WEBVTT

NOTE duration:"00:54:33"

NOTE recognizability:0.728

NOTE language:en-us

NOTE Confidence: 0.747943522

00:00:02.320 --> 00:00:04.624 Welcome everyone. Today's Grand

NOTE Confidence: 0.747943522

00:00:04.624 --> 00:00:08.080 Round speaker is Doctor Ben Shue,

NOTE Confidence: 0.747943522

00:00:08.080 --> 00:00:11.920 A preeminent head and neck pathologist.

NOTE Confidence: 0.744893306857143

00:00:14.120 --> 00:00:19.670 Doctor Ben Shue graduated from medical

NOTE Confidence: 0.744893306857143

00:00:19.670 --> 00:00:23.960 school from McGill University in Montreal,

NOTE Confidence: 0.744893306857143

00:00:23.960 --> 00:00:27.488 QC, Canada, where she went on to

NOTE Confidence: 0.744893306857143

00:00:27.488 --> 00:00:30.658 do a pathology residence residency,

NOTE Confidence: 0.744893306857143

00:00:30.658 --> 00:00:32.392 and after completion,

NOTE Confidence: 0.744893306857143

00:00:32.392 --> 00:00:36.408 she actually applied for a head and

NOTE Confidence: 0.744893306857143

00:00:36.408 --> 00:00:39.740 neck fellowship here at Yale in 2014.

NOTE Confidence: 0.744893306857143

00:00:39.740 --> 00:00:44.844 But that was exactly the year I did not.

NOTE Confidence: 0.744893306857143

00:00:44.844 --> 00:00:48.245 We did not have a CGME accreditation and

NOTE Confidence: 0.744893306857143

00:00:48.245 --> 00:00:53.080 that was the year we did not have funding.

NOTE Confidence: 0.744893306857143

00:00:53.080 --> 00:00:57.360 So Doctor Shoe went to memorial to do

NOTE Confidence: 0.744893306857143

00:00:57.360 --> 00:01:01.000 2 years of fellowship the first year

NOTE Confidence: 0.744893306857143

00:01:01.000 --> 00:01:04.665 as is an Oncologic Surgical Pathology

NOTE Confidence: 0.744893306857143

00:01:04.665 --> 00:01:09.356 fellow and the second year as a head

NOTE Confidence: 0.744893306857143

00:01:09.356 --> 00:01:12.732 and neck pathology fellow and made

NOTE Confidence: 0.744893306857143

00:01:12.732 --> 00:01:17.240 excellent use of her two years there.

NOTE Confidence: 0.744893306857143

00:01:17.240 --> 00:01:19.796 She went on to become attending

NOTE Confidence: 0.744893306857143

00:01:19.800 --> 00:01:24.400 pathologist back in Canada at Sunnybrook

NOTE Confidence: 0.744893306857143

00:01:24.400 --> 00:01:26.906 Health Sciences Center in Toronto

NOTE Confidence: 0.744893306857143

00:01:26.906 --> 00:01:30.945 and then after a couple of years she

NOTE Confidence: 0.744893306857143

00:01:30.945 --> 00:01:34.460 was ready to move and was recruited

NOTE Confidence: 0.744893306857143

00:01:34.460 --> 00:01:38.010 by Memorial Sloan Kettering Cancer

NOTE Confidence: 0.744893306857143

00:01:38.010 --> 00:01:42.560 Center as Assistant Attending and has

NOTE Confidence: 0.744893306857143

00:01:42.560 --> 00:01:46.400 recently been promoted to Associate

NOTE Confidence: 0.744893306857143

00:01:46.516 --> 00:01:50.239 Attending Pathology Pathologist.

NOTE Confidence: 0.744893306857143

00:01:50.240 --> 00:01:53.516 She practices Head and Neck pathology

NOTE Confidence: 0.744893306857143

00:01:53.516 --> 00:01:55.154 and Gu Pathology

NOTE Confidence: 0.50975657

00:01:57.360 --> 00:02:01.020 Doctor. Shu has won many awards during

NOTE Confidence: 0.50975657

00:02:01.020 --> 00:02:04.900 her career and award right from early

NOTE Confidence: 0.50975657

00:02:04.900 --> 00:02:08.560 years and award for Excellent student

NOTE Confidence: 0.50975657

00:02:08.560 --> 00:02:12.474 in China scholarship and for graduate

NOTE Confidence: 0.50975657

00:02:12.474 --> 00:02:14.862 student various different fellowships

NOTE Confidence: 0.50975657

00:02:14.862 --> 00:02:17.880 and awards throughout her career.

NOTE Confidence: 0.91817194

00:02:20.800 --> 00:02:26.310 The Best Resident Award as well as the

NOTE Confidence: 0.91817194

00:02:26.310 --> 00:02:30.600 Best Author Award for Pathology Outlines.

NOTE Confidence: 0.91817194

00:02:30.600 --> 00:02:35.052 Dr. Shu has contributed close to 200

NOTE Confidence: 0.91817194

00:02:35.052 --> 00:02:38.240 publications to medical literature.

NOTE Confidence: 0.91817194

00:02:38.240 --> 00:02:40.960 Her online presence is

NOTE Confidence: 0.91817194

00:02:40.960 --> 00:02:43.680 phenomenal and very significant.

NOTE Confidence: 0.91817194

00:02:43.680 --> 00:02:47.220 And among her major contributions

NOTE Confidence: 0.91817194

00:02:47.220 --> 00:02:49.344 is morphologic characterization

NOTE Confidence: 0.91817194

00:02:49.344 --> 00:02:51.600 of thyroid cancers,

NOTE Confidence: 0.91817194

00:02:51.600 --> 00:02:55.218 especially in a plastic thyroid cancers

NOTE Confidence: 0.91817194

00:02:55.218 --> 00:02:59.239 and Dicer one associated thyroid nodules.

NOTE Confidence: 0.91817194

00:02:59.240 --> 00:03:01.091 She's characterized mesenchymal

NOTE Confidence: 0.91817194

00:03:01.091 --> 00:03:05.410 tumors of head and neck as well

NOTE Confidence: 0.91817194

00:03:05.512 --> 00:03:08.032 as thyroid not midline tumors

NOTE Confidence: 0.91817194

00:03:08.032 --> 00:03:11.080 in the genital urinary system.

NOTE Confidence: 0.8913839075

00:03:12.400 --> 00:03:14.200 She's also very active

NOTE Confidence: 0.794765196

00:03:14.200 --> 00:03:17.540 in risk stratification or grading

NOTE Confidence: 0.794765196

00:03:17.540 --> 00:03:20.880 of various cancers like medullary,

NOTE Confidence: 0.794765196

00:03:20.880 --> 00:03:24.600 thyroid cancer, muco, epidermoid cancer,

NOTE Confidence: 0.794765196

00:03:24.600 --> 00:03:26.619 ascenic cell carcinoma,

NOTE Confidence: 0.794765196

00:03:26.619 --> 00:03:29.984 secretory carcinoma of the thyroid

NOTE Confidence: 0.794765196

00:03:29.984 --> 00:03:34.246 and also the prognostic value of

NOTE Confidence: 0.794765196

00:03:34.246 --> 00:03:37.058 characterizing extra nodal extension

NOTE Confidence: 0.794765196

00:03:37.058 --> 00:03:40.679 for tumor positive lymph nodes.

NOTE Confidence: 0.794765196

00:03:40.680 --> 00:03:44.222 Most of these papers or publications I

NOTE Confidence: 0.794765196

00:03:44.222 --> 00:03:47.679 mentioned of practice changing publications,

NOTE Confidence: 0.794765196

00:03:47.680 --> 00:03:50.872 we have actively discussed them at our

NOTE Confidence: 0.794765196

00:03:50.872 --> 00:03:54.309 team meetings and journal club and almost

NOTE Confidence: 0.794765196

00:03:54.309 --> 00:03:57.880 immediately adopted them in our practice.

NOTE Confidence: 0.794765196

00:03:57.880 --> 00:04:01.240 So these are significant contributions.

NOTE Confidence: 0.794765196

00:04:01.240 --> 00:04:03.982 She's also a contributor of two

NOTE Confidence: 0.794765196

00:04:03.982 --> 00:04:07.080 of The Who Blue book series,

NOTE Confidence: 0.794765196

00:04:07.080 --> 00:04:09.830 one on endocrine pathology and

NOTE Confidence: 0.794765196

00:04:09.830 --> 00:04:12.800 another on pediatric pathology.

NOTE Confidence: 0.794765196

00:04:12.800 --> 00:04:15.320 So with that brief introduction,

NOTE Confidence: 0.794765196

00:04:15.320 --> 00:04:17.020 I invite Doctor Shoot to

NOTE Confidence: 0.794765196

00:04:17.020 --> 00:04:18.840 give her Grand Round talk.

NOTE Confidence: 0.856459015555556

00:04:23.600 --> 00:04:26.096 Thank you so much Doctor Facade

NOTE Confidence: 0.856459015555556

00:04:26.096 --> 00:04:28.568 for the kind introduction and for

NOTE Confidence: 0.856459015555556

00:04:28.568 --> 00:04:30.758 inviting me for the Grand Round.

NOTE Confidence: 0.856459015555556

00:04:30.760 --> 00:04:32.398 It's a pleasure to be here,

NOTE Confidence: 0.856459015555556

00:04:32.400 --> 00:04:34.188 although I didn't make it to

NOTE Confidence: 0.856459015555556

00:04:34.188 --> 00:04:36.160 the head and neck fellowship.

NOTE Confidence: 0.856459015555556

00:04:36.160 --> 00:04:39.471 So my talk today is on recent

NOTE Confidence: 0.856459015555556

00:04:39.471 --> 00:04:41.960 advances in thyroid pathology,

NOTE Confidence: 0.856459015555556

00:04:41.960 --> 00:04:44.505 mostly focusing on the more

NOTE Confidence: 0.856459015555556

00:04:44.505 --> 00:04:47.050 aggressive type including high grade

NOTE Confidence: 0.856459015555556

00:04:47.134 --> 00:04:49.999 carcinoma and the plastic carcinoma.

NOTE Confidence: 0.856459015555556

00:04:50.000 --> 00:04:52.872 And the last part I'll touch on the

NOTE Confidence: 0.856459015555556

00:04:52.872 --> 00:04:55.019 grieving of majorly cyrocarcinoma

NOTE Confidence: 0.856459015555556

00:04:55.019 --> 00:04:57.719 and the molecular associations.

NOTE Confidence: 0.856459015555556

00:04:57.720 --> 00:05:00.210 I have nothing to disclose so

NOTE Confidence: 0.856459015555556

00:05:00.210 --> 00:05:02.280 start from the a real case.

NOTE Confidence: 0.856459015555556

00:05:02.280 --> 00:05:05.745 So this is a 68 year old male patient

NOTE Confidence: 0.856459015555556

00:05:05.745 --> 00:05:08.704 with a 4.5 centimeter thyroid nodule.

NOTE Confidence: 0.856459015555556

00:05:08.704 --> 00:05:11.800 Have metastasis to the central compartment,

NOTE Confidence: 0.856459015555556

00:05:11.800 --> 00:05:13.596 lymph node to starvis.

NOTE Confidence: 0.856459015555556

00:05:13.596 --> 00:05:15.841 So he underwent total thyroidectomy

NOTE Confidence: 0.856459015555556

00:05:15.841 --> 00:05:18.397 and the central neck dissection.

NOTE Confidence: 0.856459015555556

00:05:18.400 --> 00:05:20.746 We already know the outcome up

NOTE Confidence: 0.856459015555556

00:05:20.746 --> 00:05:23.783 from now that he did develop lung

NOTE Confidence: 0.856459015555556

00:05:23.783 --> 00:05:26.555 and brain metastasis in one year,

NOTE Confidence: 0.856459015555556

00:05:26.560 --> 00:05:29.272 and he has died of his metastatic

NOTE Confidence: 0.856459015555556

00:05:29.272 --> 00:05:32.440 cancer in three years.

NOTE Confidence: 0.856459015555556

00:05:32.440 --> 00:05:34.876 So what's the thyroid tumor looks like?

NOTE Confidence: 0.856459015555556

00:05:34.880 --> 00:05:38.408 It's looks like a typical classic

NOTE Confidence: 0.856459015555556

00:05:38.408 --> 00:05:40.760 variants of papular pterocarcinoma.

NOTE Confidence: 0.856459015555556

00:05:40.760 --> 00:05:42.760 There are many branching papillais.

NOTE Confidence: 0.856459015555556

00:05:42.760 --> 00:05:44.760 There are no solid girls.

NOTE Confidence: 0.856459015555556

00:05:44.760 --> 00:05:47.020 They're evident nuclear feature

NOTE Confidence: 0.856459015555556

00:05:47.020 --> 00:05:48.715 of papular cytocarcinoma.

NOTE Confidence: 0.856459015555556

00:05:48.720 --> 00:05:50.928 But as you can notice point

NOTE Confidence: 0.856459015555556

00:05:50.928 --> 00:05:52.400 by those Red Arrows,

NOTE Confidence: 0.856459015555556

00:05:52.400 --> 00:05:57.284 they're focal spotty tumor necrosis and the

NOTE Confidence: 0.856459015555556

00:05:57.284 --> 00:05:59.678 necrosis is more evidence in the nodule,

NOTE Confidence: 0.856459015555556

00:05:59.680 --> 00:06:00.982 nodule metastasis,

NOTE Confidence: 0.856459015555556

00:06:00.982 --> 00:06:04.237 nodal metastasis at the presentation.

NOTE Confidence: 0.856459015555556

00:06:04.240 --> 00:06:07.320 As you can see by the red arrow.

NOTE Confidence: 0.856459015555556

00:06:07.320 --> 00:06:07.733 Again,

NOTE Confidence: 0.856459015555556

00:06:07.733 --> 00:06:09.798 even in the nodal metastasis,

NOTE Confidence: 0.856459015555556

00:06:09.800 --> 00:06:12.765 the tumor preserved the popular

NOTE Confidence: 0.856459015555556

00:06:12.765 --> 00:06:16.480 architectures and nuclear feature of PTC.

NOTE Confidence: 0.856459015555556

00:06:16.480 --> 00:06:19.305 So the question comes to

NOTE Confidence: 0.856459015555556

00:06:19.305 --> 00:06:21.000 what's the diagnosis?

NOTE Confidence: 0.856459015555556

00:06:21.000 --> 00:06:25.140 So before the new WHO 2020 250 edition,

NOTE Confidence: 0.856459015555556

00:06:25.140 --> 00:06:27.990 this can be called variably by

NOTE Confidence: 0.856459015555556

00:06:28.082 --> 00:06:31.278 multiple terminology including most

NOTE Confidence: 0.856459015555556

00:06:31.280 --> 00:06:33.820 commonly by practicing pathologists

NOTE Confidence: 0.856459015555556

00:06:33.820 --> 00:06:36.360 as papular sero carcinoma.

NOTE Confidence: 0.856459015555556

00:06:36.360 --> 00:06:38.760 But clearly that does not capture

NOTE Confidence: 0.856459015555556

00:06:38.760 --> 00:06:40.801 the aggressive outcome of this

NOTE Confidence: 0.856459015555556

00:06:40.801 --> 00:06:42.997 case as patient have the system

NOTE Confidence: 0.856459015555556

00:06:42.997 --> 00:06:45.290 metastasis in one year and dead

NOTE Confidence: 0.856459015555556

00:06:45.290 --> 00:06:47.155 of disease within three years.

NOTE Confidence: 0.856459015555556

00:06:47.160 --> 00:06:49.309 As we know that papular sero carcinoma

NOTE Confidence: 0.856459015555556

00:06:49.309 --> 00:06:51.560 overall is a very endowing cancer,

NOTE Confidence: 0.856459015555556

00:06:51.560 --> 00:06:54.200 they have normal life expectancy.

NOTE Confidence: 0.856459015555556

00:06:54.200 --> 00:06:56.680 They rarely develop distant metastasis,

NOTE Confidence: 0.856459015555556

00:06:56.680 --> 00:07:00.480 usually in the 1 to 2% range.

NOTE Confidence: 0.856459015555556

00:07:00.480 --> 00:07:03.413 The other alternative to call it a

NOTE Confidence: 0.856459015555556

00:07:03.413 --> 00:07:05.160 Papillocera carcinoma high grade.

NOTE Confidence: 0.856459015555556

00:07:05.160 --> 00:07:05.660 However,

NOTE Confidence: 0.856459015555556

00:07:05.660 --> 00:07:08.160 there are many clinicians not

NOTE Confidence: 0.856459015555556

00:07:08.160 --> 00:07:09.756 used to this terminology.

NOTE Confidence: 0.856459015555556

00:07:09.756 --> 00:07:12.150 They may treat it as garden

NOTE Confidence: 0.856459015555556

00:07:12.235 --> 00:07:14.227 variety of Papillocera carcinomas

NOTE Confidence: 0.856459015555556

00:07:14.227 --> 00:07:16.717 and not until the publication

NOTE Confidence: 0.856459015555556

00:07:16.717 --> 00:07:19.320 of WHO Fixed Edition in 2022.

NOTE Confidence: 0.856459015555556

00:07:19.320 --> 00:07:21.920 CAP actually does not mandate

NOTE Confidence: 0.856459015555556

00:07:21.920 --> 00:07:24.000 us to grade papulocerrocarcinoma

NOTE Confidence: 0.856459015555556

00:07:24.084 --> 00:07:26.700 and we don't need to mandatory

NOTE Confidence: 0.856459015555556

00:07:26.700 --> 00:07:29.234 be reporting mitotic index and

NOTE Confidence: 0.856459015555556

00:07:29.234 --> 00:07:31.358 necrosis in papulocerrocarcinoma.

NOTE Confidence: 0.736101587

00:07:34.200 --> 00:07:38.040 It's MSK actually we call it 40 differentia

NOTE Confidence: 0.736101587

00:07:38.040 --> 00:07:40.936 cyro carcinoma based on mitosis and

NOTE Confidence: 0.736101587

00:07:40.936 --> 00:07:43.714 necrosis for the longest time since

NOTE Confidence: 0.865860736363636

00:07:46.160 --> 00:07:48.965 2020, 2006. But this approach

NOTE Confidence: 0.865860736363636

00:07:48.965 --> 00:07:52.480 was not adopted outside of MSKCC.

NOTE Confidence: 0.865860736363636

00:07:52.480 --> 00:07:55.088 And the last thing I'm going to touch

NOTE Confidence: 0.865860736363636

00:07:55.088 --> 00:07:57.667 on this high grade differentiation

NOTE Confidence: 0.865860736363636

00:07:57.667 --> 00:08:00.747 cyrocarcinoma is a new classification

NOTE Confidence: 0.865860736363636

00:08:00.747 --> 00:08:03.437 terminology included in WHO 5th Edition.

NOTE Confidence: 0.865860736363636

00:08:03.440 --> 00:08:06.450 And this particular category of tumor is

NOTE Confidence: 0.865860736363636

00:08:06.450 --> 00:08:09.928 aimed to capture those tumors that I show

NOTE Confidence: 0.865860736363636

00:08:09.928 --> 00:08:13.640 with necrosis or elevated mitotic index,

NOTE Confidence: 0.865860736363636

00:08:13.640 --> 00:08:16.790 but otherwise return a differentiated

NOTE Confidence: 0.865860736363636

00:08:16.790 --> 00:08:18.680 psoriatic carcinoma morphology.

NOTE Confidence: 0.865860736363636

00:08:18.680 --> 00:08:20.786 So to touch on this new

NOTE Confidence: 0.865860736363636

00:08:20.786 --> 00:08:21.839 classification of tumor,

NOTE Confidence: 0.865860736363636

00:08:21.840 --> 00:08:24.240 I just want to briefly touch on the

NOTE Confidence: 0.865860736363636

00:08:24.240 --> 00:08:26.800 history of Poly deficiency cyrocarcinoma

NOTE Confidence: 0.865860736363636

00:08:26.800 --> 00:08:29.999 or high grade carcinoma in the thyroid.

NOTE Confidence: 0.865860736363636

00:08:30.000 --> 00:08:32.742 So it was first described by

NOTE Confidence: 0.865860736363636

00:08:32.742 --> 00:08:34.568 Doctor Rosi in 1984.

NOTE Confidence: 0.865860736363636

00:08:34.568 --> 00:08:35.912 At that time,

NOTE Confidence: 0.865860736363636

00:08:35.912 --> 00:08:38.600 it was named as insular carcinoma.

NOTE Confidence: 0.865860736363636

00:08:38.600 --> 00:08:39.600 Reportedly,

NOTE Confidence: 0.865860736363636

00:08:39.600 --> 00:08:42.195 differentiated carcinoma basically

NOTE Confidence: 0.865860736363636

00:08:42.195 --> 00:08:45.170 described these tumors with a

NOTE Confidence: 0.865860736363636

00:08:45.170 --> 00:08:47.550 fetal thyroid appearance and

NOTE Confidence: 0.865860736363636

00:08:47.640 --> 00:08:51.240 solid trabecular insular growth.

NOTE Confidence: 0.865860736363636

00:08:51.240 --> 00:08:54.299 It was not until 2004 was first

NOTE Confidence: 0.865860736363636

00:08:54.299 --> 00:08:57.480 included in The Who classification.

NOTE Confidence: 0.865860736363636

00:08:57.480 --> 00:09:00.232 Named as poorly differentiated

NOTE Confidence: 0.865860736363636

00:09:00.232 --> 00:09:00.920 styrocarcinoma,

NOTE Confidence: 0.865860736363636

00:09:00.920 --> 00:09:03.385 this was proposed to capture

NOTE Confidence: 0.865860736363636

00:09:03.385 --> 00:09:05.357 tumors with indetermined prognosis

NOTE Confidence: 0.865860736363636

00:09:05.357 --> 00:09:07.655 between papular stereo carcinoma

NOTE Confidence: 0.865860736363636

00:09:07.655 --> 00:09:09.959 and endoplastic stereo carcinoma.

NOTE Confidence: 0.865860736363636

00:09:09.960 --> 00:09:13.656 The only definition was included at the

NOTE Confidence: 0.865860736363636

00:09:13.656 --> 00:09:16.560 solid trabecular insular growth pattern.

NOTE Confidence: 0.608655332

00:09:19.160 --> 00:09:23.530 It's not until 2007 or 2006 that

NOTE Confidence: 0.608655332

00:09:23.530 --> 00:09:25.755 two separate study was published.

NOTE Confidence: 0.608655332

00:09:25.760 --> 00:09:28.960 Proposing criteria for Porto

NOTE Confidence: 0.608655332

00:09:28.960 --> 00:09:30.560 differentiation cyrocarcinoma.

NOTE Confidence: 0.608655332

00:09:30.560 --> 00:09:34.144 On top is a Turing proposal beat by

NOTE Confidence: 0.608655332

00:09:34.144 --> 00:09:36.966 Doctor Rosai Visa International Group

NOTE Confidence: 0.608655332

00:09:36.966 --> 00:09:39.534 that define Porto differentiation

NOTE Confidence: 0.608655332

00:09:39.534 --> 00:09:42.361 cyrocarcinoma as solid trabecular

NOTE Confidence: 0.608655332

00:09:42.361 --> 00:09:45.299 insular architecture absent of nuclear

NOTE Confidence: 0.608655332

00:09:45.299 --> 00:09:47.031 feature of popular cyrocarcinoma

NOTE Confidence: 0.608655332

00:09:47.031 --> 00:09:50.052 and at least one of the following

NOTE Confidence: 0.608655332

00:09:50.052 --> 00:09:52.112 features being collated in nuclei

NOTE Confidence: 0.608655332

00:09:52.120 --> 00:09:57.200 elevated mitosis or tumor necrosis.

NOTE Confidence: 0.608655332

00:09:57.200 --> 00:10:01.424 At about the same time MSKCC actually did

NOTE Confidence: 0.608655332

00:10:01.424 --> 00:10:05.712 a separate study and separate criteria

NOTE Confidence: 0.608655332

00:10:05.712 --> 00:10:08.944 based defining ported differentiate

NOTE Confidence: 0.608655332

00:10:08.944 --> 00:10:12.350 carcinoma based solely on mitosis

NOTE Confidence: 0.608655332

00:10:12.350 --> 00:10:16.472 and or necrosis Buried in both paper

NOTE Confidence: 0.608655332

00:10:16.472 --> 00:10:19.512 they're actually mentioning that solid

NOTE Confidence: 0.608655332

00:10:19.520 --> 00:10:22.568 Tribeca or to insular growth pattern

NOTE Confidence: 0.608655332

00:10:22.568 --> 00:10:25.654 result necrosis in the Turin Cooper

NOTE Confidence: 0.608655332

00:10:25.654 --> 00:10:28.558 does not impact survival at all.

NOTE Confidence: 0.608655332

00:10:28.560 --> 00:10:30.004 Well in the Ms.

NOTE Confidence: 0.608655332

00:10:30.004 --> 00:10:32.170 case study it's also showed that

NOTE Confidence: 0.608655332

00:10:32.255 --> 00:10:35.120 architecture does not impact survival.

NOTE Confidence: 0.608655332

00:10:35.120 --> 00:10:38.090 So despite this mentioning of

NOTE Confidence: 0.608655332

00:10:38.090 --> 00:10:42.160 architecture doesn't affect outcome,

NOTE Confidence: 0.608655332

00:10:42.160 --> 00:10:46.736 the 2017 WHO Forced Edition

NOTE Confidence: 0.608655332

00:10:46.736 --> 00:10:48.738 officially included Turing proposal

NOTE Confidence: 0.608655332

00:10:48.738 --> 00:10:52.294 which is on top as a definition of

NOTE Confidence: 0.608655332

00:10:52.294 --> 00:10:54.199 pretty differentiated carcinoma.

NOTE Confidence: 0.608655332

00:10:54.200 --> 00:10:56.560 That's basically left those tumors

NOTE Confidence: 0.608655332

00:10:56.560 --> 00:10:59.406 result solid growth pattern or with

NOTE Confidence: 0.608655332

00:10:59.406 --> 00:11:01.830 PTC nuclei but have some mitosis

NOTE Confidence: 0.608655332

00:11:01.830 --> 00:11:04.341 and necrosis behind and those

NOTE Confidence: 0.608655332

00:11:04.341 --> 00:11:07.176 tumors can be classified variably

NOTE Confidence: 0.608655332

00:11:07.176 --> 00:11:09.799 as popular Sero carcinoma,

NOTE Confidence: 0.608655332

00:11:09.800 --> 00:11:12.782 puppy Sero carcinoma high grade were in

NOTE Confidence: 0.608655332

00:11:12.782 --> 00:11:16.238 our center as 40 differential carcinoma.

NOTE Confidence: 0.608655332

00:11:16.240 --> 00:11:18.860 So that's the eventually data

NOTE Confidence: 0.608655332

00:11:18.860 --> 00:11:21.480 viewed within this two decades,

NOTE Confidence: 0.608655332

00:11:21.480 --> 00:11:25.360 these two reclassification in 2022.

NOTE Confidence: 0.608655332

00:11:25.360 --> 00:11:27.784 I'm just going to mention the

NOTE Confidence: 0.608655332

00:11:27.784 --> 00:11:29.914 classification here and then outcome

NOTE Confidence: 0.608655332

00:11:29.914 --> 00:11:33.458 in following sides to show that it's

NOTE Confidence: 0.608655332

00:11:33.458 --> 00:11:36.206 more justified to include this high

NOTE Confidence: 0.608655332

00:11:36.206 --> 00:11:38.320 grade differentiated thyroid carcinoma,

NOTE Confidence: 0.608655332

00:11:38.320 --> 00:11:41.180 morphology or classification because

NOTE Confidence: 0.608655332

00:11:41.180 --> 00:11:44.755 they do also have intermediate

NOTE Confidence: 0.608655332

00:11:44.755 --> 00:11:46.958 prognosis worse than PTC.

NOTE Confidence: 0.608655332

00:11:46.960 --> 00:11:50.549 So nowaday in the 2022 WHO they

NOTE Confidence: 0.608655332

00:11:50.549 --> 00:11:52.847 have a new classification of high

NOTE Confidence: 0.608655332

00:11:52.847 --> 00:11:55.667 grade follicular cell derived non

NOTE Confidence: 0.608655332

00:11:55.667 --> 00:11:57.434 endopathic thyroid carcinoma,

NOTE Confidence: 0.608655332

00:11:57.440 --> 00:12:01.664 a hand of mouthful of nomenclatures

NOTE Confidence: 0.608655332

00:12:01.664 --> 00:12:05.472 and that can be further divided into

NOTE Confidence: 0.608655332

00:12:05.472 --> 00:12:08.738 Poly differentiated carcinoma and high

NOTE Confidence: 0.608655332

00:12:08.738 --> 00:12:10.835 grade differentiated cyrocarcinoma.

NOTE Confidence: 0.608655332

00:12:10.840 --> 00:12:13.570 And the high grade differentiated

NOTE Confidence: 0.608655332

00:12:13.570 --> 00:12:15.208 cyrocarcinoma basically preserved

NOTE Confidence: 0.608655332

00:12:15.208 --> 00:12:17.500 for tumor meet MSKCC criteria

NOTE Confidence: 0.608655332

00:12:17.500 --> 00:12:20.880 but does not need to rain.

NOTE Confidence: 0.608655332

00:12:20.880 --> 00:12:22.480 So it's here is a summary

NOTE Confidence: 0.608655332

00:12:22.480 --> 00:12:23.840 of what it looks like.

NOTE Confidence: 0.608655332

00:12:23.840 --> 00:12:26.680 So the high grade differentiated

NOTE Confidence: 0.608655332

00:12:26.680 --> 00:12:29.462 high grade follicular derived non

NOTE Confidence: 0.608655332

00:12:29.462 --> 00:12:31.972 the past styrocarcinoma is defined

NOTE Confidence: 0.608655332

00:12:31.972 --> 00:12:35.052 by elevated mitotic count and or

NOTE Confidence: 0.608655332

00:12:35.052 --> 00:12:38.016 tumor necrosis and they don't have

NOTE Confidence: 0.608655332

00:12:38.016 --> 00:12:40.382 anaplastic morphology and under it

NOTE Confidence: 0.608655332

00:12:40.382 --> 00:12:43.476 they're two subgroup the on the left

NOTE Confidence: 0.608655332

00:12:43.476 --> 00:12:45.272 the pretty differentiated carcinoma

NOTE Confidence: 0.608655332

00:12:45.272 --> 00:12:48.199 which is defined by Turing proposal

NOTE Confidence: 0.608655332

00:12:48.200 --> 00:12:51.203 and that can be further divided into

NOTE Confidence: 0.608655332

00:12:51.203 --> 00:12:53.693 non oncocytic one and oncocytic

NOTE Confidence: 0.608655332

00:12:53.693 --> 00:12:56.478 one that have oncocytic morphology.

NOTE Confidence: 0.608655332

00:12:56.480 --> 00:12:58.916 And on the right are the high

NOTE Confidence: 0.608655332

00:12:58.916 --> 00:12:59.960 grade differentiated carcinoma.

NOTE Confidence: 0.608655332

00:12:59.960 --> 00:13:02.837 This a tumor with any architecture urine

NOTE Confidence: 0.608655332

00:13:02.837 --> 00:13:05.679 not salted or any nuclear feature.

NOTE Confidence: 0.608655332

00:13:05.680 --> 00:13:08.046 So they can re preserve the nuclear

NOTE Confidence: 0.608655332

00:13:08.046 --> 00:13:10.000 feature of popping Seracarcinoma,

NOTE Confidence: 0.608655332

00:13:10.000 --> 00:13:12.860 but they additionally have either

NOTE Confidence: 0.608655332

00:13:12.860 --> 00:13:16.600 elevated mitotic index or tumor necrosis.

NOTE Confidence: 0.608655332

00:13:16.600 --> 00:13:21.190 And from WHO 2022 ton high power

NOTE Confidence: 0.608655332

00:13:21.190 --> 00:13:24.528 fuels now switched to 2mm squares

NOTE Confidence: 0.608655332

00:13:24.528 --> 00:13:26.559 for mitotic index.

NOTE Confidence: 0.608655332

00:13:26.560 --> 00:13:28.656 So why we propose,

NOTE Confidence: 0.608655332

00:13:28.656 --> 00:13:31.276 why we propose this classification?

NOTE Confidence: 0.608655332

00:13:31.280 --> 00:13:34.544 Is it really because they capture

NOTE Confidence: 0.608655332

00:13:34.544 --> 00:13:36.720 carcinoma of Interment prognosis?

NOTE Confidence: 0.608655332

00:13:36.720 --> 00:13:40.101 So here I'm showing to study on the left.

NOTE Confidence: 0.608655332

00:13:40.101 --> 00:13:42.063 The Kaplan mayor curve is to

NOTE Confidence: 0.608655332

00:13:42.063 --> 00:13:43.998 compare popular Sero carcinoma.

NOTE Confidence: 0.608655332

00:13:44.000 --> 00:13:45.900 Tall cell subtype or tall

NOTE Confidence: 0.608655332

00:13:45.900 --> 00:13:47.800 cell variants is a high

NOTE Confidence: 0.595270819166667

00:13:47.882 --> 00:13:49.893 grade differential cyrocarcinoma

NOTE Confidence: 0.595270819166667

00:13:49.893 --> 00:13:53.706 that also have tall cell morphology

NOTE Confidence: 0.595270819166667

00:13:53.706 --> 00:13:57.436 including 30% of tall cells.

NOTE Confidence: 0.595270819166667

00:13:57.440 --> 00:14:00.878 Those tumors are actually very rare.

NOTE Confidence: 0.595270819166667

00:14:00.880 --> 00:14:03.796 They account for only 5% of all

NOTE Confidence: 0.595270819166667

00:14:03.796 --> 00:14:06.286 tumors with tall cell morphology

NOTE Confidence: 0.595270819166667

00:14:06.286 --> 00:14:08.346 and characterized by elevated

NOTE Confidence: 0.595270819166667

00:14:08.346 --> 00:14:10.751 mitotic index or tumor necrosis

NOTE Confidence: 0.595270819166667

00:14:10.751 --> 00:14:13.990 and can see their disease specific

NOTE Confidence: 0.595270819166667

00:14:13.990 --> 00:14:16.610 survival and distant metastasis

NOTE Confidence: 0.595270819166667

00:14:16.610 --> 00:14:19.110 free survival drastically different.

NOTE Confidence: 0.595270819166667

00:14:19.110 --> 00:14:23.233 So in PTC Tal cell subtype those

NOTE Confidence: 0.595270819166667

00:14:23.233 --> 00:14:25.998 result elevated mitosis or necrosis.

NOTE Confidence: 0.595270819166667

00:14:26.000 --> 00:14:28.530 Their mortality at five years

NOTE Confidence: 0.595270819166667

00:14:28.530 --> 00:14:31.748 only one to 2% and their distant

NOTE Confidence: 0.595270819166667

00:14:31.748 --> 00:14:34.520 metastasis rate is super low at 2%.

NOTE Confidence: 0.595270819166667

00:14:34.520 --> 00:14:37.355 However, when you get to the high

NOTE Confidence: 0.595270819166667

00:14:37.355 --> 00:14:39.132 grade differentiate cyrocarcinoma

NOTE Confidence: 0.595270819166667

00:14:39.132 --> 00:14:41.876 or portly differentiated carcinoma,

NOTE Confidence: 0.595270819166667

00:14:41.880 --> 00:14:44.520 their five year disease related

NOTE Confidence: 0.595270819166667

00:14:44.520 --> 00:14:48.928 mortality is around 20 to 25% and

NOTE Confidence: 0.595270819166667

00:14:48.928 --> 00:14:52.060 the five year risk of distant

NOTE Confidence: 0.595270819166667

00:14:52.060 --> 00:14:54.160 metastasis is more than half.

NOTE Confidence: 0.595270819166667

00:14:54.160 --> 00:14:58.437 So 50 to 61% developed decent metastasis.

NOTE Confidence: 0.595270819166667

00:14:58.440 --> 00:15:00.815 So clearly just mitosis and

NOTE Confidence: 0.595270819166667

00:15:00.815 --> 00:15:03.854 necrosis allow can capture for the

NOTE Confidence: 0.595270819166667

00:15:03.854 --> 00:15:06.759 chemo cell derived carcinoma with

NOTE Confidence: 0.595270819166667

00:15:06.759 --> 00:15:09.083 this indeterminate prognosis that

NOTE Confidence: 0.595270819166667

00:15:09.171 --> 00:15:11.480 need additional clinical care.

NOTE Confidence: 0.734256655

00:15:15.800 --> 00:15:18.544 We additionally showed that

NOTE Confidence: 0.734256655

00:15:18.544 --> 00:15:21.048 high grade thyroid carcinoma,

NOTE Confidence: 0.734256655

00:15:21.048 --> 00:15:24.432 it's main cause of radioactive iodine

NOTE Confidence: 0.734256655

00:15:24.432 --> 00:15:27.252 refractory disease and also main cause

NOTE Confidence: 0.734256655

00:15:27.252 --> 00:15:29.790 of deaths in non endopathic thyroid

NOTE Confidence: 0.734256655

00:15:29.873 --> 00:15:32.795 for the killer cell derived carcinoma.

NOTE Confidence: 0.734256655

00:15:32.800 --> 00:15:35.104 Molecularly this group as a group

NOTE Confidence: 0.734256655

00:15:35.104 --> 00:15:37.940 high grade for the killer cell

NOTE Confidence: 0.734256655

00:15:37.940 --> 00:15:41.938 derived cyrocarcinoma also have more

NOTE Confidence: 0.734256655

00:15:41.938 --> 00:15:44.716 aggressive molecular signatures.

NOTE Confidence: 0.734256655

00:15:44.720 --> 00:15:47.560 Not sure it's maybe two,

NOTE Confidence: 0.734256655

00:15:47.560 --> 00:15:49.513 I'm not sure whether the phone is too small.

NOTE Confidence: 0.734256655

00:15:49.520 --> 00:15:51.653 So on the left are the PTCS and on

NOTE Confidence: 0.734256655

00:15:51.653 --> 00:15:54.095 the right are the high grade for the

NOTE Confidence: 0.734256655

00:15:54.095 --> 00:15:55.861 killer derived thyrocarcinoma ISO

NOTE Confidence: 0.734256655

00:15:55.861 --> 00:15:58.783 group including portate death and high

NOTE Confidence: 0.734256655

00:15:58.783 --> 00:16:01.399 grade differentiated thyrocarcinoma.

NOTE Confidence: 0.734256655

00:16:01.400 --> 00:16:03.524 You can see the driver mutation

NOTE Confidence: 0.734256655

00:16:03.524 --> 00:16:05.672 remains the same being B RAF and

NOTE Confidence: 0.734256655

00:16:05.672 --> 00:16:09.000 the Ras well The high grade for the

NOTE Confidence: 0.734256655

00:16:09.000 --> 00:16:10.920 cure derived thyrocarcinomas tend

NOTE Confidence: 0.734256655

00:16:11.003 --> 00:16:14.092 to to gain additional aggressive

NOTE Confidence: 0.734256655

00:16:14.092 --> 00:16:17.024 molecular signatures particularly third

NOTE Confidence: 0.734256655

00:16:17.024 --> 00:16:21.120 promoter mutation in 40% of cases,

NOTE Confidence: 0.734256655

00:16:21.120 --> 00:16:25.680 TP53 in 10% of cases and peak 3C AAKTM

NOTE Confidence: 0.734256655

00:16:25.680 --> 00:16:29.040 Tor pathway alterations in 11% of cases.

NOTE Confidence: 0.781656569473684

00:16:31.240 --> 00:16:33.848 So why don't we just lump all the

NOTE Confidence: 0.781656569473684

00:16:33.848 --> 00:16:36.855 tumors as a high grade for the

NOTE Confidence: 0.781656569473684

00:16:36.855 --> 00:16:38.675 first cell derived cyrocarcinoma.

NOTE Confidence: 0.781656569473684

00:16:38.680 --> 00:16:42.298 Why bother subdividing is is because

NOTE Confidence: 0.781656569473684

00:16:42.298 --> 00:16:45.379 poorly differential cyrocarcinoma and the

NOTE Confidence: 0.781656569473684

00:16:45.379 --> 00:16:48.309 high grade differential cyrocarcinoma do

NOTE Confidence: 0.781656569473684

00:16:48.309 --> 00:16:51.640 have molecular and clinical difference.

NOTE Confidence: 0.781656569473684

00:16:51.640 --> 00:16:54.120 ISO group. The poorly differential

NOTE Confidence: 0.781656569473684

00:16:54.120 --> 00:16:56.600 cytocarcinoma is mostly Ras driven.

NOTE Confidence: 0.781656569473684

00:16:56.600 --> 00:17:00.506 Their Ras mutation rate is around 45 to 50%.

NOTE Confidence: 0.781656569473684

00:17:00.506 --> 00:17:04.256 The urine like B Ravi sundry E mutations

NOTE Confidence: 0.781656569473684

00:17:04.256 --> 00:17:07.671 and they're usually more radioactive

NOTE Confidence: 0.781656569473684

00:17:07.671 --> 00:17:12.202 I then AB avid and responsive and the

NOTE Confidence: 0.781656569473684

00:17:12.202 --> 00:17:16.446 the risk of distal metastasis is much

NOTE Confidence: 0.781656569473684

00:17:16.446 --> 00:17:19.830 higher significant higher compared to the

NOTE Confidence: 0.781656569473684

00:17:19.830 --> 00:17:21.998 high grade differential cyrocarcinoma.

NOTE Confidence: 0.781656569473684

00:17:22.000 --> 00:17:24.610 Although the risk of this metastasis

NOTE Confidence: 0.781656569473684

00:17:24.610 --> 00:17:27.906 over all is still over 50% in the

NOTE Confidence: 0.781656569473684

00:17:27.906 --> 00:17:29.558 high grade differentiated carcinoma.

NOTE Confidence: 0.781656569473684

00:17:29.560 --> 00:17:32.577 On the other hand the high grade

NOTE Confidence: 0.781656569473684

00:17:32.577 --> 00:17:33.870 differentiated scarcity thyroid

NOTE Confidence: 0.781656569473684

00:17:33.938 --> 00:17:36.158 carcinoma is mostly B RAF driven.

NOTE Confidence: 0.781656569473684

00:17:36.160 --> 00:17:38.248 The rate of Ras mutations lower

NOTE Confidence: 0.781656569473684

00:17:38.248 --> 00:17:41.159 and the rate of B RAF desantry E

NOTE Confidence: 0.781656569473684

00:17:41.159 --> 00:17:42.920 mutations is over 50%.

NOTE Confidence: 0.791789882222222

00:17:46.680 --> 00:17:50.544 Looking at the molecular signature in

NOTE Confidence: 0.791789882222222

00:17:50.544 --> 00:17:52.476 hybrid differentiated cyrocarcinoma,

NOTE Confidence: 0.791789882222222

00:17:52.480 --> 00:17:54.340 hybrid follicular style divide

NOTE Confidence: 0.791789882222222

00:17:54.340 --> 00:17:56.200 cyrocarcinoma as a whole,

NOTE Confidence: 0.791789882222222

00:17:56.200 --> 00:17:59.340 it seems that B RAF is only E is associated

NOTE Confidence: 0.791789882222222

00:17:59.420 --> 00:18:02.198 with a proplicity for nodal metastasis

NOTE Confidence: 0.791789882222222

00:18:02.200 --> 00:18:04.636 and decreased risk of distant metastasis.

NOTE Confidence: 0.791789882222222

00:18:04.640 --> 00:18:07.080 Just as the well differentiated

NOTE Confidence: 0.791789882222222

00:18:07.080 --> 00:18:09.032 counterpart being popular cyrocarcinoma

NOTE Confidence: 0.791789882222222

00:18:09.032 --> 00:18:11.200 were follicular cyrocarcinoma.

NOTE Confidence: 0.791789882222222

00:18:11.200 --> 00:18:15.885 So overall RAST driven hybrid carcinoma have

NOTE Confidence: 0.791789882222222

00:18:15.885 --> 00:18:19.035 a higher percentage of vascular invasion,

NOTE Confidence: 0.791789882222222

00:18:19.040 --> 00:18:22.561 lower rate of nodal metastasis and higher

NOTE Confidence: 0.791789882222222

00:18:22.561 --> 00:18:25.460 frequency of distant metastasis being

NOTE Confidence: 0.791789882222222

00:18:25.460 --> 00:18:29.280 approaching 90% compared to B Ravi sundry

NOTE Confidence: 0.791789882222222

00:18:29.280 --> 00:18:31.800 E mutation mutated hybrid carcinoma.

NOTE Confidence: 0.791789882222222

00:18:31.800 --> 00:18:34.922 They still have a risk of distant

NOTE Confidence: 0.791789882222222

00:18:34.922 --> 00:18:37.079 metastasis being 1:00 and 2:00,

NOTE Confidence: 0.791789882222222

00:18:37.080 --> 00:18:39.348 but they have much higher risk

NOTE Confidence: 0.791789882222222

00:18:39.348 --> 00:18:41.448 of nodal metastasis and lower

NOTE Confidence: 0.791789882222222

00:18:41.448 --> 00:18:43.520 frequency of vascular invasion.

NOTE Confidence: 0.791789882222222

00:18:43.520 --> 00:18:46.550 Overall the disease specific deaths

NOTE Confidence: 0.791789882222222

00:18:46.550 --> 00:18:49.148 doesn't different between doesn't differ

NOTE Confidence: 0.791789882222222

00:18:49.148 --> 00:18:51.633 between the two molecular signature.

NOTE Confidence: 0.6440547175

00:18:54.160 --> 00:18:56.735 So how about oncocetic partially

NOTE Confidence: 0.6440547175

00:18:56.735 --> 00:18:58.280 differentiated thyroid carcinoma,

NOTE Confidence: 0.6440547175

00:18:58.280 --> 00:19:01.580 those are tumor defined by

NOTE Confidence: 0.6440547175

00:19:01.580 --> 00:19:05.360 over 75% of oncocetic cells,

NOTE Confidence: 0.6440547175

00:19:05.360 --> 00:19:08.960 but also additionally have solid

NOTE Confidence: 0.6440547175

00:19:08.960 --> 00:19:12.680 growth pattern or tumor necrosis

NOTE Confidence: 0.6440547175

00:19:12.680 --> 00:19:15.720 were elevated metallic index.

NOTE Confidence: 0.6440547175

00:19:15.720 --> 00:19:18.373 Those tumor as a group overall likes

NOTE Confidence: 0.6440547175

00:19:18.373 --> 00:19:22.616 Ras and B RAF mutations just as the

NOTE Confidence: 0.6440547175

00:19:22.616 --> 00:19:25.032 well differentiated oncocytic carcinoma.

NOTE Confidence: 0.6440547175

00:19:25.040 --> 00:19:28.200 They have a very low rate of Ras

NOTE Confidence: 0.6440547175

00:19:28.200 --> 00:19:32.360 mutation being 7% only no B RAF besundry

NOTE Confidence: 0.6440547175

00:19:32.360 --> 00:19:35.343 mutations and overall they have a

NOTE Confidence: 0.6440547175

00:19:35.343 --> 00:19:39.114 higher frequency of TP 53 then F1

NOTE Confidence: 0.6440547175

00:19:39.114 --> 00:19:43.044 and P10 mutations in oncocytic party

NOTE Confidence: 0.6440547175

00:19:43.044 --> 00:19:44.807 differentiate carcinoma canonically.

NOTE Confidence: 0.6440547175

00:19:44.807 --> 00:19:47.936 They also behave differently from the non

NOTE Confidence: 0.6440547175

00:19:47.936 --> 00:19:50.560 oncocytic party difference styrocarcinoma.

NOTE Confidence: 0.6440547175

00:19:50.560 --> 00:19:52.672 The oncocytic party difference

NOTE Confidence: 0.6440547175

00:19:52.672 --> 00:19:55.840 Styrocarcinoma is less a REI avid

NOTE Confidence: 0.6440547175

00:19:55.931 --> 00:19:58.326 just like the oncocytic carcinomas

NOTE Confidence: 0.6440547175

00:19:58.326 --> 00:20:01.343 and the reason of nodal metastasis

NOTE Confidence: 0.6440547175

00:20:01.343 --> 00:20:04.238 is prognosis on the other hand does

NOTE Confidence: 0.6440547175

00:20:04.238 --> 00:20:06.599 not differ between the two group.

NOTE Confidence: 0.848740681875

00:20:09.960 --> 00:20:12.560 So taking everything together also

NOTE Confidence: 0.848740681875

00:20:12.560 --> 00:20:16.492 combined this evidence we know from the

NOTE Confidence: 0.848740681875

00:20:16.492 --> 00:20:18.996 well differentiated thyroid carcinoma.

NOTE Confidence: 0.848740681875

00:20:19.000 --> 00:20:22.000 We now know that thyroid follicular

NOTE Confidence: 0.848740681875

00:20:22.000 --> 00:20:25.170 cell derived carcinoma can be basically

NOTE Confidence: 0.848740681875

00:20:25.170 --> 00:20:27.880 divide divide into three subgroup.

NOTE Confidence: 0.848740681875

00:20:27.880 --> 00:20:30.508 The Ras like tumor urely at

NOTE Confidence: 0.848740681875

00:20:30.508 --> 00:20:32.260 the follicular pattern lesion

NOTE Confidence: 0.848740681875

00:20:32.338 --> 00:20:34.720 including follicular carcinoma.

NOTE Confidence: 0.848740681875

00:20:34.720 --> 00:20:37.920 The PTC encapsulated follicular events.

NOTE Confidence: 0.848740681875

00:20:37.920 --> 00:20:39.465 When they progress,

NOTE Confidence: 0.848740681875

00:20:39.465 --> 00:20:41.525 they progress to pretty

NOTE Confidence: 0.848740681875

00:20:41.525 --> 00:20:43.346 differentiated thyroid carcinoma,

NOTE Confidence: 0.848740681875

00:20:43.346 --> 00:20:45.958 the non oncocytic type.

NOTE Confidence: 0.848740681875

00:20:45.960 --> 00:20:48.956 In the middle are the oncocytic tumors.

NOTE Confidence: 0.848740681875

00:20:48.960 --> 00:20:51.767 This tumors as shown by our group

NOTE Confidence: 0.848740681875

00:20:51.767 --> 00:20:54.266 and the group from Harvard Lakes

NOTE Confidence: 0.848740681875

00:20:54.266 --> 00:20:57.073 B Ravi Sundry E and the Ras,

NOTE Confidence: 0.848740681875

00:20:57.080 --> 00:20:59.855 they already have widespread chromosome

NOTE Confidence: 0.848740681875

00:20:59.855 --> 00:21:03.227 loss and mitochondria DNA mutation which

NOTE Confidence: 0.848740681875

00:21:03.227 --> 00:21:06.323 allow them to accumulate this oncocytic

NOTE Confidence: 0.848740681875

00:21:06.323 --> 00:21:09.040 cytoplasm that we see on Histology.

NOTE Confidence: 0.848740681875

00:21:09.040 --> 00:21:10.669 When they progress,

NOTE Confidence: 0.848740681875

00:21:10.669 --> 00:21:13.384 they progress to poorly differentiated

NOTE Confidence: 0.848740681875

00:21:13.384 --> 00:21:16.238 cyber carcinoma but the oncocytic type.

NOTE Confidence: 0.848740681875

00:21:16.240 --> 00:21:19.822 Lastly at the B RAF driven tumor that would

NOTE Confidence: 0.848740681875

00:21:19.822 --> 00:21:22.944 be include PTC papular sero carcinoma,

NOTE Confidence: 0.848740681875

00:21:22.944 --> 00:21:25.474 classic type papular sero carcinoma,

NOTE Confidence: 0.848740681875

00:21:25.480 --> 00:21:28.140 tall cell subtype or virus and the

NOTE Confidence: 0.848740681875

00:21:28.140 --> 00:21:30.309 infiltrated for the coronary virus

NOTE Confidence: 0.848740681875

00:21:30.309 --> 00:21:33.177 of papular sero carcinoma and they

NOTE Confidence: 0.848740681875

00:21:33.177 --> 00:21:36.027 typically progress to high grade

NOTE Confidence: 0.848740681875

00:21:36.027 --> 00:21:37.237 differentiated cyrocarcinoma.

NOTE Confidence: 0.848740681875

00:21:37.240 --> 00:21:40.456 And when this tumor progressed the

NOTE Confidence: 0.848740681875

00:21:40.456 --> 00:21:42.600 additionally can other molecular

NOTE Confidence: 0.848740681875

00:21:42.680 --> 00:21:45.080 changes including turn promoter

NOTE Confidence: 0.848740681875

00:21:45.080 --> 00:21:47.480 mutations and TP53 mutations.

NOTE Confidence: 0.7867238

00:21:49.960 --> 00:21:52.935 So that's pretty much the new calcification

NOTE Confidence: 0.7867238

00:21:52.935 --> 00:21:55.988 for the high grade carcinoma and I'm

NOTE Confidence: 0.7867238

00:21:55.988 --> 00:21:59.094 going to switch deer to anapacic thyroid

NOTE Confidence: 0.7867238

00:21:59.094 --> 00:22:01.962 carcinoma which is the most deadly

NOTE Confidence: 0.7867238

00:22:01.962 --> 00:22:05.047 thyroid carcinoma in the human body.

NOTE Confidence: 0.7867238

00:22:05.047 --> 00:22:08.890 So by WHO definitions is a highly

NOTE Confidence: 0.7867238

00:22:09.010 --> 00:22:13.572 aggressive you're the fatal Cyril malignancy

NOTE Confidence: 0.7867238

00:22:13.572 --> 00:22:16.636 composed of undifferentiated cells.

NOTE Confidence: 0.7867238

00:22:16.640 --> 00:22:19.315 The undifferentiated morphology can be

NOTE Confidence: 0.7867238

00:22:19.315 --> 00:22:23.018 manifest by Histology that you no longer

NOTE Confidence: 0.7867238

00:22:23.018 --> 00:22:25.856 recognize a physical cell origins or

NOTE Confidence: 0.7867238

00:22:25.856 --> 00:22:28.991 by immunohasal chemistry when they lost

NOTE Confidence: 0.7867238

00:22:28.991 --> 00:22:31.626 expression of thyroid specific markers

NOTE Confidence: 0.7867238

00:22:31.626 --> 00:22:35.640 such as TTF 1 Seroglobulus tax eight

NOTE Confidence: 0.7867238

00:22:35.640 --> 00:22:38.944 our lowest pathologist not only to make

NOTE Confidence: 0.7867238

00:22:38.944 --> 00:22:41.940 right diagnosis but this day we're

NOTE Confidence: 0.7867238

00:22:41.940 --> 00:22:44.440 required to provide some prognosis,

NOTE Confidence: 0.7867238

00:22:44.440 --> 00:22:47.340 prognostic and predictive values for

NOTE Confidence: 0.7867238

00:22:47.340 --> 00:22:50.240 from our specimen including actionable

NOTE Confidence: 0.7867238

00:22:50.325 --> 00:22:52.880 molecular targets such as Birafi,

NOTE Confidence: 0.7867238

00:22:52.880 --> 00:22:57.495 Sandra E this we touched a little

NOTE Confidence: 0.7867238

00:22:57.495 --> 00:22:59.754 bit during our science seminar this

NOTE Confidence: 0.7867238

00:22:59.754 --> 00:23:02.010 morning and the passive sero carcinoma

NOTE Confidence: 0.7867238

00:23:02.010 --> 00:23:04.000 can look like many things.

NOTE Confidence: 0.7867238

00:23:04.000 --> 00:23:06.800 The most common morphology are

NOTE Confidence: 0.7867238

00:23:06.800 --> 00:23:08.480 the spindle phenotype,

NOTE Confidence: 0.7867238

00:23:08.480 --> 00:23:10.520 and among spindle morphology

NOTE Confidence: 0.7867238

00:23:10.520 --> 00:23:12.560 they have various morphology.

NOTE Confidence: 0.7867238

00:23:12.560 --> 00:23:15.520 They can be cellular spindle,

NOTE Confidence: 0.7867238

00:23:15.520 --> 00:23:18.076 they can be posicellular and spindle,

NOTE Confidence: 0.7867238

00:23:18.080 --> 00:23:19.548 so-called the posicellular variants,

NOTE Confidence: 0.7867238

00:23:19.548 --> 00:23:22.080 and they can focally have mixed ways,

NOTE Confidence: 0.7867238

00:23:22.080 --> 00:23:26.720 stroma, redemptal and mixo fibrosarcoma.

NOTE Confidence: 0.7867238

00:23:26.720 --> 00:23:29.620 They can be prunomorphic with

NOTE Confidence: 0.7867238

00:23:29.620 --> 00:23:31.360 tumor gene cells.

NOTE Confidence: 0.7867238

00:23:31.360 --> 00:23:34.069 They can be squamous that have two

NOTE Confidence: 0.7867238

00:23:34.069 --> 00:23:36.301 keratin pros and keratinizations where

NOTE Confidence: 0.7867238

00:23:36.301 --> 00:23:39.759 they can be epicidioid or epicidio in

NOTE Confidence: 0.7867238

00:23:39.759 --> 00:23:42.721 which they return the expression of

NOTE Confidence: 0.7867238

00:23:42.721 --> 00:23:45.631 keratin but no longer appreciable as

NOTE Confidence: 0.7867238

00:23:45.631 --> 00:23:48.186 a follicular cell derived carcinoma

NOTE Confidence: 0.7867238

00:23:48.186 --> 00:23:52.080 based on Histology and immunohistochemistry.

NOTE Confidence: 0.7867238

00:23:52.080 --> 00:23:56.120 Other rare phenotype including rapidoid

NOTE Confidence: 0.7867238

00:23:56.120 --> 00:23:59.352 with prominent eccentric cytoplasm

NOTE Confidence: 0.7867238

00:23:59.352 --> 00:24:01.892 inclusions all still class Gen.

NOTE Confidence: 0.7867238

00:24:01.892 --> 00:24:04.416 cell rich subtype which we covered

NOTE Confidence: 0.7867238

00:24:04.416 --> 00:24:07.448 2 case during the size seminar and

NOTE Confidence: 0.7867238

00:24:07.448 --> 00:24:09.783 rarely you can see heterogeneous

NOTE Confidence: 0.7867238

00:24:09.783 --> 00:24:12.790 component in these tumors as well-being

NOTE Confidence: 0.7867238

00:24:12.790 --> 00:24:15.520 chondrosarcomatoid or osteosarcomatoid.

NOTE Confidence: 0.834096275714286

00:24:17.920 --> 00:24:20.538 There is a question in the morning

NOTE Confidence: 0.834096275714286

00:24:20.538 --> 00:24:22.286 seminar saying whether this

NOTE Confidence: 0.834096275714286

00:24:22.286 --> 00:24:23.960 histological feature matters.

NOTE Confidence: 0.834096275714286

00:24:23.960 --> 00:24:27.355 We have shown that from a corpora

NOTE Confidence: 0.834096275714286

00:24:27.355 --> 00:24:30.576 of 360 anaplastic pterocarcinoma as

NOTE Confidence: 0.834096275714286

00:24:30.576 --> 00:24:34.680 a combined combined effort from us

NOTE Confidence: 0.834096275714286

00:24:34.787 --> 00:24:38.030 and from Sydney all this nuclear

NOTE Confidence: 0.834096275714286

00:24:38.030 --> 00:24:40.310 all this histological features

NOTE Confidence: 0.834096275714286

00:24:40.310 --> 00:24:42.840 does not impact outcome.

NOTE Confidence: 0.834096275714286

00:24:42.840 --> 00:24:46.025 So it's really for us to recognize

NOTE Confidence: 0.834096275714286

00:24:46.025 --> 00:24:47.898 the histological spectrum to

NOTE Confidence: 0.834096275714286

00:24:47.898 --> 00:24:49.598 make the right diagnosis.

NOTE Confidence: 0.834096275714286

00:24:49.600 --> 00:24:51.804 But histological feature per

NOTE Confidence: 0.834096275714286

00:24:51.804 --> 00:24:54.559 SE does not impact prognosis.

NOTE Confidence: 0.834096275714286

00:24:54.560 --> 00:24:56.936 They are case report of positive

NOTE Confidence: 0.834096275714286

00:24:56.936 --> 00:24:58.520 cellular variants of antopathy.

NOTE Confidence: 0.834096275714286

00:24:58.520 --> 00:25:01.695 Steroid carcinoma can have slow

NOTE Confidence: 0.834096275714286

00:25:01.695 --> 00:25:04.235 progression and improve survival,

NOTE Confidence: 0.834096275714286

00:25:04.240 --> 00:25:06.712 but the evidence is only based

NOTE Confidence: 0.834096275714286

00:25:06.712 --> 00:25:09.294 on case report and it's not

NOTE Confidence: 0.834096275714286

00:25:09.294 --> 00:25:11.399 very conclusive as of now.

NOTE Confidence: 0.96571273

00:25:14.880 --> 00:25:21.678 The only histological contribution of

NOTE Confidence: 0.96571273

00:25:21.680 --> 00:25:24.896 anapasi steroid carcinoma is recently based

NOTE Confidence: 0.96571273

00:25:24.896 --> 00:25:28.359 on molecular findings and prognostic data.

NOTE Confidence: 0.96571273

00:25:28.360 --> 00:25:31.315 The pure, the so-called thyroid

NOTE Confidence: 0.96571273

00:25:31.315 --> 00:25:34.851 squamous cell carcinoma is now debunked

NOTE Confidence: 0.96571273

00:25:34.851 --> 00:25:38.575 and taken out of WHO 5th edition.

NOTE Confidence: 0.96571273

00:25:38.575 --> 00:25:41.600 So thyroid squamous cell carcinoma

NOTE Confidence: 0.96571273

00:25:41.600 --> 00:25:44.835 was initially defined as a separate

NOTE Confidence: 0.96571273

00:25:44.835 --> 00:25:47.860 entity in The Who 4th edition.

NOTE Confidence: 0.96571273

00:25:47.860 --> 00:25:51.683 It's defined by tumor comprised entirely of

NOTE Confidence: 0.96571273

00:25:51.683 --> 00:25:54.918 tumor cells with squamous differentiations.

NOTE Confidence: 0.96571273

00:25:54.920 --> 00:25:57.895 And there's no evidence of other type

NOTE Confidence: 0.96571273

00:25:57.895 --> 00:26:00.924 of thyroid carcinoma being most commonly

NOTE Confidence: 0.96571273

00:26:00.924 --> 00:26:03.719 papulosario carcinoma tall cell variants.

NOTE Confidence: 0.96571273

00:26:03.720 --> 00:26:06.205 However, recent study especially those

NOTE Confidence: 0.96571273

00:26:06.205 --> 00:26:09.474 from our group have shown that this

NOTE Confidence: 0.96571273

00:26:09.474 --> 00:26:12.232 tumor this is a squamous phenotype have

NOTE Confidence: 0.96571273

00:26:12.232 --> 00:26:15.339 a higher frequency of B Ravi sundry

NOTE Confidence: 0.96571273

00:26:15.339 --> 00:26:17.574 E mutations just like Papulocerio

NOTE Confidence: 0.96571273

00:26:17.649 --> 00:26:21.480 carcinoma and the outcome is similar

NOTE Confidence: 0.96571273

00:26:21.480 --> 00:26:24.460 between this pure squamous phenotype

NOTE Confidence: 0.96571273

00:26:24.460 --> 00:26:27.440 and the other endopathic styrocarcinoma.

NOTE Confidence: 0.96571273

00:26:27.440 --> 00:26:30.352 The medium overall survival is 14 months

NOTE Confidence: 0.96571273

00:26:30.352 --> 00:26:33.837 in your study compared to all the other

NOTE Confidence: 0.96571273

00:26:33.837 --> 00:26:37.079 tumor that was medium survival of 10 months.

NOTE Confidence: 0.96571273

00:26:37.080 --> 00:26:39.055 So based on this prognostic

NOTE Confidence: 0.96571273

00:26:39.055 --> 00:26:40.635 data and molecular data,

NOTE Confidence: 0.96571273

00:26:40.640 --> 00:26:43.671 it's it is now believed that thyroid

NOTE Confidence: 0.96571273

00:26:43.671 --> 00:26:45.837 squamous cell carcinoma is a

NOTE Confidence: 0.96571273

00:26:45.837 --> 00:26:47.822 subtype of anaplastic sero carcinoma

NOTE Confidence: 0.96571273

00:26:47.822 --> 00:26:50.239 rather than a separate entity.

NOTE Confidence: 0.82429327

00:26:53.160 --> 00:26:55.400 So in term of the immuno profile,

NOTE Confidence: 0.82429327

00:26:55.400 --> 00:26:58.568 I'm only going to touch quickly you already

NOTE Confidence: 0.82429327

00:26:58.568 --> 00:27:01.560 because they underwent the differentiation,

NOTE Confidence: 0.82429327

00:27:01.560 --> 00:27:04.542 so they start to lose expression of

NOTE Confidence: 0.82429327

00:27:04.542 --> 00:27:07.562 cyber physical cell markers and keratins.

NOTE Confidence: 0.82429327

00:27:07.562 --> 00:27:10.928 So generally this tumor should be

NOTE Confidence: 0.82429327

00:27:10.928 --> 00:27:13.520 seroglobulin negative if it's positive,

NOTE Confidence: 0.82429327

00:27:13.520 --> 00:27:15.914 it's only really focal and it is

NOTE Confidence: 0.82429327

00:27:15.914 --> 00:27:17.600 transition between a differentiated

NOTE Confidence: 0.82429327

00:27:17.600 --> 00:27:20.560 sero carcinoma and antopathic carcinoma.

NOTE Confidence: 0.82429327

00:27:20.560 --> 00:27:24.928 About 1/3 is TTF 1 positive and packs

NOTE Confidence: 0.82429327

00:27:24.928 --> 00:27:29.246 8 depending on the conality 50% to

NOTE Confidence: 0.82429327

00:27:29.246 --> 00:27:32.725 70% of packs 8 positive keratin.

NOTE Confidence: 0.82429327

00:27:32.725 --> 00:27:35.840 In practice we actually use a spectrum.

NOTE Confidence: 0.82429327

00:27:35.840 --> 00:27:39.260 Overall 75% of the endopathy

NOTE Confidence: 0.82429327

00:27:39.260 --> 00:27:41.996 pterocarcinoma are keratin positive,

NOTE Confidence: 0.82429327

00:27:42.000 --> 00:27:45.096 but there are some viabilities in

NOTE Confidence: 0.82429327

00:27:45.096 --> 00:27:48.776 term of pan keratins and the high

NOTE Confidence: 0.82429327

00:27:48.776 --> 00:27:50.796 mild cure rate keratins.

NOTE Confidence: 0.82429327

00:27:50.800 --> 00:27:53.878 We also use mutation driven protein.

NOTE Confidence: 0.82429327

00:27:53.880 --> 00:27:57.080 Your diagnosis friend plastic

NOTE Confidence: 0.82429327

00:27:57.080 --> 00:28:00.400 pterocarcinoma including a Baron

NOTE Confidence: 0.82429327

00:28:00.400 --> 00:28:02.400 P15P53 expression in about 60%

NOTE Confidence: 0.82429327

00:28:02.400 --> 00:28:04.384 of cases by immunohistochemistry.

NOTE Confidence: 0.82429327

00:28:04.384 --> 00:28:07.960 We use specific marker for B RAF

NOTE Confidence: 0.82429327

00:28:07.960 --> 00:28:10.560 V sundry E by immunohistochemistry

NOTE Confidence: 0.82429327

00:28:10.560 --> 00:28:14.400 that it's positively about 40% of

NOTE Confidence: 0.82429327

00:28:14.400 --> 00:28:17.771 antipathy Styrocarcinoma Ras Q61R

NOTE Confidence: 0.82429327

00:28:17.771 --> 00:28:24.260 detect H Ras N Ras and K Ras Q61 are

NOTE Confidence: 0.82429327

00:28:24.260 --> 00:28:27.410 mutation only and that is positively

NOTE Confidence: 0.82429327

00:28:27.515 --> 00:28:29.772 about 15% of the cases.

NOTE Confidence: 0.82429327

00:28:29.772 --> 00:28:32.963 So in practice and the KSE 7

NOTE Confidence: 0.82429327

00:28:32.963 --> 00:28:34.439 it's usually high.

NOTE Confidence: 0.82429327

00:28:34.440 --> 00:28:34.819 However,

NOTE Confidence: 0.82429327

00:28:34.819 --> 00:28:37.093 there's a caviar that some of

NOTE Confidence: 0.82429327

00:28:37.093 --> 00:28:38.960 the anaplastic sero carcinoma,

NOTE Confidence: 0.82429327

00:28:38.960 --> 00:28:40.848 especially the squamous one.

NOTE Confidence: 0.82429327

00:28:40.848 --> 00:28:43.680 Because of the highest Dromo content,

NOTE Confidence: 0.82429327

00:28:43.680 --> 00:28:46.398 the KSE 7 May be lower,

NOTE Confidence: 0.82429327

00:28:46.400 --> 00:28:50.400 ranging from 10% to 100%.

NOTE Confidence: 0.82429327

00:28:50.400 --> 00:28:51.600 So in practice,

NOTE Confidence: 0.82429327

00:28:51.600 --> 00:28:52.800 In our practice,

NOTE Confidence: 0.82429327

00:28:52.800 --> 00:28:56.112 we're actually using a combination of

NOTE Confidence: 0.82429327

00:28:56.112 --> 00:28:58.320 differentiation marker and mutation

NOTE Confidence: 0.82429327

00:28:58.397 --> 00:29:01.797 marker to diagnose anaplastic styrocarcinoma.

NOTE Confidence: 0.82429327

00:29:01.800 --> 00:29:03.300 The differential diagnosis is

NOTE Confidence: 0.82429327

00:29:03.300 --> 00:29:04.800 extensively covered this morning

NOTE Confidence: 0.82429327

00:29:04.800 --> 00:29:06.479 in the science seminar,

NOTE Confidence: 0.82429327

00:29:06.480 --> 00:29:09.154 so I won't touch on it now.

NOTE Confidence: 0.82429327

00:29:09.160 --> 00:29:13.024 I only going to quickly mention one

NOTE Confidence: 0.82429327

00:29:13.024 --> 00:29:16.832 paper because it's one of my rear

NOTE Confidence: 0.82429327

00:29:16.832 --> 00:29:20.720 collaboration with a Yale pathologist.

NOTE Confidence: 0.82429327

00:29:20.720 --> 00:29:23.660 So basically we established that

NOTE Confidence: 0.82429327

00:29:23.660 --> 00:29:27.065 primary sarcoma of the thyroid gun

NOTE Confidence: 0.82429327

00:29:27.065 --> 00:29:30.320 can occur is a comfort license 1%

NOTE Confidence: 0.82429327

00:29:30.320 --> 00:29:33.596 of all thyroid malignancies and we

NOTE Confidence: 0.82429327

00:29:33.596 --> 00:29:37.238 report a single case of he coma

NOTE Confidence: 0.82429327

00:29:37.238 --> 00:29:40.712 that was never reported in the

NOTE Confidence: 0.82429327

00:29:40.712 --> 00:29:43.499 thyroid literature that have RBM

NOTE Confidence: 0.82429327

00:29:43.499 --> 00:29:46.812 10 and TFE 3 translocation and Dr.

NOTE Confidence: 0.82429327

00:29:46.812 --> 00:29:49.514 Sinai and Doctor Wu can be helped

NOTE Confidence: 0.82429327

00:29:49.520 --> 00:29:51.038 for this project.

NOTE Confidence: 0.82429327

00:29:51.038 --> 00:29:54.580 So moving on to the molecular of

NOTE Confidence: 0.82429327

00:29:54.683 --> 00:29:57.719 endoplastic thyroid carcinoma,

NOTE Confidence: 0.82429327

00:29:57.720 --> 00:29:59.868 once again endopathic thyroid

NOTE Confidence: 0.82429327

00:29:59.868 --> 00:30:02.280 carcinoma because it's for the

NOTE Confidence: 0.82429327

00:30:02.280 --> 00:30:03.480 cure cell derived,

NOTE Confidence: 0.82429327

00:30:03.480 --> 00:30:05.510 they returned the early driver

NOTE Confidence: 0.82429327

00:30:05.510 --> 00:30:07.540 mutations being B RAC with

NOTE Confidence: 0.82429327

00:30:07.614 --> 00:30:09.720 sundry E and the Ras mutations.

NOTE Confidence: 0.82429327

00:30:09.720 --> 00:30:14.866 The frequency is being 638% and

NOTE Confidence: 0.82429327

00:30:14.866 --> 00:30:17.940 27% compared to differentiated,

NOTE Confidence: 0.82429327

00:30:17.940 --> 00:30:20.420 well differentiated and poor

NOTE Confidence: 0.82429327

00:30:20.420 --> 00:30:22.280 high grade thyrocarcinoma.

NOTE Confidence: 0.82429327

00:30:22.280 --> 00:30:25.840 The accumulate even more mutations,

NOTE Confidence: 0.82429327

00:30:25.840 --> 00:30:28.516 the TP 53 mutation for example,

NOTE Confidence: 0.82429327

00:30:28.520 --> 00:30:30.752 becoming highly prevalent,

NOTE Confidence: 0.82429327

00:30:30.752 --> 00:30:33.623 accounting for 63% of anaplastic

NOTE Confidence: 0.82429327

00:30:33.623 --> 00:30:35.928 thyrocarcinoma and the frequency of

NOTE Confidence: 0.82429327

00:30:35.928 --> 00:30:38.599 turtle motor mutation is also higher,

NOTE Confidence: 0.82429327

00:30:38.600 --> 00:30:39.902 being 50%.

NOTE Confidence: 0.82429327

00:30:39.902 --> 00:30:43.157 They also additionally have peak

NOTE Confidence: 0.82429327

00:30:43.160 --> 00:30:45.880 3C AAQTM tour pathway alterations,

NOTE Confidence: 0.82429327

00:30:45.880 --> 00:30:49.710 swift sniff complex alterations and

NOTE Confidence: 0.82429327

00:30:49.710 --> 00:30:53.438 mismatch mismatch Repair alterations.

NOTE Confidence: 0.6199489565

00:30:55.680 --> 00:30:57.057 Anapastic SERO carcinoma,

NOTE Confidence: 0.6199489565

00:30:57.057 --> 00:31:00.270 the B RAF Nissundry E and the

NOTE Confidence: 0.6199489565

00:31:00.358 --> 00:31:02.738 Ras no longer designate the

NOTE Confidence: 0.6199489565

00:31:02.738 --> 00:31:05.118 route of spread and survival.

NOTE Confidence: 0.6199489565

00:31:05.120 --> 00:31:08.466 At this stage is really the Anapaci

NOTE Confidence: 0.6199489565

00:31:08.466 --> 00:31:10.531 stereo carcinoma morphology or

NOTE Confidence: 0.6199489565

00:31:10.531 --> 00:31:12.719 diagnosis that designate outcome.

NOTE Confidence: 0.6199489565

00:31:12.720 --> 00:31:16.000 The B Ravi sundry E mutated or Ras

NOTE Confidence: 0.6199489565

00:31:16.000 --> 00:31:18.399 mutated endopathy stereo carcinoma have

NOTE Confidence: 0.6199489565

00:31:18.399 --> 00:31:21.393 a similar rate of nodal metastasis,

NOTE Confidence: 0.6199489565

00:31:21.400 --> 00:31:23.540 distant metastasis and mortality

NOTE Confidence: 0.6199489565

00:31:23.540 --> 00:31:27.720 being in the range of 60 to 70%.

NOTE Confidence: 0.601711429473684

00:31:30.320 --> 00:31:34.296 1 thing as a pathologist we know commonly

NOTE Confidence: 0.601711429473684

00:31:34.296 --> 00:31:38.472 being asked to do as B RAF is only E testing.

NOTE Confidence: 0.601711429473684

00:31:38.480 --> 00:31:42.400 The reason is that this new adjuvant that

NOTE Confidence: 0.601711429473684

00:31:42.400 --> 00:31:45.518 Bafinib which is AB RAF inhibitors and

NOTE Confidence: 0.601711429473684

00:31:45.518 --> 00:31:48.236 Trabafinib which is a Berk inhibitors,

NOTE Confidence: 0.601711429473684

00:31:48.240 --> 00:31:50.505 they have a fabulous response

NOTE Confidence: 0.601711429473684

00:31:50.505 --> 00:31:54.250 in B RAF V certainly E mutated

NOTE Confidence: 0.601711429473684

00:31:54.250 --> 00:31:56.320 antopathy steroid carcinoma.

NOTE Confidence: 0.601711429473684

00:31:56.320 --> 00:31:58.785 Data from MB Anderson showed

NOTE Confidence: 0.601711429473684

00:31:58.785 --> 00:32:02.105 that they lead to feasibility of

NOTE Confidence: 0.601711429473684

00:32:02.105 --> 00:32:04.365 complete surgical resection and

NOTE Confidence: 0.601711429473684

00:32:04.365 --> 00:32:07.038 durable local regional controls.

NOTE Confidence: 0.601711429473684

00:32:07.040 --> 00:32:10.008 Based on this data,

NOTE Confidence: 0.601711429473684

00:32:10.008 --> 00:32:12.699 FDA actually approved combined

NOTE Confidence: 0.601711429473684

00:32:12.699 --> 00:32:15.453 that Bafnib and tribetanib as a

NOTE Confidence: 0.601711429473684

00:32:15.453 --> 00:32:18.686 standard first line treatment for B

NOTE Confidence: 0.601711429473684

00:32:18.686 --> 00:32:21.401 RAF eccentric E mutated endopathy

NOTE Confidence: 0.601711429473684

00:32:21.401 --> 00:32:24.223 cyrocarcinoma and this is included

NOTE Confidence: 0.601711429473684

00:32:24.223 --> 00:32:28.312 in endopathic in ATA guideline to

NOTE Confidence: 0.601711429473684

00:32:28.312 --> 00:32:30.556 treating endopathy cyrocarcinoma.

NOTE Confidence: 0.601711429473684

00:32:30.560 --> 00:32:32.552 Here is an example actually of

NOTE Confidence: 0.601711429473684

00:32:32.552 --> 00:32:34.919 a real case we recently see.

NOTE Confidence: 0.601711429473684

00:32:34.920 --> 00:32:37.800 You can see on the left the PET

NOTE Confidence: 0.601711429473684

00:32:37.800 --> 00:32:40.848 showing a large thyroid base PET

NOTE Confidence: 0.601711429473684

00:32:40.848 --> 00:32:43.758 Avid mass emitting the trachea

NOTE Confidence: 0.601711429473684

00:32:43.760 --> 00:32:46.730 and after only three cycles of

NOTE Confidence: 0.601711429473684

00:32:46.730 --> 00:32:49.338 Dypathinib and tribadinib the tumor

NOTE Confidence: 0.601711429473684

00:32:49.338 --> 00:32:52.058 shrink down significantly and the

NOTE Confidence: 0.601711429473684

00:32:52.058 --> 00:32:54.234 path avidity is decreased.

NOTE Confidence: 0.601711429473684

00:32:54.240 --> 00:32:57.082 And here is the case after surgical

NOTE Confidence: 0.601711429473684

00:32:57.082 --> 00:32:59.934 resection on the left of the

NOTE Confidence: 0.601711429473684

00:32:59.934 --> 00:33:02.514 pre treatment sample showing a

NOTE Confidence: 0.601711429473684

00:33:02.514 --> 00:33:04.800 hypercellular endopathy pterocarcinoma.

NOTE Confidence: 0.601711429473684

00:33:04.800 --> 00:33:07.712 We supported morphic slash

NOTE Confidence: 0.601711429473684

00:33:07.712 --> 00:33:10.144 spindomorphology on the on the

NOTE Confidence: 0.601711429473684

00:33:10.144 --> 00:33:12.700 right a basically the post treatment

NOTE Confidence: 0.601711429473684

00:33:12.786 --> 00:33:15.780 sample of the thyroid dectomy we

NOTE Confidence: 0.601711429473684

00:33:15.780 --> 00:33:17.888 received and the entire tumor,

NOTE Confidence: 0.601711429473684

00:33:17.888 --> 00:33:20.791 nearly the entire tumor is wiped out

NOTE Confidence: 0.601711429473684

00:33:20.791 --> 00:33:23.251 as this fibrosis and information and

NOTE Confidence: 0.601711429473684

00:33:23.251 --> 00:33:26.284 that there are only one small focus

NOTE Confidence: 0.601711429473684

00:33:26.284 --> 00:33:28.444 of endopathy styroid carcinoma in

NOTE Confidence: 0.601711429473684

00:33:28.444 --> 00:33:31.718 the middle top and at high power.

NOTE Confidence: 0.601711429473684

00:33:31.720 --> 00:33:33.750 You can see that endopathy

NOTE Confidence: 0.601711429473684

00:33:33.750 --> 00:33:35.780 styrocarcinoma is only manifest as

NOTE Confidence: 0.601711429473684

00:33:35.853 --> 00:33:38.013 this scattered hyperchlomatic for

NOTE Confidence: 0.601711429473684

00:33:38.013 --> 00:33:41.168 neomorphic cells embedded in the

NOTE Confidence: 0.601711429473684

00:33:41.168 --> 00:33:44.367 sea of macrophages and lymphocytes.

NOTE Confidence: 0.601711429473684

00:33:44.367 --> 00:33:45.708 In our experience,

NOTE Confidence: 0.601711429473684

00:33:45.708 --> 00:33:49.276 we have more than 50 case now the

NOTE Confidence: 0.601711429473684

00:33:49.276 --> 00:33:51.276 response rate but it's variable

NOTE Confidence: 0.601711429473684

00:33:51.276 --> 00:33:54.480 but many of them have a complete

NOTE Confidence: 0.601711429473684

00:33:54.480 --> 00:33:56.880 response in the surgical specimen,

NOTE Confidence: 0.601711429473684

00:33:56.880 --> 00:33:58.800 some of them does not have

NOTE Confidence: 0.601711429473684

00:33:58.800 --> 00:34:01.400 a significant response.

NOTE Confidence: 0.601711429473684

00:34:01.400 --> 00:34:04.185 The residual difference is Ptero

NOTE Confidence: 0.601711429473684

00:34:04.185 --> 00:34:06.413 carcinoma surprisingly was urinary

NOTE Confidence: 0.601711429473684

00:34:06.413 --> 00:34:08.751 not touched by this combined

NOTE Confidence: 0.601711429473684

00:34:08.751 --> 00:34:11.955 therapies and it will be left behind

NOTE Confidence: 0.601711429473684

00:34:11.955 --> 00:34:14.279 in the thyroidectomy specimen.

NOTE Confidence: 0.601711429473684

00:34:14.280 --> 00:34:18.320 Because of this combined therapies,

NOTE Confidence: 0.601711429473684

00:34:18.320 --> 00:34:20.959 we are now asked by our clinician,

NOTE Confidence: 0.601711429473684

00:34:20.960 --> 00:34:23.185 medical oncologist to have rapid

NOTE Confidence: 0.601711429473684

00:34:23.185 --> 00:34:26.812 B rapid sundry E on every single

NOTE Confidence: 0.601711429473684

00:34:26.812 --> 00:34:29.436 case of endopathy styrocarcinoma.

NOTE Confidence: 0.601711429473684

00:34:29.440 --> 00:34:32.457 In our hand we found B RAF

NOTE Confidence: 0.601711429473684

00:34:32.457 --> 00:34:33.319 Lisandre immunohistochemistry.

NOTE Confidence: 0.601711429473684

00:34:33.320 --> 00:34:36.002 It's a highly sensitive and specific

NOTE Confidence: 0.601711429473684

00:34:36.002 --> 00:34:39.993 marker to screening for B RAF Lisandre E

NOTE Confidence: 0.601711429473684

00:34:39.993 --> 00:34:42.117 mutations endoplastic steroid carcinoma.

NOTE Confidence: 0.601711429473684

00:34:42.120 --> 00:34:44.680 The sensitivity is about 95%.

NOTE Confidence: 0.601711429473684

00:34:44.680 --> 00:34:47.416 So there are first negative cases

NOTE Confidence: 0.601711429473684

00:34:47.416 --> 00:34:50.554 but the specificity is 100% showing

NOTE Confidence: 0.601711429473684

00:34:50.554 --> 00:34:53.839 on the right three cases,

NOTE Confidence: 0.601711429473684

00:34:53.840 --> 00:34:55.604 one is squeamoid anoplastic,

NOTE Confidence: 0.601711429473684

00:34:55.604 --> 00:34:58.708 one is osteocarps John cell rich and

NOTE Confidence: 0.601711429473684

00:34:58.708 --> 00:35:01.389 one is raptoroid and all three cases

NOTE Confidence: 0.601711429473684

00:35:01.389 --> 00:35:04.071 are positive for B RAC Nissundre E

NOTE Confidence: 0.601711429473684

00:35:04.071 --> 00:35:06.325 So basically even our patient of

NOTE Confidence: 0.601711429473684

00:35:06.325 --> 00:35:09.160 anopathy sero carcinoma walk into our door.

NOTE Confidence: 0.601711429473684

00:35:09.160 --> 00:35:11.200 The first thing our medical oncologist

NOTE Confidence: 0.601711429473684

00:35:11.200 --> 00:35:13.613 asked is a rapid B RAC nissundre

NOTE Confidence: 0.601711429473684

00:35:13.613 --> 00:35:15.581 E you know histochemistry and then

NOTE Confidence: 0.601711429473684

00:35:15.581 --> 00:35:17.400 we can get it turn around.

NOTE Confidence: 0.601711429473684

00:35:17.400 --> 00:35:20.080 We seen a day to put patient that

NOTE Confidence: 0.601711429473684

00:35:20.080 --> 00:35:22.719 on that bacfinib and trabechium and

NOTE Confidence: 0.601711429473684

00:35:22.719 --> 00:35:26.198 that will be followed by some form

NOTE Confidence: 0.601711429473684

00:35:26.198 --> 00:35:28.993 of molecular confirmation either by

NOTE Confidence: 0.601711429473684

00:35:28.993 --> 00:35:33.426 PCR based ISA such as E dialog or

NOTE Confidence: 0.601711429473684

00:35:33.426 --> 00:35:36.081 next generation sequencing which can

NOTE Confidence: 0.846358732068966

00:35:36.177 --> 00:35:40.155 take two weeks or more to get the results.

NOTE Confidence: 0.846358732068966

00:35:40.160 --> 00:35:43.004 So in this graph I already

NOTE Confidence: 0.846358732068966

00:35:43.004 --> 00:35:44.900 showed the differentiated well

NOTE Confidence: 0.846358732068966

00:35:44.991 --> 00:35:47.239 differential cyrocarcinoma,

NOTE Confidence: 0.846358732068966

00:35:47.240 --> 00:35:50.120 the high grade cyrocarcinoma and

NOTE Confidence: 0.846358732068966

00:35:50.120 --> 00:35:53.520 I'm now just adding the last

NOTE Confidence: 0.846358732068966

00:35:53.520 --> 00:35:56.640 line of the progression which is

NOTE Confidence: 0.846358732068966

00:35:56.640 --> 00:35:58.200 anaplasic psoriatic carcinoma.

NOTE Confidence: 0.846358732068966

00:35:58.200 --> 00:36:01.716 So overall now we think thyroid

NOTE Confidence: 0.846358732068966

00:36:01.720 --> 00:36:03.775 have a style wise progression

NOTE Confidence: 0.846358732068966

00:36:03.775 --> 00:36:05.830 from well differentiated to high

NOTE Confidence: 0.846358732068966

00:36:05.903 --> 00:36:08.159 grade to anaplasic cirrocarcinoma.

NOTE Confidence: 0.846358732068966

00:36:08.160 --> 00:36:12.514 Well, the driver mutations remains the same.

NOTE Confidence: 0.846358732068966

00:36:12.520 --> 00:36:17.166 They can additional molecular aggressive

NOTE Confidence: 0.846358732068966

00:36:17.166 --> 00:36:20.596 molecular signatures when they progress.

NOTE Confidence: 0.846358732068966

00:36:20.600 --> 00:36:23.204 And the Ras like tumor are the

NOTE Confidence: 0.846358732068966

00:36:23.204 --> 00:36:24.320 foamicular pattern lesions,

NOTE Confidence: 0.846358732068966

00:36:24.320 --> 00:36:26.944 the B RAF like tumor are the classic

NOTE Confidence: 0.846358732068966

00:36:26.944 --> 00:36:29.318 and talso papular sero carcinoma,

NOTE Confidence: 0.846358732068966

00:36:29.320 --> 00:36:30.643 well oncocytic carcinoma,

NOTE Confidence: 0.846358732068966

00:36:30.643 --> 00:36:33.730 it's by them by their own characterized

NOTE Confidence: 0.846358732068966

00:36:33.806 --> 00:36:36.018 by widespread chromosome loss

NOTE Confidence: 0.846358732068966

00:36:36.018 --> 00:36:37.677 and mitochondria mutations.

NOTE Confidence: 0.586860573

00:36:39.920 --> 00:36:42.780 So that's basically summarize the

NOTE Confidence: 0.586860573

00:36:42.780 --> 00:36:46.289 fordicular cell derived new pattern part.

NOTE Confidence: 0.586860573

00:36:46.289 --> 00:36:50.832 So now we're moving towards a combined

NOTE Confidence: 0.586860573

00:36:50.832 --> 00:36:53.680 molecular histological classifications

NOTE Confidence: 0.586860573

00:36:53.680 --> 00:36:57.640 in which Ras tumor is really the RASP,

NOTE Confidence: 0.586860573

00:36:57.640 --> 00:37:01.000 the fordicular pattern lesion when they go,

NOTE Confidence: 0.586860573

00:37:01.000 --> 00:37:03.996 they when they spread the spread decently

NOTE Confidence: 0.586860573

00:37:04.000 --> 00:37:06.718 that would be include fordicular adenoma.

NOTE Confidence: 0.586860573

00:37:06.720 --> 00:37:09.430 The NIFPS, the portly differential

NOTE Confidence: 0.586860573

00:37:09.430 --> 00:37:12.885 carcinoma and the forticular carcinoma were

NOTE Confidence: 0.586860573

00:37:12.885 --> 00:37:15.557 invasive encapsulated follicular events.

NOTE Confidence: 0.586860573

00:37:15.560 --> 00:37:18.408 But the B RAF like tumors are the

NOTE Confidence: 0.586860573

00:37:18.408 --> 00:37:21.109 infiltrative 1, they're tall cells,

NOTE Confidence: 0.586860573

00:37:21.109 --> 00:37:23.761 Casa infiltrative particular subtype

NOTE Confidence: 0.586860573

00:37:23.761 --> 00:37:26.520 or infiltrative solid subtype.

NOTE Confidence: 0.586860573

00:37:26.520 --> 00:37:29.131 When they progress a progress to high

NOTE Confidence: 0.586860573

00:37:29.131 --> 00:37:30.880 grade differentiation center carcinoma,

NOTE Confidence: 0.586860573

00:37:30.880 --> 00:37:32.994 then we have the non B RAF,

NOTE Confidence: 0.586860573

00:37:33.000 --> 00:37:35.320 non Ras oncostatic tumor.

NOTE Confidence: 0.742072049230769

00:37:37.360 --> 00:37:39.580 Eventually all of them can

NOTE Confidence: 0.742072049230769

00:37:39.580 --> 00:37:41.800 lead to the development of

NOTE Confidence: 0.742072049230769

00:37:41.888 --> 00:37:44.318 endopathic thyroid carcinoma.

NOTE Confidence: 0.742072049230769

00:37:44.320 --> 00:37:46.192 So we're going to switch here

NOTE Confidence: 0.742072049230769

00:37:46.192 --> 00:37:48.948 and use the last 10 minutes or so

NOTE Confidence: 0.742072049230769

00:37:48.948 --> 00:37:50.833 in major or thyroid carcinoma.

NOTE Confidence: 0.684431592727273

00:37:52.960 --> 00:37:55.216 So major or thyroid carcinoma was

NOTE Confidence: 0.684431592727273

00:37:55.216 --> 00:37:57.240 first described by Doctor Hazard,

NOTE Confidence: 0.684431592727273

00:37:57.240 --> 00:38:02.235 Doctor Kovka and Doctor Creel in 1959.

NOTE Confidence: 0.684431592727273

00:38:02.235 --> 00:38:04.295 Since it's publications have

NOTE Confidence: 0.684431592727273

00:38:04.295 --> 00:38:07.640 already been more than six decades,

NOTE Confidence: 0.684431592727273

00:38:07.640 --> 00:38:09.752 the prognostic factor identified

NOTE Confidence: 0.684431592727273

00:38:09.752 --> 00:38:12.392 the imaginary steroid carcinoma age,

NOTE Confidence: 0.684431592727273

00:38:12.400 --> 00:38:15.984 sex, PMN staging serum,

NOTE Confidence: 0.684431592727273

00:38:15.984 --> 00:38:19.112 calcitonin, serum CA calcitonin,

NOTE Confidence: 0.684431592727273

00:38:19.112 --> 00:38:22.660 doubling time, type of red mutations,

NOTE Confidence: 0.684431592727273

00:38:22.660 --> 00:38:24.205 sporadic versus hereditary

NOTE Confidence: 0.684431592727273

00:38:24.205 --> 00:38:27.037 disease and so on or so forth.

NOTE Confidence: 0.684431592727273

00:38:27.040 --> 00:38:30.352 But notice that there's no not

NOTE Confidence: 0.684431592727273

00:38:30.352 --> 00:38:32.560 a single pathological parameters

NOTE Confidence: 0.684431592727273

00:38:32.560 --> 00:38:36.120 in this prognostic factor list.

NOTE Confidence: 0.684431592727273

00:38:36.120 --> 00:38:39.288 It's not until 2020 that a

NOTE Confidence: 0.684431592727273

00:38:39.288 --> 00:38:42.186 greeting system was developed for

NOTE Confidence: 0.684431592727273

00:38:42.186 --> 00:38:44.238 modular stereo carcinoma.

NOTE Confidence: 0.684431592727273

00:38:44.240 --> 00:38:46.720 Well the pulmonary and pancreatic

NOTE Confidence: 0.684431592727273

00:38:46.720 --> 00:38:48.616 pancreatic neuroendocrine carcinoma

NOTE Confidence: 0.684431592727273

00:38:48.616 --> 00:38:52.468 have their neoplasm have their well

NOTE Confidence: 0.684431592727273

00:38:52.468 --> 00:38:55.056 accepted well established prognostic

NOTE Confidence: 0.684431592727273

00:38:55.056 --> 00:38:57.680 relevant histological greeting system.

NOTE Confidence: 0.684431592727273

00:38:57.680 --> 00:39:01.215 So in 2020 there are two parallel

NOTE Confidence: 0.684431592727273

00:39:01.215 --> 00:39:04.518 study published a few months apart.

NOTE Confidence: 0.684431592727273

00:39:04.520 --> 00:39:07.432 One by us using A2 tier grading system

NOTE Confidence: 0.684431592727273

00:39:07.432 --> 00:39:09.788 using you only mitosis and necrosis

NOTE Confidence: 0.684431592727273

00:39:09.788 --> 00:39:12.613 and the other by a Sydney group

NOTE Confidence: 0.684431592727273

00:39:12.613 --> 00:39:15.588 from Doctor Gill using a three tier

NOTE Confidence: 0.684431592727273

00:39:15.588 --> 00:39:18.330 grading system using mitosis necrosis

NOTE Confidence: 0.684431592727273

00:39:18.330 --> 00:39:21.480 and Kia 67 proliferation index.

NOTE Confidence: 0.681459185

00:39:23.520 --> 00:39:27.494 We included 144 cases of my joint stereo

NOTE Confidence: 0.681459185

00:39:27.494 --> 00:39:30.478 carcinoma and we use the same cut off as

NOTE Confidence: 0.681459185

00:39:30.480 --> 00:39:34.155 as 40 different stereo carcinoma being 5

NOTE Confidence: 0.681459185

00:39:34.155 --> 00:39:38.052 mitosis per 2mm squares and tumor necrosis.

NOTE Confidence: 0.681459185

00:39:38.052 --> 00:39:41.720 Well Sydney grade is more resemble AGI

NOTE Confidence: 0.681459185

00:39:41.810 --> 00:39:45.440 pancreatic biliary grading system with added

NOTE Confidence: 0.681459185

00:39:45.440 --> 00:39:49.759 that cause necrosis as a served parameters.

NOTE Confidence: 0.681459185

00:39:49.760 --> 00:39:52.595 So basically a present of necrosis will

NOTE Confidence: 0.681459185

00:39:52.595 --> 00:39:56.332 boost will make the grade to be one

NOTE Confidence: 0.681459185

00:39:56.332 --> 00:39:59.080 year or higher regardless of either

NOTE Confidence: 0.681459185

00:39:59.080 --> 00:40:01.280 grading system that was proposed.

NOTE Confidence: 0.681459185

00:40:01.280 --> 00:40:04.322 In details we you can see on the right

NOTE Confidence: 0.681459185

00:40:04.322 --> 00:40:07.695 that either grading system is highly

NOTE Confidence: 0.681459185

00:40:07.695 --> 00:40:10.645 prognostically relevant and predict disease

NOTE Confidence: 0.681459185

00:40:10.729 --> 00:40:13.799 specific survival and overall survival.

NOTE Confidence: 0.960954846

00:40:16.080 --> 00:40:18.968 So the next year, in 2022,

NOTE Confidence: 0.960954846

00:40:18.968 --> 00:40:22.013 we decide to sit 2021-2022,

NOTE Confidence: 0.960954846

00:40:22.013 --> 00:40:24.278 we decide to sit together

NOTE Confidence: 0.960954846

00:40:24.280 --> 00:40:26.244 and recruiting more center.

NOTE Confidence: 0.960954846

00:40:26.244 --> 00:40:29.767 The aim is really to develop a

NOTE Confidence: 0.960954846

00:40:29.767 --> 00:40:32.177 universal grading system using a

NOTE Confidence: 0.960954846

00:40:32.177 --> 00:40:36.190 consensus cut off so that it can be

NOTE Confidence: 0.960954846

00:40:36.190 --> 00:40:38.675 easily applied throughout the world.

NOTE Confidence: 0.960954846

00:40:38.680 --> 00:40:42.868 In practice we recruited 327 patients

NOTE Confidence: 0.960954846

00:40:42.868 --> 00:40:45.238 from 5 center across Europe,

NOTE Confidence: 0.960954846

00:40:45.240 --> 00:40:49.080 Australia and the US.

NOTE Confidence: 0.960954846

00:40:49.080 --> 00:40:52.678 The features we use of peritotic count,

NOTE Confidence: 0.960954846

00:40:52.680 --> 00:40:53.618 PS67 necrosis,

NOTE Confidence: 0.960954846

00:40:53.618 --> 00:40:56.432 and the mitotic count we followed

NOTE Confidence: 0.960954846

00:40:56.432 --> 00:40:59.119 the basically gastrointestinal sash,

NOTE Confidence: 0.960954846

00:40:59.120 --> 00:41:00.887 pancreatal biliary neuron,

NOTE Confidence: 0.960954846

00:41:00.887 --> 00:41:04.421 The tumor criteria we counted hotspot

NOTE Confidence: 0.960954846

00:41:04.421 --> 00:41:07.454 per 2mm squares and we mandate

NOTE Confidence: 0.960954846

00:41:07.454 --> 00:41:10.980 counting of 500 to 2000 cells.

NOTE Confidence: 0.960954846

00:41:10.980 --> 00:41:14.205 Necosis is just classified as

NOTE Confidence: 0.960954846

00:41:14.205 --> 00:41:17.158 present or absent. A high grade.

NOTE Confidence: 0.960954846

00:41:17.158 --> 00:41:19.580 Major or serial carcinoma is defined by

NOTE Confidence: 0.960954846

00:41:19.650 --> 00:41:22.198 at least one of the following features,

NOTE Confidence: 0.960954846

00:41:22.200 --> 00:41:25.424 A mitotic index of five or

NOTE Confidence: 0.960954846

00:41:25.424 --> 00:41:27.440 more per 2mm squares,

NOTE Confidence: 0.960954846

00:41:27.440 --> 00:41:32.380 A KIC 7 proliferation index of 5% or more,

NOTE Confidence: 0.960954846

00:41:32.380 --> 00:41:33.880 or tumor necrosis.

NOTE Confidence: 0.960954846

00:41:33.880 --> 00:41:36.416 We did try other cut offs similar to

NOTE Confidence: 0.960954846

00:41:36.416 --> 00:41:39.439 long or pancreatic biliary in our study,

NOTE Confidence: 0.960954846

00:41:39.440 --> 00:41:42.998 but none of them work because

NOTE Confidence: 0.960954846

00:41:42.998 --> 00:41:45.370 major or pterocarcinoma generally

NOTE Confidence: 0.960954846

00:41:45.472 --> 00:41:47.652 like very high mitotic index

NOTE Confidence: 0.960954846

00:41:47.652 --> 00:41:50.104 or KSC 7 proliferation index.

NOTE Confidence: 0.960954846

00:41:50.104 --> 00:41:53.536 So this is a consensus grading

NOTE Confidence: 0.960954846

00:41:53.536 --> 00:41:57.115 system we came up to and what we've

NOTE Confidence: 0.960954846

00:41:57.115 --> 00:41:59.905 shown here is that they're really

NOTE Confidence: 0.960954846

00:41:59.905 --> 00:42:02.318 highly predictive of outcome.

NOTE Confidence: 0.960954846

00:42:02.320 --> 00:42:04.256 They independently predict outcome

NOTE Confidence: 0.960954846

00:42:04.256 --> 00:42:06.676 of major or thyroid carcinomas

NOTE Confidence: 0.18027546

00:42:08.760 --> 00:42:12.540 in including overall survival,

NOTE Confidence: 0.18027546

00:42:12.540 --> 00:42:14.280 disease specific survival,

NOTE Confidence: 0.18027546

00:42:14.280 --> 00:42:16.068 local regional recurrence,

NOTE Confidence: 0.18027546

00:42:16.068 --> 00:42:18.452 free survival and distant

NOTE Confidence: 0.18027546

00:42:18.452 --> 00:42:20.240 metastasis free survival.

NOTE Confidence: 0.18027546

00:42:20.240 --> 00:42:22.472 The low grade macular thyroid carcinoma

NOTE Confidence: 0.18027546

00:42:22.472 --> 00:42:24.994 have a 10 year disease specific

NOTE Confidence: 0.18027546

00:42:24.994 --> 00:42:28.318 survival of 97% while the in the high

NOTE Confidence: 0.18027546

00:42:28.318 --> 00:42:30.620 grade tumors it's decreased to 53%.

NOTE Confidence: 0.18027546

00:42:30.620 --> 00:42:33.620 Same thing for the distant metastasis

NOTE Confidence: 0.18027546

00:42:33.620 --> 00:42:36.852 free survivals is 84% in low grade

NOTE Confidence: 0.18027546

00:42:36.852 --> 00:42:39.800 tumors and 31% in high grade tumors.

NOTE Confidence: 0.7521587

00:42:42.400 --> 00:42:46.589 So week based on this study the grading

NOTE Confidence: 0.7521587

00:42:46.589 --> 00:42:50.095 scheme that is now included in The

NOTE Confidence: 0.7521587

00:42:50.095 --> 00:42:53.113 Who 50 editions and we subsequently

NOTE Confidence: 0.7521587

00:42:53.120 --> 00:42:56.132 conduct a separate study looking at

NOTE Confidence: 0.7521587

00:42:56.132 --> 00:42:59.319 the molecular profile of these tumors.

NOTE Confidence: 0.7521587

00:42:59.320 --> 00:43:02.260 We take most of our tumors with

NOTE Confidence: 0.7521587

00:43:02.260 --> 00:43:05.078 tissues and we recruit one more

NOTE Confidence: 0.7521587

00:43:05.080 --> 00:43:08.320 center with being Emory University's.

NOTE Confidence: 0.7521587

00:43:08.320 --> 00:43:11.592 So a total of 290 cases of primary

NOTE Confidence: 0.7521587

00:43:11.592 --> 00:43:13.919 resected major serial carcinoma.

NOTE Confidence: 0.7521587

00:43:13.920 --> 00:43:17.592 And what we found is that right red

NOTE Confidence: 0.7521587

00:43:17.592 --> 00:43:20.198 somatic mutation create this grade.

NOTE Confidence: 0.7521587

00:43:20.200 --> 00:43:23.210 So there is a much higher percentage

NOTE Confidence: 0.7521587

00:43:23.210 --> 00:43:25.744 of right somatic mutations in

NOTE Confidence: 0.7521587

00:43:25.744 --> 00:43:27.440 high grade tumor compared.

NOTE Confidence: 0.84141901

00:43:29.920 --> 00:43:31.112 On the other hand,

NOTE Confidence: 0.84141901

00:43:31.112 --> 00:43:33.385 we also found the right somatic mutation

NOTE Confidence: 0.84141901

00:43:33.385 --> 00:43:36.821 was associated with larger tumor size,

NOTE Confidence: 0.84141901

00:43:36.821 --> 00:43:39.729 higher prognostic group slash

NOTE Confidence: 0.84141901

00:43:39.729 --> 00:43:43.000 stage and vascular invasion.

NOTE Confidence: 0.84141901

00:43:43.000 --> 00:43:47.410 RED M918T which is an aggressive

NOTE Confidence: 0.84141901

00:43:47.410 --> 00:43:50.344 form of RED mutations was also

NOTE Confidence: 0.84141901

00:43:50.344 --> 00:43:53.349 associated with a worst clinical

NOTE Confidence: 0.84141901

00:43:53.349 --> 00:43:56.586 pathological features being younger age,

NOTE Confidence: 0.84141901

00:43:56.586 --> 00:43:59.438 higher stage vascular invasion,

NOTE Confidence: 0.84141901

00:43:59.440 --> 00:44:02.560 extra thyroid extension positive margins.

NOTE Confidence: 0.84141901

00:44:02.560 --> 00:44:05.400 But surprisingly it doesn't correlate

NOTE Confidence: 0.84141901

00:44:05.400 --> 00:44:08.920 with the grade in our study.

NOTE Confidence: 0.84141901

00:44:08.920 --> 00:44:11.640 I mean you look at the outcome based

NOTE Confidence: 0.84141901

00:44:11.640 --> 00:44:14.144 on molecular signature along we found

NOTE Confidence: 0.84141901

00:44:14.144 --> 00:44:16.880 that the red somatic mutations or

NOTE Confidence: 0.84141901

00:44:16.967 --> 00:44:20.273 germline mutation is associated with a

NOTE Confidence: 0.84141901

00:44:20.273 --> 00:44:22.945 decreased distant metastasis or that's

NOTE Confidence: 0.84141901

00:44:22.945 --> 00:44:25.735 a type of distant metastasis free

NOTE Confidence: 0.84141901

00:44:25.735 --> 00:44:28.020 survivals imagine or thyroid carcinoma.

NOTE Confidence: 0.84141901

00:44:28.020 --> 00:44:29.840 On the other hand,

NOTE Confidence: 0.84141901

00:44:29.840 --> 00:44:32.810 the Ras mutation have improved over

NOTE Confidence: 0.84141901

00:44:32.810 --> 00:44:36.896 survival but only a trend it was not

NOTE Confidence: 0.84141901

00:44:36.896 --> 00:44:41.815 significant and M9118T does not make it

NOTE Confidence: 0.84141901

00:44:41.815 --> 00:44:45.440 so it was not prognostically significant.

NOTE Confidence: 0.84141901

00:44:45.440 --> 00:44:45.957 However,

NOTE Confidence: 0.84141901

00:44:45.957 --> 00:44:48.542 all this molecular signatures when

NOTE Confidence: 0.84141901

00:44:48.542 --> 00:44:51.554 you do macular analysis together with

NOTE Confidence: 0.84141901

00:44:51.554 --> 00:44:54.557 grade and group and grade and stage,

NOTE Confidence: 0.84141901

00:44:54.560 --> 00:44:57.265 the prognostic relevance of a

NOTE Confidence: 0.84141901

00:44:57.265 --> 00:45:00.560 red and RICE mutation was lost.

NOTE Confidence: 0.84141901

00:45:00.560 --> 00:45:03.304 So in the end is really the grade

NOTE Confidence: 0.84141901

00:45:03.304 --> 00:45:06.569 and this stage trumped the molecular

NOTE Confidence: 0.84141901

00:45:06.569 --> 00:45:09.057 signature imaginary sero carcinoma

NOTE Confidence: 0.84141901

00:45:09.057 --> 00:45:11.040 in predicting outcome.

NOTE Confidence: 0.84141901

00:45:11.040 --> 00:45:15.760 So that's another prove that the grade works.

NOTE Confidence: 0.84141901

00:45:15.760 --> 00:45:17.944 One interesting molecular signature

NOTE Confidence: 0.84141901

00:45:17.944 --> 00:45:20.674 we found is TP 53.

NOTE Confidence: 0.84141901

00:45:20.680 --> 00:45:23.620 It's occurring very low frequency in

NOTE Confidence: 0.84141901

00:45:23.620 --> 00:45:25.880 major steroid carcinoma being 4%,

NOTE Confidence: 0.84141901

00:45:25.880 --> 00:45:29.072 but it was associated with decreased

NOTE Confidence: 0.84141901

00:45:29.072 --> 00:45:31.200 survivals including overall survival,

NOTE Confidence: 0.84141901

00:45:31.200 --> 00:45:31.760 disease,

NOTE Confidence: 0.84141901

00:45:31.760 --> 00:45:34.560 specific survivals and distant metastasis.

NOTE Confidence: 0.84141901

00:45:34.560 --> 00:45:39.050 Free survivals since publication

NOTE Confidence: 0.84141901

00:45:39.050 --> 00:45:42.875 are grade consensus grading paper.

NOTE Confidence: 0.84141901

00:45:42.880 --> 00:45:44.896 There are multiple studies,

NOTE Confidence: 0.84141901

00:45:44.896 --> 00:45:47.920 including one from Yeo last year,

NOTE Confidence: 0.84141901

00:45:47.920 --> 00:45:51.752 validate that the grade group works.

NOTE Confidence: 0.84141901

00:45:51.752 --> 00:45:55.544 It's it's an independent predictor of

NOTE Confidence: 0.84141901

00:45:55.544 --> 00:45:59.000 survival for vaginal pterocarcinoma.

NOTE Confidence: 0.812060633333333

00:46:02.000 --> 00:46:05.732 We also did some subsequent small

NOTE Confidence: 0.812060633333333

00:46:05.732 --> 00:46:09.514 study showing that the grid can

NOTE Confidence: 0.812060633333333

00:46:09.514 --> 00:46:12.066 be reproducible between academic

NOTE Confidence: 0.812060633333333

00:46:12.066 --> 00:46:15.593 pathologist that was lead by just

NOTE Confidence: 0.812060633333333

00:46:15.593 --> 00:46:19.980 Doctor Balada from Brigham TA 67

NOTE Confidence: 0.812060633333333

00:46:19.980 --> 00:46:22.530 Imaginal sero carcinoma can be

NOTE Confidence: 0.812060633333333

00:46:22.530 --> 00:46:24.679 accurately assessed by eyeballing

NOTE Confidence: 0.812060633333333

00:46:24.679 --> 00:46:27.841 imaging analysis or AI based platform

NOTE Confidence: 0.812060633333333

00:46:27.841 --> 00:46:31.677 that is from Emory group and our group

NOTE Confidence: 0.555421232857143

00:46:34.000 --> 00:46:36.844 AE Tiny group. Other further also

NOTE Confidence: 0.555421232857143

00:46:36.844 --> 00:46:39.600 further support our observation that

NOTE Confidence: 0.555421232857143

00:46:39.600 --> 00:46:43.020 the red somatic mutation is associated

NOTE Confidence: 0.555421232857143

00:46:43.107 --> 00:46:45.999 with high grade tumor and outcome.

NOTE Confidence: 0.555421232857143

00:46:46.000 --> 00:46:49.678 And lastly, we just recently published

NOTE Confidence: 0.555421232857143

00:46:49.678 --> 00:46:52.626 A prognostic nomogram developed

NOTE Confidence: 0.555421232857143

00:46:52.626 --> 00:46:57.215 using our multi center core and the

NOTE Confidence: 0.555421232857143

00:46:57.215 --> 00:46:59.115 normal Grammy including mitosis,

NOTE Confidence: 0.555421232857143

00:46:59.120 --> 00:47:02.438 tic 7 and tumor necrosis and this

NOTE Confidence: 0.555421232857143

00:47:02.438 --> 00:47:06.238 study was lead by the Australia group.

NOTE Confidence: 0.555421232857143

00:47:06.240 --> 00:47:09.876 So that's pretty much the talk.

NOTE Confidence: 0.555421232857143

00:47:09.880 --> 00:47:12.666 So the take home message is really

NOTE Confidence: 0.555421232857143

00:47:12.666 --> 00:47:16.244 in the thyroid pathologies there is a

NOTE Confidence: 0.555421232857143

00:47:16.244 --> 00:47:18.584 shift towards a classification scheme

NOTE Confidence: 0.555421232857143

00:47:18.584 --> 00:47:21.295 based on prognostically relevant

NOTE Confidence: 0.555421232857143

00:47:21.295 --> 00:47:24.675 histological features and molecular

NOTE Confidence: 0.555421232857143

00:47:24.675 --> 00:47:27.620 pathogenesis because Mitos I hope I

NOTE Confidence: 0.555421232857143

00:47:27.620 --> 00:47:30.254 showed here mitosis and necosis matters

NOTE Confidence: 0.555421232857143

00:47:30.254 --> 00:47:32.960 in both C cell derived carcinomas

NOTE Confidence: 0.555421232857143

00:47:32.960 --> 00:47:35.800 and funicar cell derived carcinoma.

NOTE Confidence: 0.555421232857143

00:47:35.800 --> 00:47:39.382 And because of that is our part of our

NOTE Confidence: 0.555421232857143

00:47:39.382 --> 00:47:42.716 job to search for elevated mitotic

NOTE Confidence: 0.555421232857143

00:47:42.720 --> 00:47:45.513 the index and necrosis in this tumor

NOTE Confidence: 0.555421232857143

00:47:45.513 --> 00:47:48.587 in order to accurately classify this

NOTE Confidence: 0.555421232857143

00:47:48.587 --> 00:47:52.175 tumor grading this tumor and provide

NOTE Confidence: 0.555421232857143

00:47:52.175 --> 00:47:55.520 prognostic relevant data to the clinicians.

NOTE Confidence: 0.555421232857143

00:47:55.520 --> 00:47:58.400 So that's pretty much the talk.

NOTE Confidence: 0.555421232857143

00:47:58.400 --> 00:48:00.822 Thank you very much and I'm open

NOTE Confidence: 0.555421232857143

00:48:00.822 --> 00:48:01.514 to questions.

NOTE Confidence: 0.732103915

00:48:05.200 --> 00:48:07.000 Oh yeah, just a second. I was

NOTE Confidence: 0.732103915

00:48:07.000 --> 00:48:10.960 told I have to turn this on. OK,

NOTE Confidence: 0.5108488688

00:48:11.520 --> 00:48:13.361 good talk. I like it's the value

NOTE Confidence: 0.5108488688

00:48:13.361 --> 00:48:15.016 of necrosis and Mectotis most of

NOTE Confidence: 0.5108488688

00:48:15.016 --> 00:48:16.899 the things not they got EFNI and

NOTE Confidence: 0.5108488688

00:48:16.953 --> 00:48:18.598 we can have ischemic necrosis,

NOTE Confidence: 0.5108488688

00:48:18.600 --> 00:48:20.205 attractive proliferation. Yeah.

NOTE Confidence: 0.5108488688

00:48:20.205 --> 00:48:22.880 Are you using this criteria?

NOTE Confidence: 0.5108488688

00:48:22.880 --> 00:48:24.679 We are not over calling this group.

NOTE Confidence: 0.559763045

00:48:25.560 --> 00:48:28.422 We exclude I think in all of our study

NOTE Confidence: 0.559763045

00:48:28.422 --> 00:48:31.190 we exclude Fla related degenerative

NOTE Confidence: 0.559763045

00:48:31.190 --> 00:48:33.558 necrosis and tumor necrosis.

NOTE Confidence: 0.559763045

00:48:33.560 --> 00:48:36.480 So I have to be true tumor necrosis,

NOTE Confidence: 0.559763045

00:48:36.480 --> 00:48:39.120 the imaginary cereal carcinoma for example,

NOTE Confidence: 0.559763045

00:48:39.120 --> 00:48:41.208 the specifically mentioned here

NOTE Confidence: 0.559763045

00:48:41.208 --> 00:48:43.818 FOA related necrosis or degenerated

NOTE Confidence: 0.559763045

00:48:43.818 --> 00:48:46.160 necrosis is not tumor necrosis.

NOTE Confidence: 0.559763045

00:48:46.160 --> 00:48:48.560 So you need 2 tumor necrosis. Yeah,

NOTE Confidence: 0.5261931

00:48:53.240 --> 00:48:58.618 other question where where has a

NOTE Confidence: 0.5261931

00:48:58.620 --> 00:49:03.700 so-called lumner cell carcinoma that

NOTE Confidence: 0.5261931

00:49:03.700 --> 00:49:08.175 always had you can type necrosis and

NOTE Confidence: 0.5261931

00:49:08.175 --> 00:49:10.640 add like colonic carcinoma like here

NOTE Confidence: 0.321105598

00:49:13.240 --> 00:49:14.280 where in the cell could

NOTE Confidence: 0.583769619375

00:49:14.760 --> 00:49:17.184 it be high grade if you have necrosis

NOTE Confidence: 0.583769619375

00:49:17.184 --> 00:49:19.974 or elevated mitosis will be high grade

NOTE Confidence: 0.583769619375

00:49:19.974 --> 00:49:23.040 differentiated cell carcinoma. So

NOTE Confidence: 0.572335326

00:49:23.040 --> 00:49:25.320 you do not recommend columns?

NOTE Confidence: 0.796896029

00:49:27.800 --> 00:49:31.016 No. But we do see cases

NOTE Confidence: 0.796896029

00:49:31.016 --> 00:49:33.160 resolved necrosis and mitosis.

NOTE Confidence: 0.796896029

00:49:33.160 --> 00:49:35.392 So common cell variants do occur,

NOTE Confidence: 0.796896029

00:49:35.392 --> 00:49:38.387 but only those resolved mitosis and necrosis

NOTE Confidence: 0.796896029

00:49:38.387 --> 00:49:40.759 will be called papulosariocarcinoma,

NOTE Confidence: 0.796896029

00:49:40.760 --> 00:49:44.960 coloner cell subtype or rare.

NOTE Confidence: 0.796896029

00:49:44.960 --> 00:49:47.360 But many of those as it was classified

NOTE Confidence: 0.796896029

00:49:47.360 --> 00:49:49.742 as one aggressive variance, right.

NOTE Confidence: 0.796896029

00:49:49.742 --> 00:49:52.416 But I think really because they're high

NOTE Confidence: 0.796896029

00:49:52.416 --> 00:49:55.332 grade, so there should belongs to the

NOTE Confidence: 0.796896029

00:49:55.332 --> 00:49:58.028 high grade category rather than PTC,

NOTE Confidence: 0.796896029

00:49:58.028 --> 00:49:59.912 popular serial carcinoma,

NOTE Confidence: 0.796896029

00:49:59.912 --> 00:50:01.796 common cell variants.

NOTE Confidence: 0.796896029

00:50:01.800 --> 00:50:04.110 But we see common cell variants

NOTE Confidence: 0.796896029

00:50:04.110 --> 00:50:06.180 without mitosis, we do see rarely.

NOTE Confidence: 0.796896029

00:50:06.180 --> 00:50:07.480 We do see them.

NOTE Confidence: 0.796896029

00:50:07.480 --> 00:50:10.240 Yeah, I haven't seen

NOTE Confidence: 0.505808841666667

00:50:10.320 --> 00:50:12.410 it also it seems like we have.

NOTE Confidence: 0.505808841666667

00:50:12.410 --> 00:50:15.830 I'll see would be extremely helpful

NOTE Confidence: 0.505808841666667

00:50:15.830 --> 00:50:19.060 and diagnosing and positive carcinomas

NOTE Confidence: 0.505808841666667

00:50:19.060 --> 00:50:21.720 that may experience carcinomas.

NOTE Confidence: 0.505808841666667

00:50:21.720 --> 00:50:25.410 You anyone know what the incidence

NOTE Confidence: 0.505808841666667

00:50:25.410 --> 00:50:28.236 of the inevitation is in Gordon?

NOTE Confidence: 0.505808841666667

00:50:28.236 --> 00:50:31.170 The like is when as carcinomas

NOTE Confidence: 0.505808841666667

00:50:31.265 --> 00:50:36.320 of the they are, they are

NOTE Confidence: 0.532213764285714

00:50:36.520 --> 00:50:40.870 low frequency of my kinase passing

NOTE Confidence: 0.532213764285714

00:50:40.870 --> 00:50:43.040 alterations in hidden neck,

NOTE Confidence: 0.532213764285714

00:50:43.040 --> 00:50:45.506 mucosal base, squamous cell carcinoma.

NOTE Confidence: 0.532213764285714

00:50:45.506 --> 00:50:49.838 I don't have the exact percentage in my I

NOTE Confidence: 0.532213764285714

00:50:49.838 --> 00:50:52.785 think all together is less than 10% and

NOTE Confidence: 0.532213764285714

00:50:52.785 --> 00:50:56.935 it can be rough and B rough so B rough.

NOTE Confidence: 0.532213764285714

00:50:56.935 --> 00:51:00.920 This entry per SE should be really low,

NOTE Confidence: 0.532213764285714

00:51:00.920 --> 00:51:05.240 around 1 to 2% maximum. Yeah.

NOTE Confidence: 0.543475096666667

00:51:09.120 --> 00:51:11.718 Sorry. Thank you for coming across

NOTE Confidence: 0.543475096666667

00:51:11.720 --> 00:51:14.320 ATC's that have fusion signatures

NOTE Confidence: 0.543475096666667

00:51:14.320 --> 00:51:17.680 like PTP 6 or rather, yeah, yeah,

NOTE Confidence: 0.679260068571429

00:51:17.720 --> 00:51:20.170 we do. Actually in our 360 core

NOTE Confidence: 0.679260068571429

00:51:20.170 --> 00:51:22.786 we have a few fusion driven

NOTE Confidence: 0.679260068571429

00:51:22.786 --> 00:51:27.064 tumor including red PC1 OP and

NOTE Confidence: 0.679260068571429

00:51:27.064 --> 00:51:30.472 one in track three I believe.

NOTE Confidence: 0.679260068571429

00:51:30.480 --> 00:51:34.680 Yeah, so it happens kind of

NOTE Confidence: 0.583635618333333

00:51:34.680 --> 00:51:35.920 just like all the other issues, it's

NOTE Confidence: 0.586197934

00:51:35.960 --> 00:51:38.280 just as all the other ATC.

NOTE Confidence: 0.586197934

00:51:38.280 --> 00:51:40.800 So by the end when they transform

NOTE Confidence: 0.586197934

00:51:40.800 --> 00:51:42.720 to antipathy stereocarcinoma,

NOTE Confidence: 0.586197934

00:51:42.720 --> 00:51:44.850 it's really the tumor type

NOTE Confidence: 0.586197934

00:51:44.850 --> 00:51:47.640 that Disney the outcome. Yeah,

NOTE Confidence: 0.589070946

00:51:50.520 --> 00:51:51.544 yeah, very nice thought.

NOTE Confidence: 0.589070946

00:51:51.544 --> 00:51:54.192 Thank you. Thank you.

NOTE Confidence: 0.589070946

00:51:54.192 --> 00:51:55.968 I'm understanding correctly

NOTE Confidence: 0.589070946

00:51:55.968 --> 00:51:58.068 the however the carcinomas in

NOTE Confidence: 0.589070946

00:51:58.068 --> 00:51:59.360 an aggressive category, so you

NOTE Confidence: 0.335769585714286

00:52:01.520 --> 00:52:05.195 put re rapture from juniors as well.

NOTE Confidence: 0.335769585714286

00:52:05.200 --> 00:52:08.462 And my question is the presence of

NOTE Confidence: 0.335769585714286

00:52:08.462 --> 00:52:11.296 target therapy by rewrap with neck,

NOTE Confidence: 0.335769585714286

00:52:11.296 --> 00:52:15.984 has that altered the spiral of the

NOTE Confidence: 0.335769585714286

00:52:15.984 --> 00:52:18.198 patients or is that that or not

NOTE Confidence: 0.771089913333333

00:52:20.200 --> 00:52:21.799 yet anaplasic styrocarcinoma.

NOTE Confidence: 0.771089913333333

00:52:21.799 --> 00:52:24.464 They do have improved survival

NOTE Confidence: 0.771089913333333

00:52:24.464 --> 00:52:27.360 because they becoming some of them

NOTE Confidence: 0.771089913333333

00:52:27.360 --> 00:52:29.291 becoming surgically managed both

NOTE Confidence: 0.771089913333333

00:52:29.291 --> 00:52:32.770 disease if it's local and the plastic

NOTE Confidence: 0.771089913333333

00:52:32.858 --> 00:52:35.760 styrocarcinoma and even in decent

NOTE Confidence: 0.771089913333333

00:52:35.760 --> 00:52:37.826 metastasis they do control them

NOTE Confidence: 0.771089913333333

00:52:37.826 --> 00:52:41.264 better because in general the the

NOTE Confidence: 0.771089913333333

00:52:41.264 --> 00:52:43.184 average survival for endopathy cereal

NOTE Confidence: 0.771089913333333

00:52:43.184 --> 00:52:45.479 carcinoma is only a few months.

NOTE Confidence: 0.771089913333333

00:52:45.480 --> 00:52:48.906 And we do have patient Barack and

NOTE Confidence: 0.771089913333333

00:52:48.906 --> 00:52:51.952 Merck survive one year, two years,

NOTE Confidence: 0.771089913333333

00:52:51.952 --> 00:52:54.540 but the data is still early

NOTE Confidence: 0.771089913333333

00:52:54.540 --> 00:52:56.480 because it's a recent change.

NOTE Confidence: 0.654204587272727

00:52:57.000 --> 00:52:58.950 Would you expect that survival benefit

NOTE Confidence: 0.654204587272727

00:52:58.950 --> 00:53:00.840 to be carried into the general,

NOTE Confidence: 0.48110821

00:53:02.840 --> 00:53:05.720 no, like unfortunately no birac,

NOTE Confidence: 0.48110821

00:53:05.720 --> 00:53:09.738 Merc or birac inhibitor by itself in

NOTE Confidence: 0.48110821

00:53:09.738 --> 00:53:11.676 treating differential cyrocarcinoma.

NOTE Confidence: 0.48110821

00:53:11.680 --> 00:53:13.760 Our experience is quite disappointing.

NOTE Confidence: 0.48110821

00:53:13.760 --> 00:53:15.260 They're not touching them,

NOTE Confidence: 0.48110821

00:53:15.260 --> 00:53:18.060 they only, they basically only

NOTE Confidence: 0.48110821

00:53:18.060 --> 00:53:20.320 treating the anapacic component.

NOTE Confidence: 0.48110821

00:53:20.320 --> 00:53:21.301 That's the case.

NOTE Confidence: 0.48110821

00:53:21.301 --> 00:53:23.263 I show the differentiated component was

NOTE Confidence: 0.48110821

00:53:23.263 --> 00:53:25.397 not touched by the combined therapy.

NOTE Confidence: 0.48110821

00:53:25.400 --> 00:53:27.960 It's there. Yeah, thank you.

NOTE Confidence: 0.4692084975

00:53:27.960 --> 00:53:31.415 Actually the general carcinomas patients

NOTE Confidence: 0.4692084975

00:53:31.415 --> 00:53:36.360 by or natural causes not from cancers.

NOTE Confidence: 0.4692084975

00:53:36.360 --> 00:53:39.916 So we have therapy it's known for.

NOTE Confidence: 0.4692084975

00:53:39.920 --> 00:53:41.240 So they don't have cancer

NOTE Confidence: 0.742008110909091

00:53:43.880 --> 00:53:46.274 but I I was not thinking that

NOTE Confidence: 0.742008110909091

00:53:46.274 --> 00:53:48.824 there was an aggressive it was

NOTE Confidence: 0.742008110909091

00:53:48.824 --> 00:53:52.200 more aggressive but it's not.

NOTE Confidence: 0.742008110909091

00:53:52.200 --> 00:53:56.371 No. So the way very few of

NOTE Confidence: 0.742008110909091

00:53:56.371 --> 00:53:59.000 the general kind of once they.

NOTE Confidence: 0.19342594

00:54:10.840 --> 00:54:14.256 Yeah. Yeah exactly. So the rash German

NOTE Confidence: 0.19342594

00:54:14.256 --> 00:54:16.679 tumor are you already REI sensitive.

NOTE Confidence: 0.636834878181818

00:54:16.680 --> 00:54:19.312 Yeah. So they they you already try REI

NOTE Confidence: 0.636834878181818

00:54:19.312 --> 00:54:22.108 first for distant metastasis and distant

NOTE Confidence: 0.636834878181818

00:54:22.108 --> 00:54:24.048 metastasis in different shapes are

NOTE Confidence: 0.636834878181818

00:54:24.048 --> 00:54:27.240 carcinoma is mostly rash driven. Yeah.