\*PLEASE NOTE: Auto transcription by Zoom, mistakes may be made in transcribing, please take into consideration.

* First, with an integer introduction of our speaker today so today I have the honor to introduce Dr a mock at 939 and completed her undergraduate education at Cornell University, followed by Medical School at Macquarie medical college.
* 00:33:14Then made her way to Boston where she completed her internship and residency in internal medicine.
* 00:33:20As well as her fellowship and nephrology at the Brigham and women's hospital impressively she also completed an mph from the Harvard Th Chan School of Public Health, at the same time she was completing her fellowship training.
* 00:33:32joined the academic ranks initially at Massachusetts general, but now is a member of the Faculty and nephrology faculty at the promo and school of medicine at the University of Pennsylvania.
* 00:33:42In addition to her primary faculty appointment she's a core faculty Member in the palliative and advanced illness research Center.
* 00:33:49A senior scholar in the Center for clinical epidemiology and biostatistics and the director of health equity anti-racism and Community engagement in the renal electrolyte and hypertension division at Perlman school of medicine.
* 00:34:02has had an impressive clinical and research career with numerous NIH grants that focus on the intersection of chronic and end-stage renal disease with advanced care planning and palliative care.
* 00:34:14has amassed a number of very impressive publications and awards that reflect that she has been and continues to be an outstanding clinician-researcher and mentor.
* 00:34:23Dr nine has traveled extensively to give grand rounds and other high impact presentations and it is a distinct honor to have her with us today, as we continue our health system wide conversation on health equity and with that i'll give it over to Dr nine yeah.
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**Nwamaka Eneanya**

00:34:40Thank you so much for that super kind introduction was my honor to to be in the room, and I just you know I only wish that I could have done this in person.

* 00:34:49But it's my honor to talk today about a subject that's near and dear to my heart and that's serious illness care so today we'll be talking about killed that would eat for serious seriously ill patients with chronic kidney disease, what have we learned so here's my one financial disclosure.
* 00:35:06objectives of this talk will be the first summarize the role of dialysis for seriously ill and elderly patients with kidney disease.
* 00:35:13The next move on to describe patterns of care at the end of life for patients with kidney disease and lastly we'll review racial disparities and caring for seriously ill patients with kidney disease.
* 00:35:24So some key definitions that I'd like to start reviewing.
* 00:35:28are as follows, these are from the World Health Organization and the World Health Organization defines health equity as the notion that everyone should have a fair opportunity.
* 00:35:37To attain their full health potential and that no one should be disadvantaged from achieving this potential.
* 00:35:43I also wanted to define palliative care, which is an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness.
* 00:35:52Food prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems physical psychosocial spiritual now the words that you see here in bold red.
* 00:36:03remind me of the fear of the field of nephrology so in my opinion, health, equity, and palliative care is a nice marriage in terms of advancing the field of serious illness Karen apology.
* 00:36:16So what is kidney palliative care or basically aims to improve quality of life for seriously ill patients with kidney disease and their caregivers.
* 00:36:24And the domains of kidney palliative care includes symptom assessment management goals of care and advanced care planning and treatment decision making and the bulk of my talk.
* 00:36:32will really focus on goals of care bansko planning and treatment decision making, I could probably give you a separate talk about symptom assessment and management.
* 00:36:41And the options for training and can you palliative care are broad now and more and more programs, including pen are now doing the specialty tracks within your policy in which you.
* 00:36:51Do a combination of kind of clear trading in ufology and come out board certified in both fields.
* 00:36:57Now, as of 2020 when Dr Sam gilpin who's one of my mentees and friends, we published this review and the event is a chronic kidney disease and only 50 for clinicians.
* 00:37:07As a 2020 Wer board certified in both type of care and ufology so it's small but it's growing in terms of people who are doing train.
* 00:37:16And there's that we need dedicated efforts to course improve education, work course capacity and to also advanced research and policy in kitten palliative care.
* 00:37:26So let's talk about dialysis decisions I always like to talk about clinical cases in my presentations to give you a little bit more of a contacts into the discussion.
* 00:37:37So patients the team was an 83 year old male with a history of bladder cancer satisfied suspect, to me, and he asked me prostate cancer status post radiation therapy real cell carcinoma sense post right partial nephrectomy.
* 00:37:50And she had stage for chronic kidney disease, you can see his baseline labs there, who was presenting for just a routine outpatient follow up.
* 00:37:57Now this gentleman was normally very well put together very lively and when I saw him he had notable power and had lost 15 pounds in the last six weeks.
* 00:38:07He also had this complaints of metallic taste in his mouth profound fatigue and practice.
* 00:38:14So a little bit more of a background into his his clinical pusher because renal disease.
* 00:38:19He had recently had this redo HELIOS me do to severe hygiene of process that was complicated by moderate increasing output so his renal function was.
* 00:38:27Rapidly declining and I had a discussion with his on his urologist who said let's just try to do the HELIOS me again let's let's let's keep this guy off a dialysis.
* 00:38:36And it worked, but a known complication is this this moderate increase in his elasticity output and he was just having a very hard time keeping up.
* 00:38:45So here his labs that he obtained before seeing me at the clinic is sodium was elevated 150 by carb is very low at eight he had a cute on chronic kidney injury.
* 00:38:55hyper hypoglycemia and he was anemic and so, of course, I sent him directly to the emergency room for treatment of severe dehydration acute and chronic kidney disease and his anemia.
* 00:39:06And I have clinic from one to five, and before I finished my clinic it was it had to be a matter of 30 minutes.
* 00:39:12I had a phone call from the emergency room saying we got to start this guy on dialysis, and so the question I would pose to the audience is.
* 00:39:20You know what would you do, would you start dialysis for this elderly gentleman who has multiple cancers and very advanced kidney disease, what would you do in that setting so i'll have you think about that as we move on with the discussion.
* 00:39:34So let's let's look at actually mortality curves or for patients who have end stage kidney disease or now terms kidney failure as of 2020 years or D has been has been rebranded and to kidney failure.
* 00:39:47And so here mortality curves from our US RDS database, which is a national database that houses all information for patients with kidney disease, whether it be chronic kidney disease or kidney failure.
* 00:39:58And these are mortality curves for patients, under the age of 65.
* 00:40:02Who start dialysis so in this blue curve, you can see haemodialysis patients and on the yellow curve, you can see peritoneal dialysis patients.
* 00:40:09On the X axis, you have months after dialysis initiation on the y axis, you have desktop or 1000 patient years and these curves are adjusted for age, race, sex, ethnicity and primary diagnosis.
* 00:40:19So you can see here with a well known fact is that mortality is highest really the first three months of dialysis initiation and it kind of plateaus after that.
* 00:40:28hemodialysis have a slightly higher mortality risk of as opposed to peritoneal dialysis but not there's not a huge difference between the two modalities.
* 00:40:37I want to contrast these mortality curves with patients over the age of 65 and you can see here significantly higher mortality rates for both patients on haemodialysis and peritoneal dialysis i'll just go back and show you again under the age of 65 over the age of 65.
* 00:40:53And so, if there is another option that's not dialysis what is that and that's medical management without dialysis, also known as conservative.
* 00:41:02kidney management or maximum medical management without dialysis, and this is essentially non diabetic therapy that.
* 00:41:09is focused on treatment and fluid balance anemia blood pressure electrolytes as an acid base abnormalities.
* 00:41:15As well as a big focus on physical symptoms and social support so essentially it's the care that is being provided to patients with chronic kidney disease.
* 00:41:23And you just continue that care beyond the point where you would start dialysis and again really starting to think about quality of life.
* 00:41:31Physical symptoms and psychosocial support something that a lot of dialysis patients once they start, in particular in Center haemodialysis patients they don't have ready access to, for instance palliative care or other clinicians that had that expertise.
* 00:41:45And so, you know as we're thinking about the different types of treatment options for older patients the number one question that always that always comes up, especially when it comes to clinicians the way I teach it.
* 00:41:56to you about this is what about survival, so I really like to show this very nicely done study that was published in 2016 it came out of the Netherlands, in which the investigators that are retrospective survival analysis.
* 00:42:08of patients who were aged at age 70 years and above who had kidney failure and, at the time that they opted for treatment, whether that be conservative management or some type of dialysis therapy they started the clock.
* 00:42:23And in total 107 patients chose conservative management versus 204 patients that shows some type of renal replacement therapy, whether that be haemodialysis or peritoneal dialysis.
* 00:42:33And no surprise for those who chose haemodialysis median survival was longer so for those who had haemodialysis meetings arrivals 3.1 years versus 1.5 for those features conservative management.
* 00:42:48It was very striking and interesting in this study was that for patients who were age any years and older.
* 00:42:54There was actually no significant survival advantage, you lose that survival advantage, once you approach that age.
* 00:43:00And that the survival vantage was substantially reduced and patients age 70 and greater, and particularly those who had.
* 00:43:07comorbidity score greater than three was specifically cardiovascular comorbidity.
* 00:43:12So this is something that I, this is a piece of work or a research, study that I love to review with my patients as we're engaging and shared decision making about what treatment option is most aligned with their goals and values.
* 00:43:23And there are plenty of other observational studies that mirror these results, is that you can live, you can certainly live longer.
* 00:43:30Up until a certain age and then, as you get older that survival advantage decreases and there's also been a lot of research to show that quality of life is definitely improved among those who don't.
* 00:43:40choose to do dialysis when they're older functional status has also improved and they're more likely to use palliative care and hospice resources towards at the end of life.
* 00:43:50And so, you know as I focused on survival and mortality, the question is, is that as important to our dialysis patients are like what what do they consider important, and so this was a study that was performed in 2016.
* 00:44:02and which the investigators conducted focus groups to list priorities for patients and their caregivers about what was most important to them.
* 00:44:11And you can see here the top priorities were fatigue energy resilience and coping ability to travel and mortality is way down here priority number 14.
* 00:44:21And this was shared between both patients and caregivers patients being in the Teal caregivers being in the light blue that this is not, this is not one of the.
* 00:44:29Most important important priorities when they're thinking about.
* 00:44:34Their treatment options it for kidney failure, and so, although clinicians like to focus on survival and they think that oh my gosh my patients are going to be freaked out by saying that you may not live as long.
* 00:44:44That actually may not be important to them and it's really important to ask a patient, what is important to them when you're engaging into your decision making to make that option to make that that treatment decision.
* 00:44:54And so what does the lay of the land look like for our patients who actually do choose to do conservative management, this is a really important study that was published.
* 00:45:04In 2019 by Dr Susan long Dr john o'hara and others from Seattle University of Washington in Seattle and which they did a qualitative study using.
* 00:45:13The electronic medical record which was very innovative and they looked at 851 medical records.
* 00:45:20of adults who are older, in the va system, who had decided to do conservative management and three major themes came from this qualitative analysis.
* 00:45:30The first thing was that clinicians tended to repeatedly question their patients when they decided that they did not want dialysis they would try to encourage them try to.
* 00:45:39You know kind of browbeat them into making the decision, and if it was actually very distressing for me to read that the second theme.
* 00:45:48That arose is that when patients were not good candidates for dialysis that clinicians tended to view them as kind of.
* 00:45:55objective criteria so that their age or their expected prognosis rather than engaging and shared decision making and seeing if their treatment options were aligned with their goals and values.
* 00:46:05And the third dynamic to me, which is the most embarrassing for the photo reference nephrology is that when clinicians believe they had.
* 00:46:12Nothing else to offer the patient when they chose conservative management, they just signed off from their care and said, you know what this patient is going to go to hospital not doing dialysis so.
* 00:46:20We have a lot of work to do in terms of the infrastructure to support patients who actually do not want dialysis the path of least resistance right now is actually putting them on dialysis.
* 00:46:30They qualify for medicare a bunch of services, social work and so it's really easy.
* 00:46:36For a clinician to do that, but again, if we want to change the paradigm, here we have to be changed, thinking about what's most important for our patients and how and how to align with those goals and values.
* 00:46:46And so, this is a qualitative study that I published in bmt nephrology last year in which we did qualitative interviews among primary care physicians physicians to adjust.
* 00:46:57And patients who were older older than the age of 65 who had advanced kidney disease as as well as their caregivers.
* 00:47:03And this was really at the point in the renal disease, where they had to make it some type of decision, whether that be dialysis non dialysis and we wanted to just kind of gauge.
* 00:47:11What their experiences were with dialysis decision making, discussions and advanced care planning.
* 00:47:16And what we found very interestingly in this study was that nephrologist in primary care clinicians were very, very aligned.
* 00:47:23nephrologist felt that this is my responsibility to decide who's appropriate for dialysis versus who's not.
* 00:47:29And primary care clinicians felt that they really wanted to own advanced care planning they really wanted to have that type of supportive advocacy role.
* 00:47:38For their patients with advanced kidney disease and each person was pointing at each other, saying like you do this, you do that they're pretty much aligned, however, for patients and caregivers.
* 00:47:47They weren't aligned so despite nephrologist thinking that they really were doing a good job of describing dialysis or non biologic therapies.
* 00:47:55Patients and caregivers really had a minimal understanding of what type of lifestyle change what happened with dialysis they just assumed that they would feel better all of their symptoms would get would.
* 00:48:05would go away and that they would actually do better like actually perhaps not need dialysis in the future, or be eligible for transport when indeed they weren't.
* 00:48:13And then, in terms of advanced care planning a lot of patients felt that it was type of a process that you just had to do so, one of the patients, for instance, said.
* 00:48:20This was many years ago that I filled out advanced directives i've been in and out of the hospital for years i'm sure it's just part of the process.
* 00:48:25They really didn't understand the significance of having a health care proxy convey their goals and values or their wishes if they became critically ill and so again.
* 00:48:36We need to have more of a comprehensive communication system and management system for our patients to really make sure that again they're they're choosing decisions that are aligned with their goals and values.
* 00:48:47And that we support that maximally in those decisions.
* 00:48:51So what about educating patients about the other option and medical management without dialysis.
* 00:48:57Currently there's minimal education that's that's available in the United States, Canada has a lot of resources, Australia, which is known for really kind of.
* 00:49:06Leading the supportive kidney care literature, has a ton of resources, but here in the United States it's very minimal so.
* 00:49:14We published this this clinical trial 2020 where we did a pilot randomized controlled trial to educate patients about supportive kidney care.
* 00:49:22and see if knowledge would improve after we educated them so essentially we wanted to test the efficacy of this 11.5 minute video.
* 00:49:31Decision aid on knowledge of supportive care among elderly patients with advanced ck D.
* 00:49:36And so, patients who were eligible were age 65 years or greater English speaking had advanced ck D stage four or five.
* 00:49:43And had been referred by the nephrologist that both pen and Massachusetts general hospital because I finished a trial once I got to pen.
* 00:49:48So they're randomized receive education, via this video versus.
* 00:49:53A short verbal script that describes the content of the video so five minutes or less than five minutes.
* 00:49:58And then the video it was real patient images of patients receiving haemodialysis in Center or some type of home dialysis therapy, whether that be paired to meal dialysis or him home our home, you have dialysis.
* 00:50:09And, and then the option about supportive kidney here or non diabetic management of kidney disease.
* 00:50:15With somebody in their home and they're setting or surrounded by their family also you see the patient visiting their doctor, etc, and then there's a person who's speaking describing supportive kidney care.
* 00:50:25And the outcomes again that we were interested in, or the proximal outcome of just knowledge supportive kidney care knowledge and a secondary.
* 00:50:31was a preference for supportive kidney care we made that preference secondary because we realize that.
* 00:50:36Shared decision making is is usually not done in just one a one time visitor or one time educational session, and so we made sure that that was a secondary outcome and we power, the trial for to look at this supportive kidney care knowledge.
* 00:50:48And so here is the table, one for the study.
* 00:50:52You can see here that the both arms whether those patients who receive verbal script education versus video where we're quite balanced, with the exception of a few things the video script had a higher proportion of males.
* 00:51:05As well as a higher proportion of nephrologist that had art be the video script had a or the video arm had a higher proportion of patients, where the nephrologist had already sent them to some type of pre dialysis education prior to them entering into the study.
* 00:51:18We also collected the surprise question, in which we asked all the nephrologist you were referring their patients.
* 00:51:24Would you be surprised if your patient died in the next one year, and you can see here that consistent with a lot of other literature that the proportions.
* 00:51:31we're we're not 50% but they you can see that 18% felt that their patients.
* 00:51:37They would not be surprised in the verbal script arm and 28% of patients or 20% of clinicians would would not be surprised in the video arm.
* 00:51:46So here are the results of the study in total, we had a the actual outcome was assessed by asking a patient's.
* 00:51:55A one item question about supportive kidney care and there were multiple choice options and if they chose all three options that got a perfect score of three so the scale of zero to three.
* 00:52:05And you can see, mean scores at baseline before they received education was two.
* 00:52:10And this was not significantly different at baseline between those in the verbal script arm and those in the video script arm, we also looked at proportions of who got the entire question right, and you can see here that a minority of patients.
* 00:52:24Actually answer that question right and there was no difference at baseline between the verbal script and video arm.
* 00:52:30Now, after receiving education, we found that this the score significantly increase so overall.
* 00:52:37As well as in both arms so knowledge improved for supportive kidney care in both the verbal script and video arm, however.
* 00:52:44We didn't see a difference in terms of the verbal script or the video script or the video arm improving knowledge more.
* 00:52:50Among of video or the participants who received education, you can also see here that those who had correct knowledge significantly improved, so the not the education worked both the verbal script and the video.
* 00:53:01We can also see here the accessibility and satisfaction ratings for those who receive the video, so the 50 who received.
* 00:53:08The video felt that it was helpful, the majority for that it was helpful that it was that they felt comfortable or what while watching it felt satisfied and 100% so that they would recommend it to others.
* 00:53:20And so you know because of the small sample size of this trial, we did do a secondary multi variable analysis to look at predictors of knowledge of supportive kidney care, as well as preferences for supportive kidney care.
* 00:53:32And you can see here for knowledge to support a kitchen care when adjusted for all of these baseline variables that income lower income was a predictor.
* 00:53:43Having lower income predicted less knowledge of supportive kidney care and for preferences for supportive kidney care we found interestingly that health literacy, so we assess health literacy, using the realm tool.
* 00:53:55Was there a positive predictor for a preference for having supportive kidney care, as well as a surprise question this was very interesting so.
* 00:54:02clinicians who were more likely to say they would not be surprised significantly predicted patients choosing supportive kidney care as opposed to haemodialysis or peritoneal dialysis.
* 00:54:14So in conclusion, compared to a verbal educational script the efficacy of a video decision, it was not different into increasing knowledge of supportive kidney care preferences.
* 00:54:23But patients who received the video education report in high satisfaction and accessibility ratings.
* 00:54:27which really counters a lot of fears that clinicians had that their patients will be freaked out right if they learn about some of these.
* 00:54:35Nonviolent options that it's almost being seen as you're giving up on them, and that was actually not the case for this study.
* 00:54:41and future research will determine the effectiveness is a supportive caring video decision aid.
* 00:54:45On patient preferences for treatment room or setting so i'm part of actually an Roi that was funded by the NIH that is a multicenter trial that is looking now at this bit of decision and how it will actually affect.
* 00:54:55Advanced care planning, as well as a number of secondary outcomes, such as hospitalizations quality of life, etc, and so we're really excited to get this trial up and running.
* 00:55:05So back to patients he CT who I described in the beginning of this talk so essentially after clinic I ran over to the hospital, I was like.
* 00:55:12Number one block right like basketball style don't put this this patient on dialysis let me talk to him, first, and I said, you know what is most important to you like, what is it that you want, you know you're 83 been through a lot.
* 00:55:22And he said, you know, honestly, I have a huge family, and I want to spend as much time as I possibly can don't want to do dialysis is going to see it seems like it's going to disrupt my my current lifestyle and that's not what I want.
* 00:55:33And so what we did was because he was having such a hard time keeping up.
* 00:55:37With his his fluid intake he was like losing these by carrbridge fluids, and is really awesome YouTube.
* 00:55:42We put a hickman catheter in and we set him up for home infusions of normal sailing at home with the visiting nurses here's where I learned that you actually it's very difficult to do home infusions of by card because it's.
* 00:55:53seen as an unstable compound, and so we did normal sailing and maximize oral sodium bicarbonate was a low potassium phosphorus diet.
* 00:56:02And he stayed out of the hospital for one and a half years, so to me, this was the beauty of medical management without dialysis because I think if I had started this man.
* 00:56:11On dialysis in central hemodialysis with all of the fluid issues with the anemia with the cancers, this would have been a very different story.
* 00:56:19And so, after a year and a half we had been treating him maximally he he became depressed we treated him with that we sent him to a palliative care physician.
* 00:56:27He he basically showed up to my office, one on one of my outpatient visit and he's like i'm ready to die he'd been losing a lot of weeks temporal wasting and he said I lived a good life i'm you know i'm ready to go.
* 00:56:38On and we transition them to home hospice and he died within a within one week, and that was a beautiful beautiful.
* 00:56:47Experience that I have with this patient, if I had a magic wand I would wish this for all seriously oh patients.
* 00:56:54who are facing dialysis decision, it was not very hard actually to manage him in this in this manner.
* 00:57:00and actually became the home hospice doctor which, which also freaks out a lot of clinicians and it's not very hard at all.
* 00:57:05And so, his daughter, who was an icu nurse wrote to me and said that it was she really appreciated the care and he.
* 00:57:12died surrounded by love one, so it always makes me a little emotional talking about this patient but, again, the best outcome that you can possibly have.
* 00:57:18So let's talk about patterns and end of life, care for patients with kidney disease and what does that look like currently so i'll talk about another patient who I saw on the dialysis service, when I was in Boston.
* 00:57:28So this is a 66 year old female with a history of kidney failure on haemodialysis in dementia, who was presented with a non functioning dialysis catheter.
* 00:57:35she'd been sent from our outpatient dialysis unit with drainage from her trends lumbar dialysis catheter so every time I talk about.
* 00:57:42This patient and if i'm in a room physically I just asked for a show of hands like who has had a patient with a trans lumber dialysis catheter because this was my first time as a junior faculty Member.
* 00:57:52So she had this translator dialysis catheter and integration around the surrounding skin.
* 00:57:56So a little bit more about her social history, she lived in a skilled nursing facility and she was described by her healthcare clinicians as being pleasantly confused and so.
* 00:58:04She was a type of patient that would she would see you should tell you that you're handsome where you're beautiful you're dressed so nice you look great.
* 00:58:10And if you focused on those compliments, you would you would miss the fact that if you left the room and came back like 10 minutes later she had literally no idea who you who you were so it's kind of hard to to.
* 00:58:22to recognize the dimension, and she needed assistance with all of our ideas so she she was wheelchair bound and needed help with transfers and activities of daily living.
* 00:58:32So the hospital course should should have been very simple, it was per the ID console they said let's just exchange this translate translate your catheter.
* 00:58:41give her some antibiotics give her a dialysis treatment and send her home, but instead she received numerous vascular access procedures so.
* 00:58:49here's kind of a chart of her her course and each arrow represents a day that she had some change in her bachelor access so at the time.
* 00:58:58nephrology trainees were doing catheters at the bedside right and sometimes I are doing, and so it was just miserable she would have you know.
* 00:59:08Just really a day or so before it would fail, we were filming her and the dialysis unit.
* 00:59:14She was going down to the radiology sweet, they would bump her to the next day if they had some issues so she'd be npl all day she was miserable.
* 00:59:22She was just really having a hard time and struggling and this simple admission turn into a 34 day admission.
* 00:59:28And so, she she developed this recurrent uti is she had a que delirium on top of our dimension, she just stopped eating and communicating with us, she was no longer this pleasant patient that I was used to and the hospital is kind of.
* 00:59:39Take a step, I took a step back and said, you know, should we be talking about goals of care, you know this patient has really a terminal catheter her basket access you didn't have any other places where we can put it.
* 00:59:49And she's full coach and we have a bigger discussion.
* 00:59:52and her sister, who was our health care proxy became extremely frustrated she was yelling at us saying that you know you guys are supposed to be smart you just change the catheter what's wrong with the issue is threatening legal action against the hospital so.
* 01:00:04The question is, how would you approach the patient's care plan and how do you manage the sisters frustration so i'll let you think about that as we move on with the discussion.
* 01:00:11So, in terms of prognostic discussions in there for ology we're just not that great communication or prognosis the goals of care, discussions are lacking and routine care.
* 01:00:20Multiple publications have shown this and we actually don't have the best prognostic tools we have the surprise question.
* 01:00:25which has now been validated in the pre dialysis population but that's really all we have right we don't have image we don't have staging like that oncologists etc, and so it's it's really.
* 01:00:35Minimal tools and we just have more of our gestalt.
* 01:00:38which was actually shown to be more predictive of any other variable and the surprise question study of how a patient their six month mortality was strongly linked in both are highly associated with that.
* 01:00:49And so, even though we don't have the best prognostic tools patients feel it it's still important to receive this prognostic information, even if they're not comfortable they still think it needs to happen.
* 01:00:59So this was a qualitative study that I participated in when I was a fellow is very lucky to get this experience and on a per corey study that was led by Dr Lu Cohen.
* 01:01:10at bay state mass and Dr mark UNRRA at university of new Mexico, we went to New Mexico and we did qualitative interviews there as well as Bay state Massachusetts.
* 01:01:19Bay St matt or blue State University in Springfield Massachusetts and so very eye opening early in my career about how dialysis patients felt when it came to advanced care planning, they were very frustrated.
* 01:01:32caregivers and dialysis patients alike, and they felt that they were just kind of being shuffled into this dialysis treatment.
* 01:01:40And that clinicians would do the speed rounds not really talk to them, even if they're bouncing in and out of the hospital very frustrating nobody talked to them about about advanced care planning.
* 01:01:49You know, this is one of the quotes that I really liked from one of the caregivers.
* 01:01:52I would like to know my mother's prognosis and I would think that there would be someone to communicate with me, knowing that you've got my number give me a call somebody.
* 01:01:58Really, expressing frustration at their fragmentation of care, a lot of patients, when they start dialysis.
* 01:02:03They get an entirely new provider, for instance I don't see dialysis patients, and so they would get someone that they don't know and that they really have.
* 01:02:11communication with, and so this was you know really again put put qualitative research on the map in terms of nephrology but also was eye opening in terms of what patients want.
* 01:02:21And why are we so bad with prognostic discussions well, in addition to there are tools that are quite rudimentary.
* 01:02:27there's illness projections that we have to think about too in terms of being able to really predict a patient's course.
* 01:02:32So I love this this figure of illness trajectories that was published in 2014 in the annals of palliative medicine.
* 01:02:37We can see here on the X axis is time to death and on the y axis, we have functional status.
* 01:02:43So the blue curve represents someone, for instance, who has cancer very high functioning over time, maybe it's like the client then maybe they develop metastatic disease and there's like a slow predictive declined to death.
* 01:02:54And for patients that have physical and cognitive frailty, for instance for dementia patients very low functioning never really gets better right and it's a slow progression to death.
* 01:03:04For patients with solid organ disease or solid organ failure.
* 01:03:08You see here in the red curve that they have these exacerbations of disease right they have heart failure or they have infection with the dialysis or some other complication.
* 01:03:16And they get a minute and we fix them right, however, when they're discharged they never quite really go get back to where they were pre admission in terms of their functional status.
* 01:03:25And this happens over and over over again, and it takes like an informed clinician to actually look back at the chart beyond maybe the last admission but look back in the last.
* 01:03:3412 to 24 months and see has this patient get admitted like seven times they're not getting better right they're likely getting worse and approaching death.
* 01:03:44And so what is that end of life care look like for dialysis patients, for instance, compared to other.
* 01:03:50Disease groups such as cancer and heart failure, so this piece this study was published in 2010 in the archives of internal medicine, which is now JAMA internal medicine.
* 01:03:58led by Dr Wong and darker and o'hare and they looked at 100,000 or so dialysis patients who are medicare beneficiary so medicare pretty much pays for the majority of care for dialysis patients.
* 01:04:09And they found that you know no surprise, it didn't show you some of the adjusted mortality curse for dialysis patients versus other disease groups that are covered by medicare.
* 01:04:16However, dialysis patients were definitely hospitalized more compared to cancer and heart failure.
* 01:04:22significantly more intensive care unit admissions and intensive procedures such as cpr feeding tubes mechanical ventilation.
* 01:04:30What was striking in the study was that hospice use and death in the hospital hospice use was less than half.
* 01:04:37Of those for cancer and death in the hospital was significantly higher for both cancer and heart failure, so it was a really striking study about how intense the care is for our patients, yes, they are definitely more sick.
* 01:04:50But the intensity of care is significantly more than others seriously ill patient populations now.
* 01:04:57When this study came out of course what people said well there's a reason for that is that the ESRI D benefit directly conflicts with the medicare hospice benefit most of the time patients have to be.
* 01:05:08discontinued from their dialysis before they can actually receive hospice and so that was a major is that is a major barrier and continues to be that way.
* 01:05:16But there is room for improvement, so, for instance, what about patients that we know, have a very poor prognosis in nephrology, and that is for calcium relaxes patients so cassie full access is a horrible horrible disease.
* 01:05:30That is associated with at least 50% mortality once you develop your first lesion there's no FDA approved treatment for it and so it's really a painful.
* 01:05:41Infectious complication patients have to continue to get go have surgical debris segments of their lesions they're always in pain it's terrible so we know that that population is high risk of mortality and poor.
* 01:05:54Poor end of life metrics, and so we wanted to look at end of life, care for those patients, Dr Kabir on Iran, who was my mentor at the time.
* 01:06:02lead this study, along with Dr sagar neglect or who is really like the nation's kalsi full access so expert at mgh.
* 01:06:09And we took a cohort of Dr Nicole cars patients and looked at their terminal admission before death, and what that look like.
* 01:06:15and of those 24 patients, because it is a rare disease and word that many We found that only 50% received a palliative care consultation.
* 01:06:22And a significant proportion of patients had intense care so 21% had cpu had received cpr.
* 01:06:2846% received medical mechanical ventilation and 30% or 29% received.
* 01:06:33Two feeds and that the majority of these patients died in the icu so again, even for patients, where we have more of a clear sense of mortality and their quality of life we're still not receiving palliative care and the big question is why.
* 01:06:47And so back to patient ab you know what we did was we call it a palliative care and ethics console because in those settings.
* 01:06:54I by no means need to act like I am the master of all and I need to phone a friend, so we called our friends and we came up with a multidisciplinary approach, in that we put.
* 01:07:04In the chart very all over the chart we're not going to change we're going to change this patients catheter one more time and then we're never going to do it again, so I are nobody take this catheter out if it fails, it fails.
* 01:07:15And then we changed her codes, that is, with a series of discussions to dnr dni and she actually was discharged.
* 01:07:22must have been divine intervention and stayed out of the hospital for almost up to a year, so the catheter work that last catheter actually worked.
* 01:07:29And she was just back to her skilled nursing facility that return back in about 10 months and died from a vascular complication, but it was not her catheter.
* 01:07:38And again, she died in the hospital, unfortunately, but it really took this kind of last ditch effort to make sure that this patient.
* 01:07:46died with dignity right that she died, and I was not having some type of intense care and having a lot of distress with our caregivers.
* 01:07:53And, but we don't have to do this again, so we can this was kind of lessons learned on how you should have early goals of care conversations and involved caregivers for seriously ill patients, especially for those who have terminal diseases like dementia and cancer, etc.
* 01:08:08So let's shift gears talk about racial disparities and caring for seriously ill patients with kidney disease is really my jam and really why.
* 01:08:15I decided to do research on this topic.
* 01:08:18So we know that individuals from minority racial and ethnic groups experience barriers to effective palliative care, this has been described in all disciplines of medicine, not just nephrology or internal medicine, but there's less advanced care planning.
* 01:08:30there's less end of life communication with providers and health care proxies more care at the end of life that is focused on life prolongation and less hospice use.
* 01:08:37The big question is why right, why do we see these huge disparities between, namely black and.
* 01:08:44latinx or Hispanic individuals in this country and the reasons that have been populated in the literature our language and cultural differences.
* 01:08:51religious groups virtuality differences, perhaps clinician bias against those patients and communication difficulties and differences.
* 01:08:58Limited health literacy among the patients and as well as poor knowledge of what palliative care actually can can do for them as well as mistress of the healthcare system.
* 01:09:09And so really keeping that in mind, is something that my colleagues and I Dr TV SN at the University of Pittsburgh, Dr Dietrich who's at Hopkins.
* 01:09:18That we should write about for the pandemic and lessons learned from scarcity of care and what in palliative care or either transplant.
* 01:09:27or transplantation and how we can manage that, to avoid widening health inequities among black Latino X and native American populations.
* 01:09:36And so, at the time that we wrote this was just as a spray time people were considering a crisis standards of care in which they would.
* 01:09:45allocate tread end of life treatments or allocate any type of treatment for patients, based on a number of criteria scoring criteria and we said that.
* 01:09:55You know, in order to make sure that we don't again exacerbate inequities we should grant maintain granular socio demographic data which we know is not done, at the beginning of the pandemic.
* 01:10:04diversify institutional crisis triage committees that we're making these decisions, thankfully, no States actually enacted their crisis standards of care.
* 01:10:13We also recommend collaborating with Community partners to increase awareness.
* 01:10:17of resources, like advanced care planning, as well as early palliative care referral, and so we are it looks like we're, on the other side of this hopefully fingers crossed.
* 01:10:26But just keeping lessons learned again when we have scarce resources like palliative care or oregon's for transportation, how we can leverage certain strategies to decrease in equities.
* 01:10:39And so, this was another study that I published that came out of this year about serious illness care and innovation equities, and that was racial inequities and telemedicine use.
* 01:10:47And so we took a population of 285 patients who were presenting to outpatient or project clinics, whether that be transplant clinics.
* 01:10:54or general and ufology clinics and we basically wanted to see as everyone's switched to telemedicine strictly, who was having if there were an equities and care and what we're predictors of an equities and care and, specifically, we wanted to see.
* 01:11:08Who required Internet support because our actually prelim our data show that there were not a lot of racial inequities in.
* 01:11:18In telemedicine access, a lot of people had access to it when you actually delve a little bit more deeply into actually who needed help setting up their telemedicine, we did find some significant predictors so.
* 01:11:28Among 285 individuals or so we found that if you adjusted for demographics that older age so.
* 01:11:36Older patients who are more likely to need help with the Internet and setting up a telemedicine.
* 01:11:41And non white population so versus a white population were significantly more likely to to need help with the Internet.
* 01:11:49And we found that this is consistent before with, for instance Pew research Center publications and research that shows that older populations may have disabilities, whether that be.
* 01:12:00dexterity or vision issues that could could really be a barrier to telemedicine and non white minorities, for instance.
* 01:12:10tend to use their smartphones exclusively for Internet access, where the telemedicine platforms can differ and so keeping that in mind, I know a lot of institutions.
* 01:12:19are thinking about using telemedicine, some type of hybrid model going forward but really thinking of innovative strategies to lessen these inequities, for instance, so really.
* 01:12:28Investing in a lot of upfront support for patients to get their telemedicine set up on can really help a LACE again some of these in equities.
* 01:12:37So let's go back to shift gears to back to end of life care disparities, this was a publication, that I was honored to work with Dr and o'hare at university of Washington.
* 01:12:46and others at Stanford to look at end of life care in terms of intensive procedures received for haemodialysis patients, so what we did was look over a 12 year period so 2000 to 2012.
* 01:12:58Using us RDS data or national database to look at how many patients received in the last six months of life.
* 01:13:04cpr mechanical ventilation feeding tube if you received one of those procedures in the last six months of life, you were counted as having yes, there was a binary outcome, yes, no.
* 01:13:13And what we found over time was that intensive procedures overall increase for our dialysis population This was despite comorbidity staying quite stable over that decade period.
* 01:13:25We also stratified those the proportion of those who received intensive procedures by a race by race in age and we found.
* 01:13:32That, for instance younger patients that are represented by this black curve.
* 01:13:36That received significantly more intensive procedures, compared to older patients were represented by this great curve, which was no surprise younger patients tend to receive more intense care and medicine.
* 01:13:45But what was very striking about this study was that if you actually collapse these age stratification and just have one curve for the different racial ethnic groups.
* 01:13:54Hispanic and non Hispanic black patients receive significantly more procedures, the non Hispanic white patients and these cars are mean parallel over time over this that key period that we're converging they never intersected so that was very interesting to me.
* 01:14:07So I decided to go a little bit more upstream and the disease course and look at our racial disparities and end of life care among patients with chronic kidney disease.
* 01:14:16And what those preferences were for black versus white patients and what we found for those who had advanced chronic kidney disease either stage four stage five was that black patients in this study tended to have.
* 01:14:28Less there was a higher proportion that had not graduated high school, there was a higher proportion that had lower income compared to white individuals.
* 01:14:37And they were younger at at baseline compared to white individuals, we also found that black individuals were more likely to not.
* 01:14:45Talk to their family members or friends about their end of life communication less likely to have a health care proxy or do not resuscitate a living will.
* 01:14:53And more likely to want to extend live versus comfort care if they became critically Oh, more likely to stay in the hospital versus go home if they became critically out.
* 01:15:01Now we did do multi variable analysis that I don't have time to share.
* 01:15:05And we adjusted for some of these baseline differences that you see here and what remains significant even after adjusting for these baseline differences were that black patients were still more likely to not have.
* 01:15:16These discussions with their family members and also still more likely to want to extend life versus comfort care if they became critically oh.
* 01:15:22So in this this study, we also assessed hospice knowledge and what we did was do an open ended question to say, have you heard of the word hospice.
* 01:15:30And if you have, can you describe that to me in your own words, and we took those open ended responses at a content analysis and did a.
* 01:15:38divided the the the analyses into categories of poor knowledge partial knowledge and good knowledge and we found that among the patient, the study cohort 17% of black patients have good knowledge versus 61% of white patients that was significantly.
* 01:15:54Different and for an example of poor knowledge here's a response hospice is a place where people who can't take care of their activities of daily living are taken care of.
* 01:16:02And an example of a good knowledge responses, it means that it's giving care to someone in the end stages of life it's compassionate care among family that helps someone ease into death without pain.
* 01:16:12It could be at home of desires that's like a Webster textbook definition of hospice right, and you can imagine if that's what your knowledge base is.
* 01:16:20What that looks like in terms of what you prefer once you become critically ill, in particular, if you don't receive educational resources that, for instance, are appropriate for like a low health literacy level or, if you have communication barriers.
* 01:16:32With your clinician How does that affect whether you offer for hospice or not something that we need to study more.
* 01:16:40And so you know in this last thing we wanted to look at trends and racial disparities and end of life care among vets with not dialysis dependency TT because a lot of the racial disparity.
* 01:16:50End of life care literature and theology has really focused on dialysis patients, because they have a high.
* 01:16:55A high risk of death, but we also know that patients with advanced ck do not have dialysis also have a high risk of mortality.
* 01:17:01So we wanted to describe racial variability and panels of carrot end of life at the end of life among elderly decedents who are aged 70 and older with advanced ck D.
* 01:17:10We were interested in intensive care in the last month of life, as well as palliative care hospice using the last actually six months of life.
* 01:17:17And so, this was a cohort that had already been previously published on that was a basically an engaged cohort of patients so patients who had at least.
* 01:17:26That were diagnosed with ck D and had at least two primary care encounters within one year it's an end stage ck D.
* 01:17:33We focus on those again, who died, who were and we've also focused on non Hispanic white non Hispanic black or Hispanic patients.
* 01:17:39We excluded, those who have undergone dialysis or any transplant again narrowed it to older patients and that left us with about 21,000 or so patients.
* 01:17:48So, based on characteristics, there are many differences but i'll highlight a few a higher proportion of non Hispanic or Hispanic patients and white patients were married a higher proportion.
* 01:18:01Of Hispanic and non Hispanic black patient or Hispanic and not Hispanic black patients had more diabetes and a higher proportion of white patients and his medications had more C D.
* 01:18:12We also found that white patients lived further away from the va compared to not as many black and Hispanic patients.
* 01:18:20And that Hispanic patients and non Hispanic white patients were more likely to live in the lowest cortana of socio economic status, compared to white patients.
* 01:18:29So in adjusted analyses that looked at intensive care at the end of life, we found that compared to white individuals black and.
* 01:18:37Hispanic individuals received dialysis and that last month of life are more likely that both black and Hispanics were more likely to receive mechanical ventilation.
* 01:18:45Black individuals are more likely to receive cpr and both black and Hispanic individuals were more likely to receive artificial nutrition compared to white individuals.
* 01:18:54Now here, is where the study gets very interesting, so we looked over time, and the reason that we did that was between 2009 and 2012.
* 01:19:02The va did a big initiative called the comprehensive end of life care initiative, where they just poured resources into palliative care.
* 01:19:09Training of clinicians hired practitioners, who were dilute who could deliver palliative care and we wanted to look at what happened before and after the comprehensive end of life, care and so before.
* 01:19:22That end of life initiative, we found that non Hispanic black and not not as many black patients in Hispanic patients.
* 01:19:29were more likely to receive one of those intensive care or the composite of the intensive care measures that I shared before.
* 01:19:36And that there was actually no difference between the racial groups and looking at hospice or palliative care in the last six months of life, however, if you looked at honor after that time period that.
* 01:19:48That black and Hispanic patients still received more intense care compared to white patients, but they were also more likely to receive palliative care hospice, which is a reverse racial disparity that we don't see often in the literature.
* 01:20:00That was very interesting and that was a there was a significant trend over time for for that increasing, and that was that was significant so.
* 01:20:09And conclusions non Hispanic black and Hispanic patients with non dialysis dependency kd receive more intense care compared to non Hispanic whites in the final month of life, however, they received.
* 01:20:19More hospice palliative care in the last six months is really speaks to the infrastructure, if we try, if we change the infrastructure of care.
* 01:20:26And we make it more accessible that patients will actually use it, and that has been demonstrated in multiple other studies that have looked at advanced care planning, for instance.
* 01:20:35In terms of racial disparities and so you know, last thing i'll touch on the the next steps of my research which is my K award.
* 01:20:43And this is really just murdering everything that i've showed you in this talk together in terms of improving care for seriously ill patients with advanced kidney disease, so this is really an educational intervention.
* 01:20:53which serves to assess the preliminary efficacy of a comprehensive educational intervention, where there's a in person nurse practitioner teaching about advanced care planning teaching about conservative kidney management.
* 01:21:05And then we also want to explore whether that intervention of coke conservative kidney management options and advanced care planning education.
* 01:21:11reduces racial disparities and can conserve kidney management advanced care planning knowledge between black and white patients who are elderly and or have poor functional status.
* 01:21:21With advanced ck D so here's the study schema their patients who have advanced ck D or easier for have less than 20.
* 01:21:28We measure their baseline knowledge, their treatment preferences, we randomize them to either receiving any type of pre dialysis education, whether that be, with their clinician or some type of class.
* 01:21:37Or that education, plus the addition of coke.
* 01:21:41We we immediately measure knowledge and preferences immediately after post education.
* 01:21:46We do a week to assessment to assess for retention of knowledge and then we 12 we look at whether patients have communicated their preferences, with their clinicians and their family members, notably based on our qualitative work, we found that.
* 01:22:00notifying both the primary and follow just in the paramount here clinician together about their.
* 01:22:06Patients involvement and cope with hopefully prompt discussions and shared decision making, but we'd see a change in these outcomes and week 12 knowing that we couldn't have a patient patient patient facing and clinician facing intervention.
* 01:22:18So the study updates or that coordinating happened we hired our in our study intermittent issues this nurse practitioner who's certified in palliative care.
* 01:22:26And then everything stopped because of the pandemic and we switched everything to tell him medicine and now we're in the process of switching everything back to in person visits.
* 01:22:35We have this lovely educational brochure that I teamed up with the health literacy company to in.
* 01:22:41very easy in plain language to describe and to depict what conservative can be management is and how that differs from haemodialysis as well as advanced care planning, we also go overstate advanced directives in this study.
* 01:22:54So, in summary dialysis decisions or complex medical management with that dialysis should be a key part of shared decision making for seriously ill patients with kidney disease, the earlier, the better.
* 01:23:05Early goals of care discussions and palliative care consultation should be standard of care and outpatient Inpatient settings.
* 01:23:10and significant investments in palliative and patient education and palliative care infrastructure we actually improve the disparities that we see currently among racial and ethnic minorities with kidney disease.
* 01:23:20So I like to end by acknowledging all of my mentors and collaborators a list seems to continue to grow every month the divisions of nephrology and palliative care at penn and all of my funding resources.
* 01:23:33And i'll take questions now and a shameless plug to follow me on Twitter.
* 

**RAAS**

01:23:38Great thanks so much Dr nine yeah.

* 01:23:41So i'll start with a couple of questions that have been coming in the The first one is you know, are you personally involved, or are you aware of any policy initiatives that are.
* 01:23:55looking at ways to sort of de emphasize enrolling patients in dialysis and moving them towards you know conservative management approach.
* 

**Nwamaka Eneanya**

01:24:05yeah so the last administration.

* 01:24:09Sign so Alex HR and Donald trump signed an executive order in which they had this five year plan that patients would be at least.
* 01:24:1880% of all patients with kidney failure would be receiving a type of home dialysis modality.
* 01:24:24or a transplant, so the question is that nobody knows, is what is this administration going to do with that executive order, because that was signed in 2019.
* 01:24:31So that's ongoing and I also had a meeting with members of the ways and means committee because they're very interested in in equities and end of life, care for patients who received dialysis and so some of what I showed you about hospice and equities.
* 01:24:45they're very interested in forming some type of legislation that will will help mitigate those inequities so there's a lot of interest on that topic oh great.
* 

**RAAS**

01:24:54personal question for me you shared a lot of really interesting qualitative research what's what's your background in that, and how did you get so interested in that it sounds like it's been a good jump off point for a lot of your research questions.

* 

**Nwamaka Eneanya**

01:25:06yeah it has so I received some training and and when I received my master's in public health.

* 01:25:12But it was also a lot of on the kind of job training, so I was, I was a fellow I was a second year fellow when I did that qualitative work for the record study in new Mexico.
* 01:25:21And you just really receive a lot of rich data, I mean you just so limited when you're doing database studies or when you're doing even survey assessments.
* 01:25:30You receive so much rich data that can really help inform interventions and so now i'm always I always do mixed mixed methods.
* 01:25:36Research that my K was built upon the qualitative work that I showed you and my next r1 will likely be a mixed methods study as well that can help with implementation, as well as assessment of effectiveness, etc that's great.
* 

**RAAS**

01:25:49yeah we that's really fascinating to see the qualitative research another question I have where do you see this research would have been if it hadn't been for the pandemic or where do you see it going after accounting for the hiccups of a global pandemic.

* 

**Nwamaka Eneanya**

01:26:04yeah I what I can say is that I think telemedicine is both good and it has challenges.

* 01:26:10We were, it was really hard to reach patients to recruit them and, although we're going to leave the intervention.
* 01:26:18As a virtual intervention, we really need to have in person recruitment, I think that is what I learned and i'm hoping that.
* 01:26:25We can you know use telemedicine, in a way to make sure that we don't white in disparities again like accounting for some of the things I showed you about Internet access people needing different help with that or sometimes even phone plans being limited.
* 01:26:39But we're going to do some type of hybrid model with telemedicine, and in person for the for the intervention to improve knowledge about conservative management and advanced care planning great.
* 

**RAAS**

01:26:50And then.

* 01:26:52Another question here.
* 01:26:54This is, this is a good one, just because, especially that you know number of house staff we have on the call.
* 01:26:59You know what point do you see kind of general Esther PCP when when should we be engaging with nephrologists on these advanced care planning discussions and what tips, would you have for encouraging us as general as to be more engaged in these discussions, because it seems like that's.
* 01:27:17kind of a weakness right now in our understanding of how to navigate that relationship.
* 

**Nwamaka Eneanya**

01:27:22that's a great question I didn't have time to go through all of the extensive quotes in my paper, I encourage everyone to read the qualitative work about the primary care physicians in your knowledge is being aligned is that.

* 01:27:32They want, you know as communicative as they would like to be so everyone's stress everyone's just trying to get their notes done but.
* 01:27:39A lot of the primary care physicians a lot of what they kind of conveyed was that they felt intimidated about the dialysis process they're like that's not my job.
* 01:27:46But they really felt strongly about their patient doing dialysis they didn't want that, for their patients but they didn't feel.
* 01:27:52empowered enough to talk to the to the nephrologist, so I would have definitely I will love that and I have a conservative care manage a conservative care clinic at penn.
* 01:28:01Please reach out to the nephrologist and give your thoughts right, I do my shared decision making with the patient and the caregiver is usually involved.
* 01:28:07But it's even better if I have information from the primary care physician as a way longer standing relationship sometimes.
* 01:28:13give me your thoughts as well, that is extremely helpful and it can help support the patient going forward if they choose not to be dialysis, so I would just say be local.
* 01:28:21To the primary care physicians and I would say as an apologist you know we can also do a better job of reaching out to the primary care physicians and asked me for their perspectives about the dialysis.
* 01:28:32Decision making for sure so both of us need to do both fields needs to do better, but we can great awesome.
* 

**Unknown Speaker**

01:28:40well.

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**RAAS**

01:28:42Oh, and then we have someone else and say a big Hello and awesome talk from fellow cornell Ian and mayor, and this is from shola one of the three.

* 01:28:50Internal medicine residency alright well it's one o'clock we really appreciate all your time and wonderful presentation and answering all our questions.
* 

**Nwamaka Eneanya**

01:29:00Absolutely reach out with me email me if there's any other questions Thank you so much.

* 

**RAAS**

01:29:05Right thanks so much.

* 01:29:07bye.