidence: 0.868188861764706

00:42:21.152 --> 00:42:24.078 diagnosis in Afghani psychology,

NOTE Confidence: 0.868188861764706

00:42:24.078 --> 00:42:27.908 no significant change from 2017.

NOTE Confidence: 0.868188861764706

00:42:27.910 --> 00:42:30.360 If you are not seeing the major

NOTE Confidence: 0.868188861764706

00:42:30.360 --> 00:42:31.928 diagnostic features of papillary

NOTE Confidence: 0.868188861764706

00:42:31.928 --> 00:42:33.740 fibroelastoma course small bodies

NOTE Confidence: 0.868188861764706

00:42:33.740 --> 00:42:36.659 which are seen in minority of cases,

NOTE Confidence: 0.868188861764706

00:42:36.660 --> 00:42:39.999 in my experience not more than 1520% of PTC.

NOTE Confidence: 0.868188861764706

00:42:39.999 --> 00:42:41.568 So those features,

NOTE Confidence: 0.868188861764706

00:42:41.570 --> 00:42:44.258 ask yourself question should I be calling

NOTE Confidence: 0.868188861764706

00:42:44.258 --> 00:42:47.599 it PTC or should I be happier calling?

NOTE Confidence: 0.868188861764706

00:42:47.600 --> 00:42:52.200 Suspicious of PDC if it has a follicular

NOTE Confidence: 0.868188861764706

00:42:52.200 --> 00:42:57.730 pattern architecture if you are calling it.

NOTE Confidence: 0.868188861764706

00:42:57.730 --> 00:43:01.058 PTC and it has a follicular pattern or

NOTE Confidence: 0.868188861764706

00:43:01.060 --> 00:43:03.180 as a matter of fact in all PTC cases.

NOTE Confidence: 0.868188861764706

00:43:03.180 --> 00:43:06.026 Make it a habit to add this optional

NOTE Confidence: 0.868188861764706

00:43:06.026 --> 00:43:09.576 note at three to 4% of the cases which

NOTE Confidence: 0.868188861764706

00:43:09.576 --> 00:43:12.060 are called PTC on affinity psychology.

NOTE Confidence: 0.868188861764706

00:43:12.060 --> 00:43:13.985 Turn out to be nifty or follow

NOTE Confidence: 0.868188861764706

00:43:13.985 --> 00:43:15.440 up to protect yourself,

NOTE Confidence: 0.868188861764706

00:43:15.440 --> 00:43:17.708 protect declination and so that you

NOTE Confidence: 0.868188861764706

00:43:17.708 --> 00:43:20.627 will still have a good confidence from

NOTE Confidence: 0.868188861764706

00:43:20.627 --> 00:43:23.285 your clinical colleagues in case it

NOTE Confidence: 0.868188861764706

00:43:23.285 --> 00:43:25.797 turns out to be nifty and patient,

NOTE Confidence: 0.868188861764706

00:43:25.800 --> 00:43:28.070 get overtreated.

NOTE Confidence: 0.868188861764706

00:43:28.070 --> 00:43:29.642 We all know how papillary carcinoma

NOTE Confidence: 0.868188861764706

00:43:29.642 --> 00:43:30.166 looks like.

NOTE Confidence: 0.868188861764706

00:43:30.170 --> 00:43:33.590 The workout starts with imaging isoechoic,

NOTE Confidence: 0.868188861764706

00:43:33.590 --> 00:43:35.098 beautiful punctate,

NOTE Confidence: 0.868188861764706

00:43:35.098 --> 00:43:36.606 echogenic foci,

NOTE Confidence: 0.868188861764706

00:43:36.606 --> 00:43:38.868 cluster of microcalcifications,

NOTE Confidence: 0.868188861764706

00:43:38.870 --> 00:43:39.902 similar bodies,

NOTE Confidence: 0.868188861764706

00:43:39.902 --> 00:43:41.450 beautiful papillary architecture,

NOTE Confidence: 0.868188861764706

00:43:41.450 --> 00:43:42.060 fibrovascular course.

NOTE Confidence: 0.868188861764706

00:43:42.060 --> 00:43:44.977 And now I can see that I did not

NOTE Confidence: 0.868188861764706

00:43:44.977 --> 00:43:47.431 see show the fellows the classical

NOTE Confidence: 0.868188861764706

00:43:47.431 --> 00:43:49.519 fibrovascular scores earlier this morning.

NOTE Confidence: 0.868188861764706

00:43:49.520 --> 00:43:52.504 But here you go. This is picture perfect.

NOTE Confidence: 0.868188861764706

00:43:52.510 --> 00:43:54.322 All nuclei with longitudinally

NOTE Confidence: 0.868188861764706

00:43:54.322 --> 00:43:55.228 running groups,

NOTE Confidence: 0.868188861764706

00:43:55.230 --> 00:43:57.474 tiny marginal nucleoli sitting  
NOTE Confidence: 0.868188861764706

00:43:57.474 --> 00:43:59.718 underneath the nuclear membrane.  
NOTE Confidence: 0.868188861764706

00:43:59.720 --> 00:44:02.055 And of course sharply punched  
NOTE Confidence: 0.868188861764706

00:44:02.055 --> 00:44:03.456 out intranuclear inclusions,  
NOTE Confidence: 0.868188861764706

00:44:03.460 --> 00:44:04.872 classic features of papillary.  
NOTE Confidence: 0.868188861764706

00:44:04.872 --> 00:44:06.637 So if you see this,  
NOTE Confidence: 0.868188861764706

00:44:06.640 --> 00:44:09.595 it's simply a papillary thyroid  
NOTE Confidence: 0.868188861764706

00:44:09.595 --> 00:44:11.210 carcinoma diagnosis question.  
NOTE Confidence: 0.868188861764706

00:44:11.210 --> 00:44:14.220 Often asked is should we be diagnosing  
NOTE Confidence: 0.868188861764706

00:44:14.220 --> 00:44:17.240 variants of subtype and the answer is no,  
NOTE Confidence: 0.868188861764706

00:44:17.240 --> 00:44:19.249 because sometimes even if you have these  
NOTE Confidence: 0.868188861764706

00:44:19.249 --> 00:44:21.428 tall cell variants which you are seeing here,  
NOTE Confidence: 0.868188861764706

00:44:21.430 --> 00:44:22.672 the tallest cells,  
NOTE Confidence: 0.868188861764706

00:44:22.672 --> 00:44:24.742 the oncocytic look so bubble  
NOTE Confidence: 0.868188861764706

00:44:24.742 --> 00:44:25.570 internuclear inclusions  
NOTE Confidence: 0.7029006704

00:44:25.637 --> 00:44:27.477 or you're seeing these gland

NOTE Confidence: 0.7029006704  
00:44:27.477 --> 00:44:28.949 like formations reminding you  
NOTE Confidence: 0.7029006704  
00:44:28.949 --> 00:44:30.777 that this could be a colonic.  
NOTE Confidence: 0.7029006704  
00:44:30.780 --> 00:44:33.680 No carcinoma. These are columnar  
NOTE Confidence: 0.7029006704  
00:44:33.680 --> 00:44:35.420 salivarians or capillary.  
NOTE Confidence: 0.7029006704  
00:44:35.420 --> 00:44:37.394 I think these changes are very  
NOTE Confidence: 0.7029006704  
00:44:37.394 --> 00:44:39.524 focal and you may be inaccurate  
NOTE Confidence: 0.7029006704  
00:44:39.524 --> 00:44:41.738 when there is action is done.  
NOTE Confidence: 0.7029006704  
00:44:41.740 --> 00:44:42.991 So parathyroid carcinoma  
NOTE Confidence: 0.7029006704  
00:44:42.991 --> 00:44:44.659 is a great diagnosis.  
NOTE Confidence: 0.7029006704  
00:44:44.660 --> 00:44:47.460 I only mention it in a note  
NOTE Confidence: 0.7029006704  
00:44:47.460 --> 00:44:49.683 that's focal features suggest that  
NOTE Confidence: 0.7029006704  
00:44:49.683 --> 00:44:52.479 all salivarian or the very rare  
NOTE Confidence: 0.7029006704  
00:44:52.479 --> 00:44:55.254 columnar cell variants if I see  
NOTE Confidence: 0.7029006704  
00:44:55.254 --> 00:44:56.726 those features because sometimes  
NOTE Confidence: 0.7029006704  
00:44:56.726 --> 00:44:59.445 it will help the surgeon do the  
NOTE Confidence: 0.7029006704

00:44:59.445 --> 00:45:01.375 central level 6 of paratracheal.  
NOTE Confidence: 0.7029006704

00:45:01.380 --> 00:45:03.012 And for the section,  
NOTE Confidence: 0.7029006704

00:45:03.012 --> 00:45:05.052 because that nodal dissection is  
NOTE Confidence: 0.7029006704

00:45:05.052 --> 00:45:07.130 associated with the two serious  
NOTE Confidence: 0.7029006704

00:45:07.130 --> 00:45:09.135 potential complications I have surgery  
NOTE Confidence: 0.7029006704

00:45:09.135 --> 00:45:11.809 the permanent laryngeal nerve damage  
NOTE Confidence: 0.7029006704

00:45:11.809 --> 00:45:14.009 and or permanent hypoparathyroidism.  
NOTE Confidence: 0.7029006704

00:45:14.010 --> 00:45:15.510 Most surgeons will take those  
NOTE Confidence: 0.7029006704

00:45:15.510 --> 00:45:17.010 node out nodes out anyway,  
NOTE Confidence: 0.7029006704

00:45:17.010 --> 00:45:19.030 but good surgeons palpate them.  
NOTE Confidence: 0.7029006704

00:45:19.030 --> 00:45:20.858 If it's negative image  
NOTE Confidence: 0.7029006704

00:45:20.858 --> 00:45:22.686 them imaging is negative,  
NOTE Confidence: 0.7029006704

00:45:22.690 --> 00:45:24.562 then they may depend on molecular  
NOTE Confidence: 0.7029006704

00:45:24.562 --> 00:45:26.866 testing or your call of tall cell  
NOTE Confidence: 0.7029006704

00:45:26.866 --> 00:45:28.526 variant or an aggressive variant.  
NOTE Confidence: 0.7029006704

00:45:28.530 --> 00:45:30.396 But even with that I strongly



NOTE Confidence: 0.7029006704

00:45:30.396 --> 00:45:31.640 recommend that don't suck.

NOTE Confidence: 0.7029006704

00:45:31.640 --> 00:45:34.510 Like that with her carcinoma.

NOTE Confidence: 0.7029006704

00:45:34.510 --> 00:45:36.350 Medullary is an easy diagnosis,

NOTE Confidence: 0.7029006704

00:45:36.350 --> 00:45:38.735 but also keep in mind it has the widest

NOTE Confidence: 0.7029006704

00:45:38.735 --> 00:45:40.609 spectrum of cyto morphologic changes.

NOTE Confidence: 0.7029006704

00:45:40.610 --> 00:45:43.781 Very often it will be the so-called

NOTE Confidence: 0.7029006704

00:45:43.781 --> 00:45:45.845 epithelioid type with plasmacytoid

NOTE Confidence: 0.7029006704

00:45:45.845 --> 00:45:48.960 features could be focally spindly.

NOTE Confidence: 0.7029006704

00:45:48.960 --> 00:45:51.546 The presence of amyloid greatly helps,

NOTE Confidence: 0.7029006704

00:45:51.550 --> 00:45:54.054 but you have to learn how to recognize

NOTE Confidence: 0.7029006704

00:45:54.054 --> 00:45:56.028 amyloid as opposed to Polaroid.

NOTE Confidence: 0.7029006704

00:45:56.030 --> 00:45:58.150 It's more glassy appearing,

NOTE Confidence: 0.7029006704

00:45:58.150 --> 00:46:00.920 more amorphous, more sharply defined,

NOTE Confidence: 0.7029006704

00:46:00.920 --> 00:46:04.450 cut out fragments, and if you recognize it.

NOTE Confidence: 0.7029006704

00:46:04.450 --> 00:46:05.764 Which is present.

NOTE Confidence: 0.7029006704

00:46:05.764 --> 00:46:08.808 I think in 6570% of the cases  
NOTE Confidence: 0.7029006704

00:46:08.808 --> 00:46:10.968 it becomes an easy diagnosis.  
NOTE Confidence: 0.7029006704

00:46:10.970 --> 00:46:14.298 But issues happen when you have a very  
NOTE Confidence: 0.7029006704

00:46:14.298 --> 00:46:16.830 uncommon pure spindle cell morphology  
NOTE Confidence: 0.7029006704

00:46:16.830 --> 00:46:20.589 and you cannot exclude spindle cell lesion.  
NOTE Confidence: 0.7029006704

00:46:20.590 --> 00:46:22.420 Or someone asked me this morning  
NOTE Confidence: 0.7029006704

00:46:22.420 --> 00:46:24.170 at the 8:00 o'clock lecture,  
NOTE Confidence: 0.7029006704

00:46:24.170 --> 00:46:26.978 how about the giant cell variant  
NOTE Confidence: 0.7029006704

00:46:26.978 --> 00:46:28.382 of megalithic carcinoma.  
NOTE Confidence: 0.7029006704

00:46:28.390 --> 00:46:30.742 Very polymorphic cells still  
NOTE Confidence: 0.7029006704

00:46:30.742 --> 00:46:32.506 retaining a dark,  
NOTE Confidence: 0.7029006704

00:46:32.510 --> 00:46:32.906 hyperchromatic,  
NOTE Confidence: 0.7029006704

00:46:32.906 --> 00:46:34.094 evenly dispersed chromatin.  
NOTE Confidence: 0.7029006704

00:46:34.094 --> 00:46:37.428 So if you are on site for efna in  
NOTE Confidence: 0.7029006704

00:46:37.428 --> 00:46:39.216 these cases now we recommend that  
NOTE Confidence: 0.7029006704

00:46:39.216 --> 00:46:41.347 you can actually send the needle.

NOTE Confidence: 0.7029006704

00:46:41.350 --> 00:46:43.810 Watch out for calcitonin levels.

NOTE Confidence: 0.7029006704

00:46:43.810 --> 00:46:46.078 You don't even have to wait for a cell

NOTE Confidence: 0.7029006704

00:46:46.078 --> 00:46:48.175 block and if the calcitonin comes

NOTE Confidence: 0.7029006704

00:46:48.175 --> 00:46:50.300 back significantly higher than you know,

NOTE Confidence: 0.7029006704

00:46:50.300 --> 00:46:52.718 you have a measure tire carcinoma.

NOTE Confidence: 0.7029006704

00:46:52.720 --> 00:46:55.175 Previously we recommended it on

NOTE Confidence: 0.7029006704

00:46:55.175 --> 00:46:57.630 potential metastasis to the lymph

NOTE Confidence: 0.7029006704

00:46:57.709 --> 00:47:00.194 nodes of a majorly carcinoma Ki 67

NOTE Confidence: 0.7029006704

00:47:00.194 --> 00:47:02.562 with now WHO recommends be done

NOTE Confidence: 0.7029006704

00:47:02.562 --> 00:47:05.418 for to classify low and high grade.

NOTE Confidence: 0.7029006704

00:47:05.420 --> 00:47:07.996 But it's a histologic thing and I strongly,

NOTE Confidence: 0.7029006704

00:47:08.000 --> 00:47:10.105 strongly recommend do not attempt

NOTE Confidence: 0.7029006704

00:47:10.105 --> 00:47:11.368 it on psychology.

NOTE Confidence: 0.7029006704

00:47:11.370 --> 00:47:13.896 Just the simple diagnosis of measuring

NOTE Confidence: 0.7029006704

00:47:13.896 --> 00:47:16.450 high carcinoma should be good enough.

NOTE Confidence: 0.7029006704

00:47:16.450 --> 00:47:19.282 And a plastic is a fairly easy diagnosis

NOTE Confidence: 0.7029006704

00:47:19.282 --> 00:47:21.590 when you see it in psychology.

NOTE Confidence: 0.7029006704

00:47:21.590 --> 00:47:23.534 As the name suggests,

NOTE Confidence: 0.7029006704

00:47:23.534 --> 00:47:25.964 extreme pleomorphism or an aplasia.

NOTE Confidence: 0.7029006704

00:47:25.970 --> 00:47:27.990 You can imagine that disparity

NOTE Confidence: 0.7029006704

00:47:27.990 --> 00:47:30.010 in cell size and shape.

NOTE Confidence: 0.7029006704

00:47:30.010 --> 00:47:31.980 So a very easy diagnosis.

NOTE Confidence: 0.7029006704

00:47:31.980 --> 00:47:34.460 And we all know it's a rapidly enlarging

NOTE Confidence: 0.7029006704

00:47:34.460 --> 00:47:36.668 mass often cause airway compression.

NOTE Confidence: 0.7029006704

00:47:36.670 --> 00:47:39.058 This patient died inhaling

NOTE Confidence: 0.7029006704

00:47:39.058 --> 00:47:40.849 the necrotic tumor.

NOTE Confidence: 0.7029006704

00:47:40.850 --> 00:47:43.940 Imaging is a very aggressive looking

NOTE Confidence: 0.7029006704

00:47:43.940 --> 00:47:46.920 tumor with necrosis extra thyroidal.

NOTE Confidence: 0.7029006704

00:47:46.920 --> 00:47:50.372 Sanction a significantly enlarged

NOTE Confidence: 0.7029006704

00:47:50.372 --> 00:47:53.428 and juxtapose cervical nodes.

NOTE Confidence: 0.7029006704

00:47:53.428 --> 00:47:55.420 But on psychology,

NOTE Confidence: 0.859913824285714  
00:47:55.420 --> 00:47:57.184 sometimes it's very difficult  
NOTE Confidence: 0.859913824285714  
00:47:57.184 --> 00:47:58.507 to exclude metastasis.  
NOTE Confidence: 0.859913824285714  
00:47:58.510 --> 00:48:01.014 I often tell people when you have a  
NOTE Confidence: 0.859913824285714  
00:48:01.014 --> 00:48:03.145 pleomorphic tumor and you are trying to  
NOTE Confidence: 0.859913824285714  
00:48:03.145 --> 00:48:05.479 jump quickly to a diagnosis of anaplastic,  
NOTE Confidence: 0.859913824285714  
00:48:05.480 --> 00:48:07.322 always exclude metastasis  
NOTE Confidence: 0.859913824285714  
00:48:07.322 --> 00:48:09.778 and some oncologic centers.  
NOTE Confidence: 0.859913824285714  
00:48:09.780 --> 00:48:12.180 Metastatic carcinomas are cancers are  
NOTE Confidence: 0.859913824285714  
00:48:12.180 --> 00:48:14.580 more common than primary anaplastic,  
NOTE Confidence: 0.859913824285714  
00:48:14.580 --> 00:48:15.196 for example.  
NOTE Confidence: 0.859913824285714  
00:48:15.196 --> 00:48:17.044 This case looks very similar to  
NOTE Confidence: 0.859913824285714  
00:48:17.044 --> 00:48:19.320 the one which I'm showing you here,  
NOTE Confidence: 0.859913824285714  
00:48:19.320 --> 00:48:21.696 except this is a metastatic Melanoma in a  
NOTE Confidence: 0.859913824285714  
00:48:21.696 --> 00:48:24.135 patient who had a known history of Melanoma.  
NOTE Confidence: 0.859913824285714  
00:48:24.140 --> 00:48:25.949 So if you don't get the history or you  
NOTE Confidence: 0.859913824285714

00:48:25.949 --> 00:48:27.846 don't pay particular attention to history,  
NOTE Confidence: 0.859913824285714

00:48:27.850 --> 00:48:31.348 you can very easily misdiagnosed metastasis.  
NOTE Confidence: 0.859913824285714

00:48:31.350 --> 00:48:34.854 So history is important and certainly keep in  
NOTE Confidence: 0.859913824285714

00:48:34.854 --> 00:48:38.447 mind that renal cell metastasis lung adeno,  
NOTE Confidence: 0.859913824285714

00:48:38.450 --> 00:48:39.990 breast add no Melanoma,  
NOTE Confidence: 0.859913824285714

00:48:39.990 --> 00:48:41.915 these are metastasis to thyroid  
NOTE Confidence: 0.859913824285714

00:48:41.915 --> 00:48:43.787 traders are very vascular organs  
NOTE Confidence: 0.859913824285714

00:48:43.787 --> 00:48:45.917 and it knows very effectively how  
NOTE Confidence: 0.859913824285714

00:48:45.979 --> 00:48:48.059 to filter circulating tumor cells.  
NOTE Confidence: 0.859913824285714

00:48:48.060 --> 00:48:50.382 So it's not uncommon to find  
NOTE Confidence: 0.859913824285714

00:48:50.382 --> 00:48:51.930 metastasis in the thyroid.  
NOTE Confidence: 0.859913824285714

00:48:51.930 --> 00:48:53.530 We all know when you've  
NOTE Confidence: 0.859913824285714

00:48:53.530 --> 00:48:54.490 anaplastic thyroid carcinoma.  
NOTE Confidence: 0.859913824285714

00:48:54.490 --> 00:48:56.258 You will lose sight of carrot in staining.  
NOTE Confidence: 0.859913824285714

00:48:56.260 --> 00:48:58.510 Often you will lose sight  
NOTE Confidence: 0.859913824285714

00:48:58.510 --> 00:49:00.632 of globulin and TF11 stain,

NOTE Confidence: 0.859913824285714  
00:49:00.632 --> 00:49:03.334 which is often retained at least focally.  
NOTE Confidence: 0.859913824285714  
00:49:03.340 --> 00:49:06.160 Is this beautiful pink stain immunostaining?  
NOTE Confidence: 0.859913824285714  
00:49:06.160 --> 00:49:09.406 So still it remains the most  
NOTE Confidence: 0.859913824285714  
00:49:09.406 --> 00:49:11.029 important immunostains to  
NOTE Confidence: 0.859913824285714  
00:49:11.029 --> 00:49:13.470 diagnose anaplastic carcinoma.  
NOTE Confidence: 0.859913824285714  
00:49:13.470 --> 00:49:16.390 Also to remind you that the new WHO  
NOTE Confidence: 0.859913824285714  
00:49:16.390 --> 00:49:18.007 classification took out squamous  
NOTE Confidence: 0.859913824285714  
00:49:18.007 --> 00:49:20.449 cell carcinoma as a separate entity.  
NOTE Confidence: 0.859913824285714  
00:49:20.450 --> 00:49:22.178 Now if you see squamous cell  
NOTE Confidence: 0.859913824285714  
00:49:22.178 --> 00:49:23.330 carcinoma in a thyroid,  
NOTE Confidence: 0.859913824285714  
00:49:23.330 --> 00:49:25.598 either it would be a locally  
NOTE Confidence: 0.859913824285714  
00:49:25.598 --> 00:49:27.862 invasive or amac's famous cell or  
NOTE Confidence: 0.859913824285714  
00:49:27.862 --> 00:49:30.242 it will be a subtype of anaplastic.  
NOTE Confidence: 0.859913824285714  
00:49:30.250 --> 00:49:32.074 So if I see this prospectively  
NOTE Confidence: 0.859913824285714  
00:49:32.074 --> 00:49:33.630 in in a thyroid FNA,  
NOTE Confidence: 0.859913824285714

00:49:33.630 --> 00:49:36.186 I would call it anaplastic undifferentiated  
NOTE Confidence: 0.859913824285714

00:49:36.186 --> 00:49:38.250 paracast Noma squamous cell type.  
NOTE Confidence: 0.859913824285714

00:49:38.250 --> 00:49:41.110 That's how we will report it.  
NOTE Confidence: 0.859913824285714

00:49:41.110 --> 00:49:44.927 I'm not going to mention too much about nift.  
NOTE Confidence: 0.859913824285714

00:49:44.930 --> 00:49:48.514 Pi will simply answer 2 questions for you.  
NOTE Confidence: 0.859913824285714

00:49:48.520 --> 00:49:50.168 Is there a cytopathologic  
NOTE Confidence: 0.859913824285714

00:49:50.168 --> 00:49:51.816 diagnostic criteria for Nipp?  
NOTE Confidence: 0.859913824285714

00:49:51.820 --> 00:49:54.180 And answer is simple none.  
NOTE Confidence: 0.859913824285714

00:49:54.180 --> 00:49:56.100 Should we be diagnosing if PN,  
NOTE Confidence: 0.859913824285714

00:49:56.100 --> 00:49:56.760 FN,  
NOTE Confidence: 0.859913824285714

00:49:56.760 --> 00:50:00.060 cytology and answers absolutely no?  
NOTE Confidence: 0.859913824285714

00:50:00.060 --> 00:50:03.508 It's just that we seen for nifty and  
NOTE Confidence: 0.859913824285714

00:50:03.508 --> 00:50:06.766 in cases that we think are potentially  
NOTE Confidence: 0.859913824285714

00:50:06.766 --> 00:50:09.904 nifty based on focal papillary features  
NOTE Confidence: 0.859913824285714

00:50:09.904 --> 00:50:12.600 and follicular pattern architecture,  
NOTE Confidence: 0.859913824285714

00:50:12.600 --> 00:50:15.197 we will put them in follicular neoplasm.



NOTE Confidence: 0.859913824285714  
00:50:15.200 --> 00:50:18.512 If we like we can add a node  
NOTE Confidence: 0.859913824285714  
00:50:18.512 --> 00:50:20.480 differential diagnosis including FP.  
NOTE Confidence: 0.859913824285714  
00:50:20.480 --> 00:50:21.380 Most importantly,  
NOTE Confidence: 0.859913824285714  
00:50:21.380 --> 00:50:24.080 the understanding is that it leads  
NOTE Confidence: 0.859913824285714  
00:50:24.080 --> 00:50:26.928 to de escalation of treatment,  
NOTE Confidence: 0.859913824285714  
00:50:26.930 --> 00:50:30.146 reduces the number of diagnostic lapa.  
NOTE Confidence: 0.859913824285714  
00:50:30.150 --> 00:50:32.514 Surgeries, especially total thyroidectomy.  
NOTE Confidence: 0.859913824285714  
00:50:32.514 --> 00:50:35.216 So these patients prospectively when  
NOTE Confidence: 0.859913824285714  
00:50:35.216 --> 00:50:38.457 you call them should only undergo a  
NOTE Confidence: 0.859913824285714  
00:50:38.457 --> 00:50:41.545 lebec me and not a total sorry text me.  
NOTE Confidence: 0.859913824285714  
00:50:41.550 --> 00:50:44.862 So we all know the critical role of  
NOTE Confidence: 0.859913824285714  
00:50:44.862 --> 00:50:47.029 molecular testing and diagnostics,  
NOTE Confidence: 0.859913824285714  
00:50:47.030 --> 00:50:50.948 but now it has expanded into.  
NOTE Confidence: 0.859913824285714  
00:50:50.950 --> 00:50:53.115 Agnostics and precision or targeted  
NOTE Confidence: 0.859913824285714  
00:50:53.115 --> 00:50:54.414 medicine as well.  
NOTE Confidence: 0.859913824285714

00:50:54.420 --> 00:50:57.642 So not only emerging but established  
NOTE Confidence: 0.859913824285714

00:50:57.642 --> 00:50:59.790 evidence between genomic variants  
NOTE Confidence: 0.859913824285714

00:50:59.874 --> 00:51:02.640 and tumor Histology how they behave,  
NOTE Confidence: 0.859913824285714

00:51:02.640 --> 00:51:05.463 what would be the therapeutic clinical  
NOTE Confidence: 0.859913824285714

00:51:05.463 --> 00:51:07.878 course and therapeutic options available.  
NOTE Confidence: 0.859913824285714

00:51:07.880 --> 00:51:12.080 So really A3 prong role for molecular tests.  
NOTE Confidence: 0.859913824285714

00:51:12.080 --> 00:51:12.780 For example,  
NOTE Confidence: 0.859913824285714

00:51:12.780 --> 00:51:14.530 most of the commercially available  
NOTE Confidence: 0.859913824285714

00:51:14.530 --> 00:51:16.059 molecular tests now do dirt,  
NOTE Confidence: 0.859913824285714

00:51:16.060 --> 00:51:18.970 ALK and entrec analysis and all  
NOTE Confidence: 0.859913824285714

00:51:18.970 --> 00:51:21.380 these mutations are associated with.  
NOTE Confidence: 0.859913824285714

00:51:21.380 --> 00:51:23.981 All the bad things you can see in a  
NOTE Confidence: 0.859913824285714

00:51:23.981 --> 00:51:25.940 thyroid cancer, higher mortality,  
NOTE Confidence: 0.859913824285714

00:51:25.940 --> 00:51:28.200 clinical stage treatment failure,  
NOTE Confidence: 0.873782801666667

00:51:28.200 --> 00:51:30.480 metastasis so on and so forth.  
NOTE Confidence: 0.873782801666667

00:51:30.480 --> 00:51:33.296 So it does give our clinicians very useful

NOTE Confidence: 0.873782801666667

00:51:33.296 --> 00:51:36.425 piece of information for example entrec

NOTE Confidence: 0.873782801666667

00:51:36.425 --> 00:51:38.773 mutated rearranged reputar carcinoma.

NOTE Confidence: 0.873782801666667

00:51:38.780 --> 00:51:41.432 We all know these patients present

NOTE Confidence: 0.873782801666667

00:51:41.432 --> 00:51:44.932 with the with multi focal disease,

NOTE Confidence: 0.873782801666667

00:51:44.932 --> 00:51:46.238 aggressive disease,

NOTE Confidence: 0.873782801666667

00:51:46.240 --> 00:51:48.810 advanced clinical stage and unfortunately

NOTE Confidence: 0.873782801666667

00:51:48.810 --> 00:51:51.775 on FN sometimes you don't see.

NOTE Confidence: 0.873782801666667

00:51:51.775 --> 00:51:54.376 Very well developed features of papillary

NOTE Confidence: 0.873782801666667

00:51:54.376 --> 00:51:57.028 carcinoma and has molecular tests are

NOTE Confidence: 0.873782801666667

00:51:57.028 --> 00:51:59.921 very important that if they demonstrate

NOTE Confidence: 0.873782801666667

00:51:59.921 --> 00:52:01.745 and track rearranged carcinoma.

NOTE Confidence: 0.873782801666667

00:52:01.745 --> 00:52:04.905 So this is what has happened that FDA

NOTE Confidence: 0.873782801666667

00:52:04.905 --> 00:52:08.018 has approved a number of agents for

NOTE Confidence: 0.873782801666667

00:52:08.018 --> 00:52:10.470 treatment of these mutated cancers.

NOTE Confidence: 0.873782801666667

00:52:10.470 --> 00:52:12.016 For example,

NOTE Confidence: 0.873782801666667

00:52:12.016 --> 00:52:14.866 the debriefing with the additional  
NOTE Confidence: 0.873782801666667

00:52:14.866 --> 00:52:18.658 traumatic for B RAF mutated and apothecary  
NOTE Confidence: 0.873782801666667

00:52:18.658 --> 00:52:21.628 carcinoma larotrectinib is now very  
NOTE Confidence: 0.873782801666667

00:52:21.628 --> 00:52:25.040 commonly used for Amtrak fused tumors  
NOTE Confidence: 0.873782801666667

00:52:25.040 --> 00:52:27.690 regardless of the tumor Histology.  
NOTE Confidence: 0.873782801666667

00:52:27.690 --> 00:52:29.718 And the the most recent 1,  
NOTE Confidence: 0.873782801666667

00:52:29.720 --> 00:52:33.216 the pulsating herb is used for red mutated.  
NOTE Confidence: 0.873782801666667

00:52:33.220 --> 00:52:35.170 Measure with high carcinoma so the  
NOTE Confidence: 0.873782801666667

00:52:35.170 --> 00:52:37.152 molecular tests play a pivotal role  
NOTE Confidence: 0.873782801666667

00:52:37.152 --> 00:52:39.308 and and if you don't have these  
NOTE Confidence: 0.873782801666667

00:52:39.308 --> 00:52:41.109 molecular tests at the institution,  
NOTE Confidence: 0.873782801666667

00:52:41.110 --> 00:52:43.410 you're actually denying the patient  
NOTE Confidence: 0.873782801666667

00:52:43.410 --> 00:52:46.739 a chance for a disease free survival  
NOTE Confidence: 0.873782801666667

00:52:46.739 --> 00:52:49.603 based on these very specific targeted  
NOTE Confidence: 0.873782801666667

00:52:49.603 --> 00:52:52.018 therapies which are now commonly  
NOTE Confidence: 0.873782801666667

00:52:52.018 --> 00:52:55.220 available in many major medical centers.

NOTE Confidence: 0.873782801666667  
00:52:55.220 --> 00:52:56.174 So very briefly,  
NOTE Confidence: 0.873782801666667  
00:52:56.174 --> 00:52:59.162 since people do ask me the role of AI  
NOTE Confidence: 0.873782801666667  
00:52:59.162 --> 00:53:01.232 or deep learning or computer aided  
NOTE Confidence: 0.873782801666667  
00:53:01.232 --> 00:53:03.338 learning in psychology, I often.  
NOTE Confidence: 0.873782801666667  
00:53:03.338 --> 00:53:03.956 Tell them.  
NOTE Confidence: 0.873782801666667  
00:53:03.956 --> 00:53:06.814 So far it has not worked because it's  
NOTE Confidence: 0.873782801666667  
00:53:06.814 --> 00:53:09.604 very challenging to apply to psychology.  
NOTE Confidence: 0.873782801666667  
00:53:09.610 --> 00:53:12.179 Psychology has color as opposed to imaging,  
NOTE Confidence: 0.873782801666667  
00:53:12.180 --> 00:53:14.917 which is black and white or Gray.  
NOTE Confidence: 0.873782801666667  
00:53:14.920 --> 00:53:17.600 And not only color, it has many stains.  
NOTE Confidence: 0.873782801666667  
00:53:17.600 --> 00:53:19.616 Even the same stain diff quick use  
NOTE Confidence: 0.873782801666667  
00:53:19.616 --> 00:53:21.634 at Yale will look different from  
NOTE Confidence: 0.873782801666667  
00:53:21.634 --> 00:53:23.439 the TIF quake user options.  
NOTE Confidence: 0.873782801666667  
00:53:23.440 --> 00:53:26.308 The nuclei will I would different  
NOTE Confidence: 0.873782801666667  
00:53:26.308 --> 00:53:28.770 intensity of nuclear staining and  
NOTE Confidence: 0.873782801666667

00:53:28.770 --> 00:53:31.590 computer cannot be taught that those  
NOTE Confidence: 0.873782801666667

00:53:31.590 --> 00:53:34.599 variations because it would look for the  
NOTE Confidence: 0.873782801666667

00:53:34.599 --> 00:53:37.770 intensity of gradient of the of the staining.  
NOTE Confidence: 0.873782801666667

00:53:37.770 --> 00:53:39.995 Cytology has too many smears.  
NOTE Confidence: 0.873782801666667

00:53:40.000 --> 00:53:42.989 I mean you can imagine a conventionally  
NOTE Confidence: 0.873782801666667

00:53:42.989 --> 00:53:44.657 prepared thyroid ethnic and  
NOTE Confidence: 0.873782801666667

00:53:44.657 --> 00:53:46.517 have anywhere from 10 to 20.  
NOTE Confidence: 0.873782801666667

00:53:46.520 --> 00:53:47.416 Plus smears.  
NOTE Confidence: 0.873782801666667

00:53:47.416 --> 00:53:48.312 Scanning them,  
NOTE Confidence: 0.873782801666667

00:53:48.312 --> 00:53:50.104 especially if they're three-dimensional,  
NOTE Confidence: 0.873782801666667

00:53:50.110 --> 00:53:51.274 adding Z, stacking,  
NOTE Confidence: 0.873782801666667

00:53:51.274 --> 00:53:53.602 cutting them in a thin slices,  
NOTE Confidence: 0.873782801666667

00:53:53.610 --> 00:53:56.270 using the whole slide scanner,  
NOTE Confidence: 0.873782801666667

00:53:56.270 --> 00:53:59.806 too much data for the computer to analyze,  
NOTE Confidence: 0.873782801666667

00:53:59.810 --> 00:54:01.184 and most importantly,  
NOTE Confidence: 0.873782801666667

00:54:01.184 --> 00:54:03.932 I pose these questions to people

NOTE Confidence: 0.873782801666667

00:54:03.932 --> 00:54:05.540 who are doing AI.

NOTE Confidence: 0.873782801666667

00:54:05.540 --> 00:54:07.290 I'm not saying anything terribly

NOTE Confidence: 0.873782801666667

00:54:07.290 --> 00:54:09.627 bad about a all I'm saying is

NOTE Confidence: 0.873782801666667

00:54:09.627 --> 00:54:12.155 that it will take time for AI to

NOTE Confidence: 0.873782801666667

00:54:12.155 --> 00:54:13.879 be applicable to diagnostics.

NOTE Confidence: 0.873782801666667

00:54:13.880 --> 00:54:15.889 So the questions I often ask is,

NOTE Confidence: 0.873782801666667

00:54:15.890 --> 00:54:17.160 are you trying to replace?

NOTE Confidence: 0.873782801666667

00:54:17.160 --> 00:54:19.588 Colleges or societal technologists

NOTE Confidence: 0.873782801666667

00:54:19.588 --> 00:54:22.623 for onsite evaluation of articles.

NOTE Confidence: 0.873782801666667

00:54:22.630 --> 00:54:24.650 Time consuming process and

NOTE Confidence: 0.873782801666667

00:54:24.650 --> 00:54:26.670 most people say no.

NOTE Confidence: 0.873782801666667

00:54:26.670 --> 00:54:28.355 Are you trying to achieve

NOTE Confidence: 0.873782801666667

00:54:28.355 --> 00:54:29.366 higher diagnostic accuracy?

NOTE Confidence: 0.873782801666667

00:54:29.370 --> 00:54:33.185 I already presented such good risk of

NOTE Confidence: 0.873782801666667

00:54:33.185 --> 00:54:35.690 malignancies and accurate accuracy,

NOTE Confidence: 0.873782801666667

00:54:35.690 --> 00:54:37.610 high accuracy of thyroid athanas.  
NOTE Confidence: 0.873782801666667

00:54:37.610 --> 00:54:39.370 So the answer is no.  
NOTE Confidence: 0.873782801666667

00:54:39.370 --> 00:54:41.120 So are we trying to decrease the  
NOTE Confidence: 0.873782801666667

00:54:41.120 --> 00:54:43.027 turnaround time and again the answer is no.  
NOTE Confidence: 0.873782801666667

00:54:43.030 --> 00:54:45.151 Actually we will add on turn around  
NOTE Confidence: 0.873782801666667

00:54:45.151 --> 00:54:47.733 time and we trying to save valuable  
NOTE Confidence: 0.873782801666667

00:54:47.733 --> 00:54:50.400 healthcare dollars and answer is again no.  
NOTE Confidence: 0.873782801666667

00:54:50.400 --> 00:54:52.770 If the companies make AI programs,  
NOTE Confidence: 0.873782801666667

00:54:52.770 --> 00:54:54.720 they will want their money back  
NOTE Confidence: 0.873782801666667

00:54:54.720 --> 00:54:56.929 and it will add to the cost.  
NOTE Confidence: 0.638569063333333

00:54:56.930 --> 00:55:00.106 Of doing an FDA. So with that I  
NOTE Confidence: 0.638569063333333

00:55:00.106 --> 00:55:02.522 and my presentation I would be very  
NOTE Confidence: 0.638569063333333

00:55:02.522 --> 00:55:04.822 happy to answer any question about  
NOTE Confidence: 0.638569063333333

00:55:04.822 --> 00:55:07.032 Tyler Cytopathology in general or  
NOTE Confidence: 0.638569063333333

00:55:07.032 --> 00:55:09.160 Bethesda system in particular.  
NOTE Confidence: 0.638569063333333

00:55:09.160 --> 00:55:11.640 So again thank you Angelique for hosting me.



NOTE Confidence: 0.6385690633333333  
00:55:11.640 --> 00:55:13.887 Thank you all for being wonderful audience.  
NOTE Confidence: 0.82481728  
00:55:20.710 --> 00:55:28.030 Yes, please. Problem. Quite often.  
NOTE Confidence: 0.82481728  
00:55:28.030 --> 00:55:29.450 Technically adequate.  
NOTE Confidence: 0.82481728  
00:55:29.450 --> 00:55:31.750 But they don't have enough colloid.  
NOTE Confidence: 0.37832573  
00:55:34.140 --> 00:55:38.738 Line. Question. But so you're  
NOTE Confidence: 0.37832573  
00:55:38.738 --> 00:55:40.530 struggling, you don't have microphone.  
NOTE Confidence: 0.126658054  
00:55:44.000 --> 00:55:45.130 Stop drinking.  
NOTE Confidence: 0.6713428  
00:55:48.080 --> 00:55:49.510 Or you.  
NOTE Confidence: 0.834512135555556  
00:55:50.860 --> 00:55:52.290 It's a good question and  
NOTE Confidence: 0.834512135555556  
00:55:52.290 --> 00:55:53.434 answer is very simple.  
NOTE Confidence: 0.834512135555556  
00:55:53.440 --> 00:55:54.760 If you have enough cells,  
NOTE Confidence: 0.834512135555556  
00:55:54.760 --> 00:55:57.100 that sample is not non diagnostic,  
NOTE Confidence: 0.834512135555556  
00:55:57.100 --> 00:55:59.740 it's diagnostics and it becomes  
NOTE Confidence: 0.834512135555556  
00:55:59.740 --> 00:56:01.852 an issue of interpretation.  
NOTE Confidence: 0.834512135555556  
00:56:01.860 --> 00:56:04.282 I sign out thyroid nodules benign all  
NOTE Confidence: 0.834512135555556

00:56:04.282 --> 00:56:07.220 the time even without seeing any colloid.

NOTE Confidence: 0.834512135555556

00:56:07.220 --> 00:56:08.075 If the cellularity,

NOTE Confidence: 0.834512135555556

00:56:08.075 --> 00:56:09.500 even with the high cellularity,

NOTE Confidence: 0.834512135555556

00:56:09.500 --> 00:56:10.500 if the cells look benign,

NOTE Confidence: 0.834512135555556

00:56:10.500 --> 00:56:12.936 it's a benign diagnosis if there

NOTE Confidence: 0.834512135555556

00:56:12.936 --> 00:56:14.560 is lymphoid proliferation in

NOTE Confidence: 0.834512135555556

00:56:14.628 --> 00:56:16.228 the background even without.

NOTE Confidence: 0.834512135555556

00:56:16.228 --> 00:56:18.566 And if little cells I call it

NOTE Confidence: 0.834512135555556

00:56:18.566 --> 00:56:20.744 benign for hachimura you don't have

NOTE Confidence: 0.834512135555556

00:56:20.744 --> 00:56:22.990 to have sex with flicker cells,

NOTE Confidence: 0.834512135555556

00:56:22.990 --> 00:56:24.817 one or two groups or even without

NOTE Confidence: 0.834512135555556

00:56:24.817 --> 00:56:26.878 it seeing any flicker cell as long

NOTE Confidence: 0.834512135555556

00:56:26.878 --> 00:56:28.708 as this logical evidence or you're

NOTE Confidence: 0.834512135555556

00:56:28.771 --> 00:56:30.547 seeing good lymphoid population.

NOTE Confidence: 0.834512135555556

00:56:30.550 --> 00:56:33.301 So again answer is simple that if

NOTE Confidence: 0.834512135555556

00:56:33.301 --> 00:56:35.391 you have follicular cells present

NOTE Confidence: 0.83451213555556  
00:56:35.391 --> 00:56:38.296 in a sample it's not non diagnostic  
NOTE Confidence: 0.83451213555556  
00:56:38.296 --> 00:56:40.574 unless there is a compromising  
NOTE Confidence: 0.83451213555556  
00:56:40.574 --> 00:56:43.244 factors such as air drying artifact,  
NOTE Confidence: 0.83451213555556  
00:56:43.250 --> 00:56:44.474 excessively obscuring blood,  
NOTE Confidence: 0.83451213555556  
00:56:44.474 --> 00:56:46.370 so on and so forth.  
NOTE Confidence: 0.892398928  
00:56:49.670 --> 00:56:50.650 Yeah. Thank you for that.  
NOTE Confidence: 0.892398928  
00:56:50.650 --> 00:56:54.290 Excellent. One area that.  
NOTE Confidence: 0.70404685  
00:56:57.310 --> 00:57:00.800 I think. It's when.  
NOTE Confidence: 0.8301585  
00:57:04.260 --> 00:57:04.450 Yeah.  
NOTE Confidence: 0.619424  
00:57:09.010 --> 00:57:15.670 Maybe the song? Michael Pages for people.  
NOTE Confidence: 0.619424  
00:57:15.670 --> 00:57:16.486 You know, but then you know,  
NOTE Confidence: 0.619424  
00:57:16.490 --> 00:57:19.558 sometimes you just have exclusively  
NOTE Confidence: 0.619424  
00:57:19.560 --> 00:57:22.900 about yourselves and you can see.  
NOTE Confidence: 0.619424  
00:57:22.900 --> 00:57:25.918 Especially appropriate for that particular.  
NOTE Confidence: 0.819346005  
00:57:26.590 --> 00:57:27.655 So good question.  
NOTE Confidence: 0.819346005

00:57:27.655 --> 00:57:29.430 Thank you for asking that.  
NOTE Confidence: 0.819346005

00:57:29.430 --> 00:57:32.570 It always remains.  
NOTE Confidence: 0.819346005

00:57:32.570 --> 00:57:35.986 An issue where to draw the line between  
NOTE Confidence: 0.819346005

00:57:35.990 --> 00:57:39.620 oncocytic hyperplasia a US oncocytic  
NOTE Confidence: 0.819346005

00:57:39.620 --> 00:57:43.720 type or oncocytic neoplasm and so,  
NOTE Confidence: 0.819346005

00:57:43.720 --> 00:57:46.200 so answer would be that if  
NOTE Confidence: 0.819346005

00:57:46.200 --> 00:57:48.210 you have adequate number of.  
NOTE Confidence: 0.819346005

00:57:48.210 --> 00:57:50.988 Are on cassettes.  
NOTE Confidence: 0.819346005

00:57:50.990 --> 00:57:54.226 It is not a US unless there  
NOTE Confidence: 0.819346005

00:57:54.226 --> 00:57:55.570 are other factors involved.  
NOTE Confidence: 0.819346005

00:57:55.570 --> 00:57:57.684 So if you have oncocytic only with  
NOTE Confidence: 0.819346005

00:57:57.684 --> 00:57:59.715 lot of color in the background  
NOTE Confidence: 0.819346005

00:57:59.715 --> 00:58:01.480 even without seeing any usual  
NOTE Confidence: 0.819346005

00:58:01.480 --> 00:58:03.349 type of follicular cells,  
NOTE Confidence: 0.819346005

00:58:03.350 --> 00:58:06.024 I will lean heavily towards a benign  
NOTE Confidence: 0.819346005

00:58:06.024 --> 00:58:08.102 diagnosis because I would know

NOTE Confidence: 0.819346005

00:58:08.102 --> 00:58:10.247 that Oncocyte don't make colored,

NOTE Confidence: 0.819346005

00:58:10.250 --> 00:58:11.537 they're defective metaplastic

NOTE Confidence: 0.819346005

00:58:11.537 --> 00:58:13.682 forms of particular cells of

NOTE Confidence: 0.819346005

00:58:13.682 --> 00:58:15.521 cellular colloid is coming from

NOTE Confidence: 0.819346005

00:58:15.521 --> 00:58:17.369 somewhere where we don't not seeing

NOTE Confidence: 0.819346005

00:58:17.369 --> 00:58:19.228 the usual form of liquor self.

NOTE Confidence: 0.819346005

00:58:19.230 --> 00:58:21.770 So colloid and Oncocyte is.

NOTE Confidence: 0.819346005

00:58:21.770 --> 00:58:24.344 Is a very reassuring mixture and

NOTE Confidence: 0.819346005

00:58:24.344 --> 00:58:27.472 I would go behind the the cases

NOTE Confidence: 0.819346005

00:58:27.472 --> 00:58:30.524 where I call something a US based

NOTE Confidence: 0.819346005

00:58:30.524 --> 00:58:32.664 oncocytic subtype is all Oncocyte

NOTE Confidence: 0.819346005

00:58:32.664 --> 00:58:36.229 in a very sparsely cellular sample.

NOTE Confidence: 0.819346005

00:58:36.230 --> 00:58:41.405 Or if I see a lot of wrong quest sites.

NOTE Confidence: 0.819346005

00:58:41.410 --> 00:58:42.318 But the,

NOTE Confidence: 0.819346005

00:58:42.318 --> 00:58:42.772 the,

NOTE Confidence: 0.819346005

00:58:42.772 --> 00:58:45.042 the clinical impression is Hashimoto  
NOTE Confidence: 0.819346005

00:58:45.042 --> 00:58:47.507 thyroiditis and I don't want to go  
NOTE Confidence: 0.819346005

00:58:47.507 --> 00:58:49.680 all the way to oncocytic neoplasm,  
NOTE Confidence: 0.819346005

00:58:49.680 --> 00:58:53.145 then I would go AUS on cosec.  
NOTE Confidence: 0.88500132

00:58:55.620 --> 00:58:57.811 But again, it's it's a little bit  
NOTE Confidence: 0.88500132

00:58:57.811 --> 00:58:59.660 of subjectivity is involved here,  
NOTE Confidence: 0.88500132

00:58:59.660 --> 00:59:01.660 and the one advice I could give you  
NOTE Confidence: 0.88500132

00:59:01.660 --> 00:59:04.112 is to do molecular testing with the  
NOTE Confidence: 0.88500132

00:59:04.112 --> 00:59:06.002 understanding that it comes back  
NOTE Confidence: 0.88500132

00:59:06.066 --> 00:59:08.136 with a higher percentage of cases,  
NOTE Confidence: 0.88500132

00:59:08.140 --> 00:59:09.013 suspicious or positive.  
NOTE Confidence: 0.88500132

00:59:09.013 --> 00:59:10.468 So you have to be  
NOTE Confidence: 0.9836472

00:59:10.480 --> 00:59:13.430 careful with that. So.  
NOTE Confidence: 0.54975593

00:59:16.170 --> 00:59:16.510 Off.  
NOTE Confidence: 0.2801788

00:59:26.640 --> 00:59:27.130 Select.  
NOTE Confidence: 0.594842652857143

00:59:33.680 --> 00:59:37.866 For the management based on the subject.

NOTE Confidence: 0.594842652857143  
00:59:37.870 --> 00:59:41.149 Because sometimes those.  
NOTE Confidence: 0.594842652857143  
00:59:41.150 --> 00:59:43.120 Very in the nose part.  
NOTE Confidence: 0.66312395  
00:59:47.690 --> 00:59:48.380 We know.  
NOTE Confidence: 0.740087842727273  
00:59:56.090 --> 00:59:57.490 So grouping, excellent question.  
NOTE Confidence: 0.740087842727273  
00:59:57.490 --> 01:00:00.190 So that's why we wanted to simplify.  
NOTE Confidence: 0.740087842727273  
01:00:00.190 --> 01:00:03.361 So we don't recommend to the clinicians  
NOTE Confidence: 0.740087842727273  
01:00:03.361 --> 01:00:06.946 how to manage the US it's their choice.  
NOTE Confidence: 0.740087842727273  
01:00:06.950 --> 01:00:09.710 They know more about clinical history,  
NOTE Confidence: 0.740087842727273  
01:00:09.710 --> 01:00:11.198 clinical palpation findings  
NOTE Confidence: 0.740087842727273  
01:00:11.198 --> 01:00:12.686 or imaging findings.  
NOTE Confidence: 0.740087842727273  
01:00:12.690 --> 01:00:15.804 All we do is we report what we see.  
NOTE Confidence: 0.740087842727273  
01:00:15.810 --> 01:00:17.844 So previously they used to get  
NOTE Confidence: 0.740087842727273  
01:00:17.844 --> 01:00:19.875 very confused where we would say  
NOTE Confidence: 0.740087842727273  
01:00:19.875 --> 01:00:21.982 AUS where some of our bodies AUS  
NOTE Confidence: 0.740087842727273  
01:00:21.982 --> 01:00:23.889 rare internuclear inclusions.  
NOTE Confidence: 0.740087842727273

01:00:23.890 --> 01:00:25.234 And by the way,  
NOTE Confidence: 0.740087842727273

01:00:25.234 --> 01:00:27.250 the worst diagnosis you can give  
NOTE Confidence: 0.740087842727273

01:00:27.329 --> 01:00:30.472 to a clinician is AUS with rare  
NOTE Confidence: 0.740087842727273

01:00:30.472 --> 01:00:31.819 internuclear inclusions because.  
NOTE Confidence: 0.740087842727273

01:00:31.820 --> 01:00:33.985 They are taught internuclear inclusion  
NOTE Confidence: 0.740087842727273

01:00:33.985 --> 01:00:35.717 equals papillary thyroid carcinoma.  
NOTE Confidence: 0.740087842727273

01:00:35.720 --> 01:00:37.616 So we should never do that.  
NOTE Confidence: 0.740087842727273

01:00:37.620 --> 01:00:40.105 And these were the reasons that we  
NOTE Confidence: 0.740087842727273

01:00:40.105 --> 01:00:42.446 wanted to tell our clinical colleagues  
NOTE Confidence: 0.740087842727273

01:00:42.446 --> 01:00:45.239 that AUS is not a very complex,  
NOTE Confidence: 0.740087842727273

01:00:45.240 --> 01:00:47.920 subjectively interpreted diagnostic category,  
NOTE Confidence: 0.740087842727273

01:00:47.920 --> 01:00:52.780 that it could be very well defined.  
NOTE Confidence: 0.740087842727273

01:00:52.780 --> 01:00:56.330 So nuclear is when you see nuclear, Ethiopia.  
NOTE Confidence: 0.740087842727273

01:00:56.330 --> 01:00:58.880 Features of papillary but very  
NOTE Confidence: 0.740087842727273

01:00:58.880 --> 01:01:01.370 folky present and everything else,  
NOTE Confidence: 0.740087842727273

01:01:01.370 --> 01:01:03.245 including on Pacific suspending everything



NOTE Confidence: 0.740087842727273  
01:01:03.245 --> 01:01:05.700 you will call other if you like.  
NOTE Confidence: 0.740087842727273  
01:01:05.700 --> 01:01:08.556 You can still put a descriptive  
NOTE Confidence: 0.740087842727273  
01:01:08.560 --> 01:01:11.896 diagnosis as a second line note.  
NOTE Confidence: 0.740087842727273  
01:01:11.900 --> 01:01:15.868 So your other question that you have was.  
NOTE Confidence: 0.740087842727273  
01:01:15.870 --> 01:01:19.368 How to manage more conservatively or  
NOTE Confidence: 0.740087842727273  
01:01:19.368 --> 01:01:22.792 lobectomy or otherwise it's a decision  
NOTE Confidence: 0.740087842727273  
01:01:22.792 --> 01:01:25.768 which is based on their discussion  
NOTE Confidence: 0.740087842727273  
01:01:25.768 --> 01:01:28.590 and but the reason I showed that  
NOTE Confidence: 0.740087842727273  
01:01:28.590 --> 01:01:30.779 slide where I wrote that now sometimes  
NOTE Confidence: 0.740087842727273  
01:01:30.779 --> 01:01:32.963 it simply follow up and they don't  
NOTE Confidence: 0.740087842727273  
01:01:32.963 --> 01:01:35.250 do anything that we have seen that  
NOTE Confidence: 0.740087842727273  
01:01:35.250 --> 01:01:38.026 they have started to realize that.  
NOTE Confidence: 0.740087842727273  
01:01:38.026 --> 01:01:42.996 If there's an AUS based on other  
NOTE Confidence: 0.740087842727273  
01:01:42.996 --> 01:01:44.900 reasons than nuclear tipiya,  
NOTE Confidence: 0.740087842727273  
01:01:44.900 --> 01:01:47.910 these patients will have a very low  
NOTE Confidence: 0.740087842727273

01:01:47.910 --> 01:01:50.640 probability of having a malignant tumor.  
NOTE Confidence: 0.740087842727273

01:01:50.640 --> 01:01:54.504 Has also shown by pharma testing that  
NOTE Confidence: 0.740087842727273

01:01:54.504 --> 01:01:57.708 almost 80% of them turn out to be behind.  
NOTE Confidence: 0.845681898

01:01:59.880 --> 01:02:01.700 Does that answer your question? Yeah, yeah.  
NOTE Confidence: 0.473067496666667

01:02:05.300 --> 01:02:07.160 You have dialysis.  
NOTE Confidence: 0.9088036

01:02:12.930 --> 01:02:16.858 Yeah, exactly. So ADA guidelines are  
NOTE Confidence: 0.9088036

01:02:16.858 --> 01:02:19.950 actually built on the tester system  
NOTE Confidence: 0.927660743333333

01:02:19.950 --> 01:02:22.248 which is which is wonderful news.  
NOTE Confidence: 0.927660743333333

01:02:22.250 --> 01:02:28.118 And even now the 2022 I have seen a  
NOTE Confidence: 0.927660743333333

01:02:28.118 --> 01:02:31.985 little bit of draft form and and again  
NOTE Confidence: 0.927660743333333

01:02:31.985 --> 01:02:35.820 it's based on what we are suggesting  
NOTE Confidence: 0.927660743333333

01:02:35.820 --> 01:02:40.174 in the in the forthcoming edition so.  
NOTE Confidence: 0.927660743333333

01:02:40.180 --> 01:02:43.008 Which is great because we can very  
NOTE Confidence: 0.927660743333333

01:02:43.008 --> 01:02:46.216 easily talk to each other using those  
NOTE Confidence: 0.927660743333333

01:02:46.216 --> 01:02:49.084 potesta categories and know how the  
NOTE Confidence: 0.927660743333333

01:02:49.171 --> 01:02:52.135 patient would be treated or managed.

NOTE Confidence: 0.927660743333333

01:02:52.140 --> 01:02:56.050 So let me just ask one more question, sure.

NOTE Confidence: 0.927660743333333

01:02:56.050 --> 01:03:00.880 Suspicious. That's great.

NOTE Confidence: 0.927660743333333

01:03:00.880 --> 01:03:03.360 Image means us.

NOTE Confidence: 0.618294834

01:03:06.100 --> 01:03:08.980 So they probably like Siri.

NOTE Confidence: 0.618294834

01:03:08.980 --> 01:03:11.940 And when you call those suspicious

NOTE Confidence: 0.618294834

01:03:11.940 --> 01:03:13.515 people, at the end of the day,

NOTE Confidence: 0.618294834

01:03:13.520 --> 01:03:16.586 you know the the risk of malignancy

NOTE Confidence: 0.618294834

01:03:16.586 --> 01:03:18.300 suspicious actually approaches 100%.

NOTE Confidence: 0.618294834

01:03:18.300 --> 01:03:19.767 So at the end of the day for when?

NOTE Confidence: 0.79562023

01:03:25.630 --> 01:03:26.290 So that's

NOTE Confidence: 0.656567586666667

01:03:27.620 --> 01:03:30.866 so 75% and Hopkins is 80%.

NOTE Confidence: 0.656567586666667

01:03:30.870 --> 01:03:33.558 Now I think in the new edition,

NOTE Confidence: 0.656567586666667

01:03:33.560 --> 01:03:35.244 a lot of people.

NOTE Confidence: 0.656567586666667

01:03:35.244 --> 01:03:37.349 We'll do the total thyroidectomy,

NOTE Confidence: 0.656567586666667

01:03:37.350 --> 01:03:39.162 but if I would,

NOTE Confidence: 0.656567586666667

01:03:39.162 --> 01:03:40.974 I'm calling something suspicious  
NOTE Confidence: 0.656567586666667

01:03:40.974 --> 01:03:43.255 for proprietary carcinoma and I've  
NOTE Confidence: 0.656567586666667

01:03:43.255 --> 01:03:45.415 convinced myself the the features  
NOTE Confidence: 0.656567586666667

01:03:45.415 --> 01:03:47.969 are more than what I would see in  
NOTE Confidence: 0.656567586666667

01:03:47.969 --> 01:03:50.765 a nifty and I don't want to call it  
NOTE Confidence: 0.656567586666667

01:03:50.765 --> 01:03:53.470 flicker neoplasm only I put a statement  
NOTE Confidence: 0.656567586666667

01:03:53.470 --> 01:03:55.770 recommendation for the first time.  
NOTE Confidence: 0.656567586666667

01:03:55.770 --> 01:03:59.250 I tell people to put us a statement  
NOTE Confidence: 0.656567586666667

01:03:59.250 --> 01:04:02.010 do lobectomy or consider lobectomy  
NOTE Confidence: 0.656567586666667

01:04:02.010 --> 01:04:04.098 or whatever because although  
NOTE Confidence: 0.656567586666667

01:04:04.098 --> 01:04:05.430 the official recommendation.  
NOTE Confidence: 0.656567586666667

01:04:05.430 --> 01:04:07.481 This in the back we most surgeons  
NOTE Confidence: 0.656567586666667

01:04:07.481 --> 01:04:09.383 they should go back with a  
NOTE Confidence: 0.656567586666667

01:04:09.383 --> 01:04:11.124 centerfire 80% risk of agency  
NOTE Confidence: 0.656567586666667

01:04:11.124 --> 01:04:13.700 and do as a second procedure of  
NOTE Confidence: 0.656567586666667

01:04:13.780 --> 01:04:16.260 completing the higher directly.

NOTE Confidence: 0.656567586666667

01:04:16.260 --> 01:04:18.800 So they will do it if it's

NOTE Confidence: 0.656567586666667

01:04:18.800 --> 01:04:20.240 not a papillary carcinoma,

NOTE Confidence: 0.656567586666667

01:04:20.240 --> 01:04:23.285 the poor patient is way over treated.

NOTE Confidence: 0.656567586666667

01:04:23.290 --> 01:04:25.234 Are also people have asked me

NOTE Confidence: 0.656567586666667

01:04:25.234 --> 01:04:27.626 this question why do we even have

NOTE Confidence: 0.656567586666667

01:04:27.626 --> 01:04:28.998 the suspicious category when

NOTE Confidence: 0.656567586666667

01:04:28.998 --> 01:04:31.328 the risk of malignancy so high?

NOTE Confidence: 0.656567586666667

01:04:31.330 --> 01:04:33.020 And answer is very simple,

NOTE Confidence: 0.656567586666667

01:04:33.020 --> 01:04:36.276 we want to give the category of malignant

NOTE Confidence: 0.656567586666667

01:04:36.276 --> 01:04:40.070 a very high specificity approaching 100%.

NOTE Confidence: 0.656567586666667

01:04:40.070 --> 01:04:42.434 That's why we have suspicious or

NOTE Confidence: 0.656567586666667

01:04:42.434 --> 01:04:44.729 popularity or suspicious category in general.

NOTE Confidence: 0.656567586666667

01:04:44.730 --> 01:04:47.346 If we take it out then the accuracy

NOTE Confidence: 0.656567586666667

01:04:47.346 --> 01:04:50.170 or risk of malignancy of flat out

NOTE Confidence: 0.656567586666667

01:04:50.170 --> 01:04:52.260 malignant will drop down into

NOTE Confidence: 0.656567586666667

01:04:52.343 --> 01:04:54.168 lower 90s or even lower.  
NOTE Confidence: 0.76026249

01:05:01.630 --> 01:05:02.698 That they have some.  
NOTE Confidence: 0.540751211428572

01:05:09.330 --> 01:05:11.339 And the appointment category all give you.  
NOTE Confidence: 0.730634881222222

01:05:16.780 --> 01:05:18.540 You mean the adenomatoid  
NOTE Confidence: 0.730634881222222

01:05:18.540 --> 01:05:21.620 nodule case that I showed you?  
NOTE Confidence: 0.730634881222222

01:05:21.620 --> 01:05:23.775 Yeah, so those cases would  
NOTE Confidence: 0.730634881222222

01:05:23.775 --> 01:05:25.930 be extremely difficult not to  
NOTE Confidence: 0.730634881222222

01:05:26.012 --> 01:05:28.480 call a US suspicious of PTC.  
NOTE Confidence: 0.730634881222222

01:05:28.480 --> 01:05:30.874 The case which I shared in  
NOTE Confidence: 0.730634881222222

01:05:30.874 --> 01:05:32.470 the morning unfortunately was  
NOTE Confidence: 0.730634881222222

01:05:32.547 --> 01:05:34.827 called suspicious for papillary.  
NOTE Confidence: 0.730634881222222

01:05:34.830 --> 01:05:35.577 Which you guys,  
NOTE Confidence: 0.730634881222222

01:05:35.577 --> 01:05:37.320 a lot of you guys thought was  
NOTE Confidence: 0.730634881222222

01:05:37.377 --> 01:05:40.400 suspicious for probably perfect, yeah.  
NOTE Confidence: 0.76576672

01:05:41.960 --> 01:05:44.870 It's. Right. Thank you.  
NOTE Confidence: 0.393035095333333

01:05:47.540 --> 01:05:49.370 So suspicious of February.

NOTE Confidence: 0.54577486  
01:05:55.970 --> 01:05:56.798 Any institution that.  
NOTE Confidence: 0.6605046  
01:06:07.370 --> 01:06:07.620 Any.  
NOTE Confidence: 0.772163927142857  
01:06:13.160 --> 01:06:15.068 So difference is situations  
NOTE Confidence: 0.772163927142857  
01:06:15.068 --> 01:06:16.499 handle it differently.  
NOTE Confidence: 0.772163927142857  
01:06:16.500 --> 01:06:20.174 So. At our institution,  
NOTE Confidence: 0.772163927142857  
01:06:20.174 --> 01:06:24.110 the trend is to do a a lobectomy.  
NOTE Confidence: 0.772163927142857  
01:06:24.110 --> 01:06:26.650 For suspicious of proprietary carcinoma.  
NOTE Confidence: 0.772163927142857  
01:06:26.650 --> 01:06:29.827 And if it turns turns out to be negative,  
NOTE Confidence: 0.772163927142857  
01:06:29.830 --> 01:06:32.366 we don't include it as a false positive.  
NOTE Confidence: 0.772163927142857  
01:06:32.370 --> 01:06:34.730 False negative.  
NOTE Confidence: 0.772163927142857  
01:06:34.730 --> 01:06:37.028 Or false positive, whichever way you look at.  
NOTE Confidence: 0.772163927142857  
01:06:37.030 --> 01:06:40.005 Because when we calculate the false positive,  
NOTE Confidence: 0.772163927142857  
01:06:40.010 --> 01:06:43.766 it's only flat out positive case.  
NOTE Confidence: 0.772163927142857  
01:06:43.770 --> 01:06:45.990 Some studies include both suspicious  
NOTE Confidence: 0.772163927142857  
01:06:45.990 --> 01:06:48.210 and and malignant when they  
NOTE Confidence: 0.772163927142857

01:06:48.285 --> 01:06:52.380 calculate the false positive rate.  
NOTE Confidence: 0.772163927142857

01:06:52.380 --> 01:06:54.966 If you like definitely each case  
NOTE Confidence: 0.772163927142857

01:06:54.966 --> 01:06:57.260 of suspicious or popular you  
NOTE Confidence: 0.772163927142857

01:06:57.260 --> 01:06:59.200 can recommend I'll actually.  
NOTE Confidence: 0.772163927142857

01:06:59.200 --> 01:07:01.030 We sit sometime in tumor boards  
NOTE Confidence: 0.772163927142857

01:07:01.030 --> 01:07:03.061 and and they don't mind if if  
NOTE Confidence: 0.772163927142857

01:07:03.061 --> 01:07:04.811 if you tell them that you feel  
NOTE Confidence: 0.772163927142857

01:07:04.811 --> 01:07:07.218 uncomfortable having the patient a  
NOTE Confidence: 0.772163927142857

01:07:07.218 --> 01:07:09.094 total thyroidectomy because you're  
NOTE Confidence: 0.772163927142857

01:07:09.094 --> 01:07:11.502 calling something suspicious papillary.  
NOTE Confidence: 0.772163927142857

01:07:11.502 --> 01:07:12.790 But again,  
NOTE Confidence: 0.772163927142857

01:07:12.790 --> 01:07:14.078 say that these days,  
NOTE Confidence: 0.772163927142857

01:07:14.078 --> 01:07:16.010 with the with the NIFTY being  
NOTE Confidence: 0.772163927142857

01:07:16.010 --> 01:07:17.427 such a such an issue,  
NOTE Confidence: 0.772163927142857

01:07:17.427 --> 01:07:20.461 it's best that your diagnosis is suspicious  
NOTE Confidence: 0.772163927142857

01:07:20.461 --> 01:07:23.749 or popular should be very carefully selected.



NOTE Confidence: 0.772163927142857  
01:07:23.750 --> 01:07:27.728 Either it's papillary or subtle features.  
NOTE Confidence: 0.772163927142857  
01:07:27.730 --> 01:07:28.450 Focal features.  
NOTE Confidence: 0.772163927142857  
01:07:28.450 --> 01:07:30.610 Think of little and your passion.  
NOTE Confidence: 0.772163927142857  
01:07:30.610 --> 01:07:33.010 You can certainly write for follicular  
NOTE Confidence: 0.772163927142857  
01:07:33.010 --> 01:07:34.210 neoplasm differential diagnosis  
NOTE Confidence: 0.772163927142857  
01:07:34.210 --> 01:07:36.325 include NFP or a floccular variant  
NOTE Confidence: 0.772163927142857  
01:07:36.325 --> 01:07:37.649 of papillary thyroid carcinoma.  
NOTE Confidence: 0.772163927142857  
01:07:37.650 --> 01:07:39.996 We do it all the time.  
NOTE Confidence: 0.772163927142857  
01:07:40.000 --> 01:07:42.214 And molecular tests help and again  
NOTE Confidence: 0.772163927142857  
01:07:42.214 --> 01:07:44.762 answer to your question a lot of  
NOTE Confidence: 0.772163927142857  
01:07:44.762 --> 01:07:46.427 times suspicious for papillary now  
NOTE Confidence: 0.772163927142857  
01:07:46.427 --> 01:07:48.704 get molecular testing pharma which  
NOTE Confidence: 0.772163927142857  
01:07:48.704 --> 01:07:51.134 is based on negative predictive  
NOTE Confidence: 0.772163927142857  
01:07:51.134 --> 01:07:54.290 value 96% also has a second layer  
NOTE Confidence: 0.772163927142857  
01:07:54.290 --> 01:07:56.533 of testing called expression Atlas  
NOTE Confidence: 0.772163927142857

01:07:56.533 --> 01:07:59.581 which is based on a 200 plus very  
NOTE Confidence: 0.772163927142857

01:07:59.581 --> 01:08:01.925 specific positive mutations of thyroid  
NOTE Confidence: 0.772163927142857

01:08:01.925 --> 01:08:05.151 cancers and and they can pick up.  
NOTE Confidence: 0.772163927142857

01:08:05.151 --> 01:08:08.028 So if you call something as PC.  
NOTE Confidence: 0.772163927142857

01:08:08.030 --> 01:08:11.429 Pharma is suspicious.  
NOTE Confidence: 0.772163927142857

01:08:11.430 --> 01:08:13.110 GSC suspicion, the GC,  
NOTE Confidence: 0.772163927142857

01:08:13.110 --> 01:08:14.790 Quincy classifier or pharma.  
NOTE Confidence: 0.772163927142857

01:08:14.790 --> 01:08:17.016 They will add an expression Atlas  
NOTE Confidence: 0.772163927142857

01:08:17.016 --> 01:08:19.538 over that and it's expression Atlas  
NOTE Confidence: 0.772163927142857

01:08:19.538 --> 01:08:22.412 is negative with all the specific  
NOTE Confidence: 0.772163927142857

01:08:22.412 --> 01:08:24.060 markers negative for papillary,  
NOTE Confidence: 0.772163927142857

01:08:24.060 --> 01:08:26.130 other cancers they will not develop.  
NOTE Confidence: 0.83016515

01:08:33.080 --> 01:08:34.438 Well, if there are no more questions,  
NOTE Confidence: 0.83016515

01:08:34.440 --> 01:08:35.976 once again thank you so much.  
NOTE Confidence: 0.83016515

01:08:35.980 --> 01:08:37.597 Have a great rest of the afternoon.  
NOTE Confidence: 0.83016515

01:08:37.600 --> 01:08:39.298 I know it's a working day,

NOTE Confidence: 0.83016515

01:08:39.300 --> 01:08:40.808 so everyone is busy.