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**TRANSCRIPT - GR 12 17 21 *"Celiac Disease - Missed opportunity or racial disparity? Surveillance of gastric intestinal metaplasia and screening/treatment of early gastric cancer in the U.S." –* Andrew Wang, MD from the University of Virginia**

* 00:19:20So glad to be led by Dr Andrew one today these Ascension she's an interventional investigate from our visual gastroenterology.
* 00:19:28Graduated from the University school of medicine university school of medicine and then completed his internal medicine residency at North West university.
* 00:19:36abroad and then traveled to the east coast is completed gastroenterology fellowship at the University of Pennsylvania or before returning home uva rays advanced.
* 00:19:46vector one job find the GI faculty to in 2007 and through his incredible achievements in contributions to the University has risen to the rank of professor of medicine.
* 00:19:55Dr Wang is known as an industry best extraordinary with research interests and novel techniques, such as the safety and efficacy of underwater and this topic mucosal reception for malignancies.
* 00:20:06And emulated techniques ears EP per client you have carcinoma.
* 00:20:10However, he should not be considered a one trick and ask him is this his grand rounds today will go in depth regarding another research passion to study the natural history African festival medical a shot.
* 00:20:20beyond his research interests, Dr Wang has an active role in multiple facets of comical parent training, education and university adore buddy I am residency house staff and the GI fellows.
* 00:20:30In honor of his incredible work as both a teacher and clinician Dr Wang received, but the outstanding patient experience Ward and was inducted into the Alpha Omega alpha otter medical society 2021.
* 00:20:41he's an exemplary member of our department, and it is a true pleasure to welcome him to the lectern to give his grand rounds today.
* 00:21:14Thank you for that great introduction I’m gonna take off my mask triple backs.
* 00:21:20All that so.
* 00:21:22thanks for all of you in person and all you're attending Thank you Brian for this kind of invitation it's been about a decade since a.
* 00:21:31Given medicine grand rounds and it's a real honor to speaking to you guys.
* 00:21:35About a topic that was pretty near and dear to my heart that I speak a lot about surveillance of gastrointestinal that plays in the screening treatment of gastric early gastric cancer in the US missed opportunity or to healthcare.
* 00:21:52So I really have no financial disclosures with respect to this talk.
* 00:21:57I want to start by dedicating the stock to Edward.
* 00:22:03ED was a friend of many in the department of medicine, he was like my second he knew me since I was three years old.
* 00:22:10And he's a close family friend he passed away just before thanksgiving.
* 00:22:14and his past president of the society of public health education for the nhl VI and he directed the national high blood pressure, education program for almost 30 years it was a senior author and James’s southern big one pressure paper during lent then.
* 00:22:29he's been credited with saving millions of lives but to me, I know him as the grandparent of my son Jake into my oldest daughter Natalie.
* 00:22:39But you know he's for me then both a role model and someone who's pick up on my career has gotten through doldrums and.
* 00:22:47He is good friend Bob Kerrey within he published this new England journal article just in the month of his passing away in the classroom.
* 00:22:55So what an honor but also wanted to honor those who donated on his behalf, whatever that's last wishes was to have contributions made to our GI research fund and as memories so For those of you out there who've donated to adds memory into this cause Thank you so much.
* 00:23:16So you know this lecture is there's always someone like me who's.
* 00:23:20been around and spoken a lot we really kind of forget the people in the background, those of you guys have been so involved in medical research.
* 00:23:28And so, this is kind of blast from the past that i've been doing this research for about a decade and it started with Justin go amount as former medicine resident she is medicine resident some good company.
* 00:23:39Just it was a GI fellow here kind of a triple who to seven speak published several papers on this topic with some black mold was a fellow of ours, and he is an advanced endoscopy fellow as well, and he was.
* 00:23:54Really stellar and has worked and garnered the acg governance award in 2013 and had an oral presentation at our big annual meeting that your presidential plenary.
* 00:24:04jenna fryer you guys all know is my partner hundred faculty as a fellow she published a couple of.
* 00:24:10Important surveys on this topic so it's really on the work, and you know sweat blood and tears of.
* 00:24:16These trainees, who have not gone on to do great things you know, unable to present a the institutions on the right of the slide I’m going to stand for in March was really because of you know, our academic coordinate free to core and you know your great work of our medicine residency.
* 00:24:33So I will further inspiration I think it's important for the students and the residents and actually the Faculty in the audience to remember you know our own history.
* 00:24:44it's important to know who we are now but also who we were and uva the school of medicine has three Nobel Prizes, the most important one, I think, is one for H pylori.
* 00:24:54warded to Barry Marshall and Robin morning, and it was 2005 for their 1982 seminal work, showing that you know H pylori was a causative agent for peptic ulcer disease and that it could be cured by curing bacteria.
* 00:25:11This is the Nobel Prize, of course, and it's the three of them downstairs and Ben Hall, all with you the school of medicine, so if you need inspiration on a late by go by there and check them out, and I think we just actually showcase the more prominent so and the.
* 00:25:26kind of picture up here.
* 00:25:32up here that's the Nobel Prize on enough bearing just keeps on his pocket but we're in current the Hannah had dinner.
* 00:25:38And you know, in addition to going to us, Sweden, I actually think in this day and age, you know if you're immortalized in social media and have a comic book that's probably almost as good so.
* 00:25:49there's this comic book of him in order to satisfy the medical community yet to ingest the H pylori fully you know it would be a be safe in this day and age.
* 00:25:59gave himself H pylori had gastric ulcer disease in terms of self and thereby satisfying Koch’s postulates so encarta Hannah.
* 00:26:09This is Barry being swarmed by just everyone like in this thousand person auditorium after his keynote lecture where I got this slide.
* 00:26:18And data period I are in here, trying to physically be like his bodyguards because of the popular you know just nature of him, and you know, the last time I saw anything like this was at rfa when I saw bottom when I was fresh.
* 00:26:33I mean, there is something more than just what we're doing in terms of excel spreadsheets.
* 00:26:39So more to the kind of this topic.
* 00:26:42This is a slide of the world CIRCA 2012 from global kind of data and highlights here in the dark blue, as you can see, on the.
* 00:26:51Eastern Pacific Rim in Russia, Eastern Europe, as well as Andy and South America, these are the rates, the gastric cancer in the world somewhere between three to 500,000.
* 00:27:03After contest some Madam pleasure, or I am is a precursor to cancer and the rates are about five to 12% prevalence wise rates of progression to cancer Point five to 1.8% a year.
* 00:27:16So then, if I show you this view of the world, he served rates of the soft jewel cancer and, as you can see, the US, which was before in this lighter blue.
* 00:27:26is now in a darker blue, but if you look at the incidence rate data three to five per hundred thousand will wait that was actually the same as the US on this slide for gastric.
* 00:27:37So the prevalence of Barrett’s or soft jewel just plays about 7% progression range of cancer per year about point 1.5%.
* 00:27:47So, looking at it a little differently, they can kind of see up here about 28,000 new cases stomach cancer in 2021 compared to 18,000 for esophageal cancer, if you overlay of the mortality curve for esophageal cancer and a gastric cancer it's essentially the same.
* 00:28:09And the kind of take a step back and talk about Barrett’s a little bit it's an important thing I believe in taking care of patients with Barrett’s.
* 00:28:16This is a picture of Tom Hanks and Rita Wilson I don't have to introduce men who have had chronic bird for more than five years or other.
* 00:28:27Risk factors, you know we as a society, almost all of our societies, as well as the hcg when the main ones recommend and ask up, however, because the rates of barons and essential cancer is much lower in women.
* 00:28:41Female patients who come with the same kind of weird symptoms, we do not recommend and asked me so there's a lot that we could unpack there i'm not going to spend my time talking about parents, but.
* 00:28:52it's actually a classical GI Colonel that if a man say Tom comes to you with five years of bird.
* 00:28:58Excuse me, if a man and woman come to your clinic and actually the woman Rita comes with five years or it's actually statistically.
* 00:29:06better off for you to diagnose something by scoping Tom by scoping the occasion yeah and so we're kind of taught these things, and I think there is value in those lessons but also kind of you know, present some biases.
* 00:29:19To kind of go further, looking at guidelines, there are so many guidelines there, these are just what five of them from across the world, with respect to.
* 00:29:27How to take care of patients with parents, how to screen them how to survey them they're very detailed that they essentially say that something that we should do.
* 00:29:36Our, this is the US is a guideline data about screening for stomach cancer screening and surveillance.
* 00:29:42As G, which is a society that I belong to you know recommendations for screening they do say that you should survey patients, but then test i'm going to play into.
* 00:29:51particularly those with some increased risk of cancer ethnicity and family history.
* 00:29:56The hga, which is another committee Amina society that I actually the committee forum know recommendation for screening and with respect to surveillance actually the hga states.
* 00:30:07That in patients within testament of pleasure, they do not recommend at this got fixed surveillance, they recommend against it.
* 00:30:16So the fan of parse this out and that out when she was a fellow looked at some of the kind of thought processes of our SG members, and these are primarily in hospice and she found over 50% of.
* 00:30:30The pests or SG members thought that in testament pleasure was a pre malignant lesion, however, about 48% of them survey, but there was really no rhyme or reason to help people when there's a real need for education and research in this field.
* 00:30:46So one of my first point here is that gastric cancer is an important disease in the US and the West is patients at risk for or with Barrett’s esophagus are directed towards spray tans Downs than patients with gasser I am deserve similar consideration.
* 00:31:03So a little bit more about the pathophysiology clinically speaking that's the H pylori bacterium and the setting of H pylori patients often develop chronic desecrate is.
* 00:31:14This is followed by progression to chronic a terrific guest writers and then in tesla metal plans, which is taught to be the break point.
* 00:31:22From which there's probably no turning back once you get in test i'm not a place, you can progress to just pleasure and then intestinal password so that's kind of the panoply of what we're talking about today.
* 00:31:36A little bit more about H pylori, this is an important in New England Journal of medicine article comes from South Korean data randomized.
* 00:31:43The study randomized patients who underwent endoscopic cure of early gastric cancer.
* 00:31:48And then they were randomized subsequently to placebo or two H pylori eradication and, as you can see here patients who.
* 00:31:56Had H pylori treatment, after having gastric cancer cured by endoscopy are much less likely to get antagonists gastric cancer later so by eradicating the cause of the H pylori organism, and this population, you can say it was.
* 00:32:13So, what then are the risk factors for gastric cancer geography and we already talked about.
* 00:32:17In the US, there are certain ethnic populations, including African Americans Native Americans Asian Americans Latin Americans.
* 00:32:24older age male gender family history H pylori of course remember the Nobel Prize obesity high salt intake smoking a terrific that stratos and gas or Diane which is focusing this time.
* 00:32:38So this slide comes from data from the last census, we got another one coming out and you guys probably know how that'll change but at that time about 40% of the population in the US was not confusion and you can see here the.
* 00:32:57Men and women, men are they kind of gold colored bar women the Teal amongst a Caucasian Americans, this is the baseline and then there's about a two fold increase in non-white patients.
* 00:33:10However, in Korean Americans and Japanese Americans look at the rates by comparison of gastric cancer many, many fold increase across both sexes.
* 00:33:20If you look at this data, even a little bit further out because we provide everyone colon cancer screening right.
* 00:33:26This is the data looking at incidence rates for colorectal gastric and esophageal cancer by siri data.
* 00:33:33And in the top bar, this is kind of the control population, the soft gentle gastric cancer rates about the same colon cancer rates lot higher, but if you kind of just focus here on the Korean Americans, the gastric cancer rate and the colorectal cancer rates are probably within.
* 00:33:50This error bar about the sand and many fold increase compared to our Asian population so really I think we have to kind of taking these data into account as we talk about guidelines and recommendations.
* 00:34:06So we kind of focus on the Asian population actually good bit of support surveilling such patients to look destruction.
* 00:34:14This is a large population based study as Sweden over 400,000 participants follow them over many decades and average follow 10 years, as you can see here in the graph on the right displeasure, and I am were associated with increased risk of stomach cancer.
* 00:34:34On kind of analysis, a trophy gas brightest and best moment of pleasure that were associated with increased risks of all types of gastric cancer really what we're talking about here in this presentation is non cardiac answer.
* 00:34:48But there was a strong association and said differently if you have someone with gastrointestinal mental pleasure within 20 years their risk of getting faster answers about 130 so probably then Caucasian population there is some room for investigation.
* 00:35:05So gastric I am is a pre malignant conditions associated with the cancer.
* 00:35:10A terrific guest writers probably is.
* 00:35:14Looking at our own data, these are uva data 300 patients who had an easy to do with biopsy in our population, the.
* 00:35:20Point prevalence about 5% 5% of our patients who live in album or accounting or come from other areas have gastric I am.
* 00:35:29Quite prevalence has been as high as 12% and other perks, the US and in our population family history of gastric cancer was associated with me, I am about an eight and a half fold increased odds ratio.
* 00:35:42However, you kind of slice it up a little bit we wanted to look at socio economic status.
* 00:35:47And we found that amongst our uninsured and Medicaid population, the rates of best practice, the frequency was much higher.
* 00:35:53compared to those with insurance and the frequency of testing amount of pleasure was a higher, as well as numerically speaking when you look at the multivariate analysis.
* 00:36:03Of Medicaid versus private payer and uninsured versus private pair chronic arthritis was statistically significant and the increased frequency gastric I have showed strong trend, so there might be something there too.
* 00:36:17So, with respect to those of you guys might go into GI there a little bit of history paths just make a real grand rounds.
* 00:36:24mastered I am defined by the loss of normal and gastric at the helium replaced by intestinal phenotype containing blood cells and then absorptive So these are the buzzwords complaint versus incomplete incomplete is worse photo versus multi-focal multifunctional it's worse.
* 00:36:42On history micrograph you can see here, this is a normal kind of appearing brush border there a goblet so, so this is complete cut by am.
* 00:36:52Here it becomes disorderly and the goblet cells are disorderly and there's the basement of the brush border, this is incomplete, I am and incomplete, I am much more strongly associated with cancer.
* 00:37:04So this is a Ferrari Portofino I like cars, my friends to boss bonnet energy and Stanford actually drives one and mismatches listening i'm happy to help them work.
* 00:37:15On the health system so maybe we can have one possibility.
* 00:37:20But the point of this slide is.
* 00:37:23Speed kills drive slowly and why do I bring this up, because there are important data like this study at a signal for that if you just take a little bit more time during and basketball.
* 00:37:35As you might expect to find more important Asians, and this population of patients to cut off with seven minutes if you didn't add looking at the esophagus stomach dudina seven minutes, the whole entire thing.
* 00:37:47Which is actually not a long period of time, those who took seven minutes or longer found two and a half times more significant lesions in terms of displeasure and cancer compared to those who did not so speed kills.
* 00:38:00So endoscopy like much of medicine is pattern recognition and so when you first develop H pylori guests right, so you get this.
* 00:38:08intro predominant inflammation and really noticed a lot of pleasure once the H pylori has been sitting around to get a more can get stratos and then testament.
* 00:38:17plays really populates the Antrim ancestor a buzzer kirby's where the hotspots, this is a in contra distinction to autoimmune or asteroid is also known as pernicious anemia there's a corpus predominant inflammation and a porpoise predominant.
* 00:38:37So I usually quiz the GI fellows I’m not going to present to you guys, but this is a do a demon and you can see that this is a salad with kozel the faults are kind of scallop like a like a scallop Shell or clam shell.
* 00:38:53And this is celiac disease that's path in the morning, this is retro reflection and the stomach and we're looking up sign up at the cardiac and there are no folds so like I said in that previous slide this is autumn the and metal, plastic interested in Australia’s.
* 00:39:10And celiac disease pernicious and so just by looking at it, we can predict, but since the pathology will be and remember you know pernicious anemia is called the SP 12 you're deficient too long insidious kills people, so we see this we usually test for an infrared sauna bodies look beautiful.
* 00:39:28It can't get assurance testing so Justin Gomez when he this, this is, I think his second study we looked at a larger swath of patients and compared.
* 00:39:38Patients who had known I am to those who did not on biopsy and found as you might expect, this is on endoscopic findings alone just endoscopy that there was a much.
* 00:39:49There was a good association between a terrific desk right as fast passes and I am and, conversely, those who had high acid states and like a soft gentle soft gel masses did not have I am.
* 00:40:01Looking at history pathological correlates of the anesthetic finding similarly those patients with IBM had a lot more gastric conditions like displeasure and cancer as opposed to an inverse correlation with parents and assumption problems.
* 00:40:17So how do we detect all this, the Sydney protocols, a way of gastric mapping and involves taking biopsies from opposite.
* 00:40:25ends of the stomach from the anthem and from the body of the stomach from the bottom and the top, as well as from Vincent sure.
* 00:40:32So, if we take you know these five station biopsies at the text virtually all patients with H pylori however in in this kind of close mapping, Mrs about 50% of cases of gastric I am.
* 00:40:46So mapping biographies are necessary but not sufficient for detecting gastric guy and we must retrain our eyes and you have to be able to see the man and profile, as well as looking.
* 00:40:59So this is just a representative patient of mine, and you can see subtly up here there's a little bit of stapling loss of folds.
* 00:41:09little ray is dairy, as this is all have a stomach.
* 00:41:12This is a special blue light in the second row called narrowband and merging, but there are other commercially available types of this image enhancement and you can see here there's this kind of regular increased vascular clarity.
* 00:41:23That is like what you would see in a colon added noma and we can diagnose those pretty readily, and this is in tesla metal pledge of the stomach at anonymous in the colon cancer so.
* 00:41:35This is a US by X thing, and this is a surface staying using indigo car mine it's a stain that we can actually use to look at typography and other changes and diagnose things with magnification and gossipy.
* 00:41:50This is just kind of those of you might be interested in GI further looking at some of the correlations using.
* 00:41:57Images enhance and dos be in this case nba you can see, here again, this paper form increased vascular, in particular the Meta pleasure this pleasure you actually get with angiogenesis that's disorderly areas of a basket clarity and it's not uniform anymore so that's becoming hands.
* 00:42:15Definitely and blue, we have a lot of other tricks meddling blue we use in other parts of medicine.
* 00:42:20But in GI it actually is taken up by intestinal type phenotype intestinal type epithelium So if you have parents or gastric I am that, even though it's a barren don't take up methyl in blue and so.
* 00:42:34It helps us to identify because of that stands blue, and this is, I am, however, if you give me a coda that stands blue variable and there are some areas that are loyal morphic that can also help me pick up displeasure.
* 00:42:47My friend Jim box bomb.
* 00:42:50Is that usc and he has and has interest because of the large Asian population in his area that he found in blind tandems and a planet and I’m studying.
* 00:43:00That by combining both nba targeting and this protocol mapping boxes, we actually got a higher yield of diagnosis, for I am so both are complimentary and that's kind of what we do here.
* 00:43:13So, as you might expect, this is kind of complex and I’ve been studying this for over a decade and you know, sometimes it's still hard to pick out, so this is an area that's ripe for Ai and there are many different.
* 00:43:25types of Ai, but this is one recent publication, and you can see that, when we train the computer and using the right inputs.
* 00:43:33That the computer aided detection, you know really is equivalent or maybe even rivals, that of experts and it's way better than non-experts so am I, help us in the future, help patients.
* 00:43:45So I’m kind of getting back to the screening thing are there benefits of screening well in countries where there's a screening program such as Korea and Japan.
* 00:43:54There are more patients found with early cancers that can be treated about 50% of all gastric cancer Stan in Japan and Korea early.
* 00:44:0215% of all cancers diagnosed in Europe, which is a Western country adopting some of those same techniques, but about 10 years behind 15% of cancers and early.
* 00:44:15If you look at these data with respect to the US and sort of the numbers are a little small but South Korea, Japan, where they've historically done biennial radiography or endoscopy This is like from over 10 years ago.
* 00:44:29Compared to the US, where there's no screening program, and this is more recent data, the rates of localized cancer again about 50% and Korea in Japan.
* 00:44:39Have over only 30% or less 28% for the US and the five-year survival is over 90 to 95% and the East Asian countries versus 70% here.
* 00:44:51So, really, I think there is a case for screening so it's how to do it right.
* 00:44:55So who does screen in the US really in our general population screening everybody probably has not effective.
* 00:45:02You should screen those at increased risk, those are the family history stomach cancer, maybe 10 years before maybe smokers and first generation immigrants from a high risk area, probably at age 50.
* 00:45:14Remember, those with prior H pylori or increased risk so probably worth spreading if you have a personal history of a terrific guest writers are, I am found, incidentally, there was a deadline and hospice was looking around me.
* 00:45:28And then we're going to get into this last point about non Caucasian Americans at the time of colorectal cancer surgery.
* 00:45:35So how do we have this topic with screen will number one remember speed kills Take your time.
* 00:45:39Use high definition and asked if he is and all these images enhanced analysis and we talked about separate your specimens use the protocol biopsies don't miss an opportunity to look if you have to stop someone.
* 00:45:52And really we're still struggle with how often this group, so this is a study that I was talking about that with some conducted and.
* 00:46:00He actually looked at a lot of patients, using our uva databases whittled down to a population of 675 patients who had invested my pleasure the stomach.
* 00:46:13Of these patients 14 went on the gastric cancer our control arm in this large study consistent of 1200 patients who did not have an estimate of pleasure, only one went on the gastric cancer and we found in this study that age increasing age associate with testament of pleasure.
* 00:46:34Also, H pylori as you might suspect and testament of pleasure was associated with risk of stomach cancer.
* 00:46:42And if you look at our survival curves there is an 1111 fold increased hazard ratio and patients with I am for developing cancer, with an actuarial risk of point 3% in one year, but up to 3.7% of engineers, so this is kind of heightened our awareness and we you know we try to.
* 00:47:00Especially pay attention to people within tesla little pleasure that's diffuse.
* 00:47:04So surveillance for gastric I am Is it reasonable well from my talk in these data, I really do think it is who what should be surveyed.
* 00:47:14Probably those with multi-focal incomplete type I am if you have pernicious anemia family history gastric cancer, how do we do it, as I said before, carefully and all your tips and tricks good.
* 00:47:27Good technique and then really what's the interval not sure yet, but I think every two to three years and patients without displeasure.
* 00:47:36This is the guideline I use from the European society of GI Alaska it's called the best to they've actually had so much time go by that they revise their guns.
* 00:47:45And as you can see here and patients who have only mild or moderate I am that's focal no family history of gastric cancer, no screening survey I know surveillance needed if you have focal I am, but you have a family, history or incomplete bad phenotype or H pylori.
* 00:48:08You may consider a screening and every three years, if you have some of these bad factors, if you have multi-focal, a trophy stratos or I am and a first degree relative you should scream and be more intensely every one to two years.
* 00:48:21If you have multi-focal and none of the bad factors that dream.
* 00:48:25And this is kind of why I’m a little more interested in people who you find this pleasure, through the surveillance if it's visible, we can actually reset it and change the natural history of their life.
* 00:48:36They can disparate surgery hopefully inspire so the British society has 10 have endorsed kind of the data that I’ve shared in my slides recommending surveillance for those who are in higher risk, who are multi-focal disease etc and surveillance, like a like a set.
* 00:48:54So there couple hundred of my colleagues across the US when we hga which the hga is one of our societies, but because of its.
* 00:49:04I think lobbying efforts and it's 10 year the Medicare and our private Paris tend to consider AJ guidelines little more seriously.
* 00:49:12And when this was about to come out there's a period of public comment and a bunch of us really wanted away in.
* 00:49:18Because the guideline was going to come out it's going against surveillance, so we really we kind of had the social media campaign and published a petition really trying to.
* 00:49:27persuade the hga to think about some of these patients who may be a higher risk, including these ethnic populations and that led to the NGA kind of putting a caveat saying you might individualized but they still said don't survey and everyone will construct better place.
* 00:49:45So the last part of my talk we'll get into therapy so here.
* 00:49:50Is an a traffic stomach it looks pretty uniform, but if you actually look carefully there your eyes might be drawn to that area.
* 00:49:56When you get closer using this narrowband imaging you can see that it looks like master diagram or like a colon that in a moment, go saying, but there's an area of a basket clarity, and this is near cancer it's hydrating this pledge.
* 00:50:10So we can reset small lesions Brian Wentworth and do this almost any and hospice.
* 00:50:17Using emr and some of these easy tools and tips and tricks that we have available, but, as you can see here, this is a small plastic lesion and we get a small piece, but in this case, it was enough that's all of the finishing.
* 00:50:32However, when you talk about being a cancer doctor and for those of us in July we're not medical oncologist but you go into advanced class be kind of have to put on and the surgical oncology hat.
* 00:50:44And we talked about curative resection and that really means on block, so if it's a bigger lesion you want to try to get the whole pizza pie as a whole mountains places.
* 00:50:53And if it's actually something that may be cancer you don't want to take it piecemeal which Mr if it's greater than one or two centimeters more result and you want to take it on blocks so ESP endoscopic semi proposal dissection and something that we do here.
* 00:51:11So these are specimens that we've removed ever moved by espn you can see, I mean this is like 10 centimeters and you know it's almost like when you might get from the search full.
* 00:51:21specimen that's encouraged to colleges, so this is kind of what I’m talking about online.
* 00:51:27So my one of my mentors Professor ODA from the national cancer Institute in Japan put this data together in 2006 quite a long time ago, but found that unblock resection with dsd superior to emr.
* 00:51:40Patients patients who got asd for early gastric cancer is had worked on Blocker sections and one piece 93% versus 56 rates of curative resection 94 versus 61.
* 00:51:52perforation as a little bit higher with bsd because it's a bit more difficult endoscopic procedures, but all complications were managed on this topic, where no one needed surgery, no one died.
* 00:52:04If you look at a recent more recent Meta analysis just looking at gastric cancer recurrence after ESP unlock reception versus Mr more likely to be piecemeal.
* 00:52:15We can see that almost all of this, published studies favor bsd with respect to lower current students.
* 00:52:22So this is where I did our own Horn, a little bit, but you know we were the first to do this procedure in Virginia in 2010.
* 00:52:29And I have to credit, my friend foggy and more who you're one of my mentors hook me up with and I he's half Columbian half Japanese and I went to Bogota to learn.
* 00:52:40optical imaging as my last yesterday and in 2010 Paul eating my then mentor and I were both on faculty did the first DST in Virginia, possibly, the first in the US using these now lead developer sites and save this person of hybrid dysplasia bill rough to construct and.
* 00:53:00So this is kind of a story, and you guys do a great job helping the occasion when I met these people, which now less than less, we do, but in 2010 we did the first gastric dsd.
* 00:53:112012 we did the first soft Julie St 2014 because we got so good at doing, yesterday we started doing homes you guys helped me a lot with postpartum care.
* 00:53:23that's really opponents and easy yesterday with higher potential, you know consequences complications.
* 00:53:30And 2015 we started doing colonic ESP, which is quite challenging because the colon is mobile and thin.
* 00:53:36And in 2017 and kind of hit the pinnacle dude you know ESP or any kind of nudity or sexually Mr is considered the most dangerous area in the GI tract work, so these people are afraid, even if you're doing things well when they bleed.
* 00:53:50These are examples of patients who had curative ESP, this is a live Yun pala point cancer suddenly kozel cancer.
* 00:53:58On the left and this patient is cured and i'm more than five years this middle column is the example I showed you before, and it was removed and cured more than five years.
* 00:54:08This is a Korean patient who had a lesion spanning the stomach and that's the end of them so it's a little tougher to work on the curve, but we were able to hear this mucosal cancer.
* 00:54:19This patient had a bill Ross of prior gastric surgery, and so any kind of further gas or surgery real tough and the proximal stomach were able to remove this hybrid displeasure lesion.
* 00:54:29And even can get more extreme you know once people figure out, you can do these things they asked me to do all sorts of crazy stuff.
* 00:54:35But sometimes it does pay off this is a patient from Augusta who are friends they're found in early cancer removed at by emr and then they followed the patient there's recurrence and then they probably frozen.
* 00:54:49And then there is another occurrence, then they call us and then we're you know we're trying to help this patient is not a good candidate.
* 00:54:55And you can see here, this is the lesion and we're chipping away at and in this white stuff is fibrosis it's like concrete.
* 00:55:03And I’m supposed to be Sunday causal tissue a little fat and so very startup and we use actually clips and dental floss and some instances of traction kinda like a MED student would during surgery.
* 00:55:16and were able to remove these So there are a lot of kind of neat little tricks we do to kind of.
* 00:55:24Make it so that a one armed procedure can really do these things, because and that's really just like having a circle, with one arm.
* 00:55:32So kind of let me see if I can make this video work here.
* 00:55:36This is a patient.
* 00:55:40of mine who had a fund application, and you can see here, this is a illusion that over time was surveyed and one from library into high grade and it's contact using when we irrigate it so that's a sign of me and pleasure.
* 00:55:54And it's depressed it's not something you can easily cut off it's about two and a half centimeters in size anything endoscopy more than one centimeter is a big so we mark out the lesion.
* 00:56:06we're injecting it some you causally between the coasts and the muscle to try to get this cushion with.
* 00:56:12which we can work, those are the markings we're using the special electro searchable knives to actually do like the most surgery in the stomach one hand.
* 00:56:22And that's the glue that's exposed down in here is the suddenly kozel layer and that's how we know we're safe and we're not going to periphery.
* 00:56:32And so, then we kind of we call this trimming but we further get into the semi poser open it up.
* 00:56:39And kind of repeat the steps over and over until we get around the whole thing this is us almost completing the circle French incision.
* 00:56:49And as you can see here there are named vessels, this is not a name vessel, but there are large vessels in the stomach so when you do this kind of thing, yes, be able to control bleeding or prophylactic Lee take out large vessels.
* 00:57:01And so, this is after we've done around the whole area of interest in left the margin we're using a clip with dental floss.
* 00:57:09Like I said a dental floss is actually FDA exempt for medical use that's why we use it for flossing but it's actually a cheap way to provide traction so we don't.
* 00:57:18break the piggy back so here we're using actually just the weight of the Tennessee cmt syringe on the dental floss and you can kind of see the traction that is exhibited.
* 00:57:29And once you kind of get that traction it's pretty easy to see how you can use that to your advantage and try to get at some of the five brodick layers better, and so it avoids the risk that you're going to cut up.
* 00:57:41let's see if I can fast forward this a little bit.
* 00:57:45So there we've taken the whole thing off.
* 00:57:50Spare this person surgery we're looking at a special light and the other thing is, we pin it down so pathologically it's like surgery the pathologist and serially section if there's cancer, they can tell you that the whole thing so it's like a mini search.
* 00:58:10So, because we were such early adopters we are part of a lot of multicenter studies, this is one led by one of my good friends at Hopkins.
* 00:58:19we're trying to compare our outcomes in North America to the Asian experience, which is predated it's about 20 years when we actually found very good rates of success with respect to unblock in our zero resection 92 and 82%.
* 00:58:34Are perforation rates were pretty acceptable 6.6% all of them that we could cure, and this topically.
* 00:58:41Low rates of delayed bleeding and importantly low rates of recurrence 4% of cases and all of them can be treated endoscopy so these people were spared surgery because of data, like these, and national comprehensive cancer network ncc N, which is kind of like.
* 00:58:58The ones that direct medical care, as well as in the partner with cms and Medicare they do give room for endoscopy per section and asd of small gastric lesions this is us where we respected the whole ancestor.
* 00:59:16And like you can see here, so this this nomenclature key is 31 days interment causal cancer pretty much.
* 00:59:23And even for medically fit patients ncc and sets that you can pursue on the Scott VIP reception and surveillance so that's really the power of what we offer.
* 00:59:32For those of you are interested, we can talk about this later, but we've actually broken this down and an Aristotelian way, so you kind of can predict which patients are low risk for known metastases.
* 00:59:43And so really it's the green the yellow that we focus on for yesterday and then this topic here and those patients who have a higher risk of lymphoma that's the answer.
* 00:59:53So I’ve been lucky enough in kind of like I said, the work of our resonance fellows and and my own, to be able to leave these two NGA documents or clinical practice updates helping to kind of further.
* 01:00:05The practice of yesterday, as well as talk about launch points for surveillance, as you know, more and more people can do it.
* 01:00:12This, I think, is an important slide and I want to spend a moment on it, my friends.
* 01:00:18shall just Shaw and it's Monica some boy this Markov model and it's important because they're actually looking at a population of patients who undergo end at the time of first screening colonoscopy.
* 01:00:32So this could be at age 50 or nowadays 45 they even modeled it for people at age 45 and you have kind of these different conditions.
* 01:00:41Know screening people who got stuff every two years, which is very intensive surveillance and then kind of what we've been talking about using mapping biopsy surveying if there's a good reason.
* 01:00:53And they kind of walked us through if you add H pylori treated if they could get a terrific guest artist, I am dysplasia.
* 01:01:00If you've got this pleasure, you could respect it and hear from some people get surgery, some people died from metastatic disease and then this.
* 01:01:09Mark off cost effective model for your cut off was about $100,000 for quality adjusted life here, you can actually find that for all.
* 01:01:20Patients in the US short of non Hispanic whites the strategy of gastric cancer screening at the time of colonoscopy if you kind of be judicious and you're just kind of survey, those who have increased risks and ethnic.
* 01:01:34Exposure etc, it was actually superior, so this kind of gives rise to the research that's going on right now to see and those people that were serving are really saving lives as a cost effective in the real world, but I think it's important.
* 01:01:48hot off the press, just to show that there's more and more coming up, this is the red journal, one of our top five journals and shows race and ethnicity is important, this is actually done out of Houston.
* 01:01:58And they actually found that impatience Hispanic patients who were second generation immigrants, they actually had a more baseline rate of.
* 01:02:09gastric and testament pleasure risk so maybe first degree immigrants are some of the population to focus on more so more to come.
* 01:02:19So kind of as I went down my talk, you know in 20 as we're approaching 2022 I think we all want to be equitable but also provide personalized medicine.
* 01:02:29buzzwords so if Tom Hanks presents your clinic Hopi well, and he has five years of grid, by all means, please scope them offer me Judy if Rita comes and she has this page a good reason for endoscopy.
* 01:02:44Please offer any Judy However, if there are come company by aquafina.
* 01:02:51soon as a half Korean half Taiwanese like my kids my wife's Korean or Halle berry.
* 01:02:57or humble Pascal or his Alter Ego the men delorean manda lorena put up your remember, we talked about socio economic status he's an orphan he's homeless, you know people who are uninsured these people, you should think about cancer cancer screening and surveillance if it's appropriate.
* 01:03:16So, of course, more research is needed, but I think we want to cast a wide net and not exclude.
* 01:03:23You know, parts of our society without you know really good research.
* 01:03:28And, of course, bring it back to you know the prize, but really what we're seeking is an optimal outcome stay for all of our patients.
* 01:03:37Not just you know stuff like this, so take home messages i'm not going to go over them in detail, but gastric cancer is important to us, faster items of pre malignant condition.
* 01:03:49Careful and the Scott big examination of the stomach is key, using our latest and greatest tools and tricks screening today should be considered in those with a risk factor for gastric cancer.
* 01:04:00surveillance for certain patients at risk or what types of I am is probably beneficial and please consider screening and surveillance and not to speak for gastric I am an early cancer.
* 01:04:12As they may be cost effective when performed in non went populations at the US at the time of screening colonoscopy.
* 01:04:20So now close, I think we got blood and minutes if you guys have any questions happy to take i'm happy to talk to guys afterwards Thank you so much for your.
* 01:04:41Other question thanks for great really interesting saw you showed them screening hdd is really important for.
* 01:04:49gastric cancer quality special populations think its primary care physicians we can often face insurance standing in the way and a lot of that can you speak to our insurance process has gone from four events and stuff like that yeah I think.
* 01:05:05I want to be fair, you know, there is actually also research in our field that says stop taking it easy just to me.
* 01:05:16This is my opinion.
* 01:05:19But in practice I’ve never had a patient.
* 01:05:25No it's not going to be like your first screening colonoscopy or if you find out polyps you shouldn't have to pay anything it's gonna be a diagnostic DVD but insurance bone tonight.
* 01:05:35And, most people have like up you know if there are many piano player reasons, with DVDs for mild this dyspepsia, and so I think, and I need you to use in the scheme of it, and this topic procedures, probably the least expensive and I’m not trying to make an.
* 01:05:53argument that it's not expensive so should I actually think that screening high risk patients really will save lives in a difference because we find things better, now we have better tools.
* 01:06:05We can treat early cancers and prevent people from getting surgery and prevent them from died, and so I think with that kind of therapy more intensive screening, maybe so but um and with respect to a PCP offering it as far than have any patient at nine.
* 01:06:25One yeah I think.
* 01:06:28We practicing here at a big academic Center like uva get kind of blessed the abundance of resources, and so a lot of times we have a lot of things that our disposal, but be advanced endoscopy imaging technology we're talking about identify some of these items.
* 01:06:40That other than anybody doing and asking Felix data Community practice or private practice group has the ability to do or is that something that.
* 01:06:46The is really more of these big academic Center that's great question actually their commercial available stokes see you buy a scope it's a button question is, do you really know how to use it once again.
* 01:06:56And that's different so you know we're really teaching our trainees now I just recently got on Twitter, because I head up a committee and I’m learning from you guys how to use the thing.
* 01:07:06That actually there's actually very resources on Twitter and other things and cases and really I think information as much more easily.
* 01:07:14So you guys will be the wave in terms of whatever field you doing cardiology energy and the Scott big image and what have you, I think.
* 01:07:22there's going to be a really exciting time and with Ai interfacing that I think there are personalized medicine really this year it's just how do we do it in a you know kind of conscience.
* 01:07:32Thank you have you seen that you know, there seems like there's.
* 01:07:36Your changes in terms of like and Scott peck technique there's only so much you can learn in the training period once you're out into practice 510 years.
* 01:07:46To like have you seen diffusion of ideas at the appropriate pace, I mean.
* 01:07:50I imagine it's so different from a lot of people trained to do yeah I think that's huge you know continual learning how to do that it's not just your Sienese at the end of the year.
* 01:08:01How do you actually get some of the hands on stuff the ass JI has been a leader in the space I’ve given a lot of courses in their data.
* 01:08:09I can see it's in training institute and downers grove that such Chicago and we hold a lot of courses with.
* 01:08:17In vivo and executing their own kind of models and more diagnostic stuff as well as therapeutic stuff.
* 01:08:23And of course you gotta think at some time but it's really heavily attended by a private practice people who want to read and I think the risk on certain areas so.
* 01:08:32There is that it's not some of the hands on stuff's hard to explain over Twitter, you can kind of get the cognitive aspect but there's some of that there's regional courses, you know we hope to kind of start up another hands on kind of course we've done a few in the past.
* 01:08:49But no, I think that's a unmet need that some societies are trying to address, but you know there's still probably room from.
* 01:08:59I got a question in the chat.
* 01:09:02So, though I know Barry like screen everyone who and how do you screen for H pylori.
* 01:09:07That term is Dr ground Oh, that the current so I actually the sending protocol which I showed you that slide if you take.
* 01:09:18biopsies from the distal proximal stomach from the answer him, and it should to from opposite was the answer one friend and sister.
* 01:09:26And you can put that in one jar if you're looking for them, but if you really don't care and use like three or even.
* 01:09:32The exact same jar for also to proc to biopsies kind of proximal stomach opposite wall so five biopsies that will take this like two minutes or less put it all together the.
* 01:09:45The accuracy of finding H pylori if you do that by nine nine.
* 01:09:51Now there you have to kind of ask for it and there are other ways of testing to ferret a KPI it can reduce kind of the sensitivity in terms of.
* 01:10:03Age February, but if you're going to map it out or kind of try to get it under skeptical using the city.
* 01:10:11thanks for that background.
* 01:10:19Like I said you guys don't have to find me to want to come watch or if anyone's interested in this field, know there's a lot to be done.
* 01:10:28Great thanks, thank you.
* 01:10:36isn't still image or PCR also.
* 01:10:42It is we don't have.
* 01:10:44A scoping.
* 

**Unknown Speaker**

01:10:50manage it anymore.

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**UVA Chiefs**

01:10:52So maybe more expensive, the.

* 01:10:56experience.
* 01:10:58You can do that.
* 01:11:01So, usually if you want to get should rather make sure you read it.
* 01:11:06To me.
* 01:11:08thanks again.