

Speakers

Larry Cripe, MD

Jeane Ridgeway, MSN, APN, NP-C, AOCN

Jean Ridgeway: So, one o'clock it is. Before we start and we'll just keep the rest of this informal as well is if you... I want to make sure that everybody or every family goes home with a binder. It's called the MDS... *Building Blocks of Hope* and it's looking at strategies for patients and caregivers living with MDS and I think that this may be helpful for a lot of people. There's lots of information. It was actually put together by the nurses on the international board as well... with some help from our physician, colleagues and some other folks, but basically it goes through and it's also available online with video links. So, at the very back of this is a clear plastic holder and there's room for business cards for your healthcare providers and inserted in one of them is the MDS Foundation. So, you've got the website there for yourselves and when you go to the website you can go ahead and link in and get an electronic copy. If you want to download it as a PDF version, you can do that or you can also look at the links of it, so... and then you've got this hardbound copy and if you want more copies just contact Dee and she'll deliver them to you etc., but the video links that you'll see made reference to in some of the areas are only available online. So, you have to... you or somebody in the family has to be savvy enough to go online and do that. So, but it answers a lot of the questions about what is MDS, Seeking Treatment and then there's this area called Quick Tips and Quick Tips is all about some of the side effects dealing with nausea, vomiting, fatigue, etc. So, it's a great resource and we're hopeful that it's going to be really helpful and if anything I would just encourage you to spread the word to other people you see in the waiting room or bring one to your doctor's office and say, "I picked this up. Maybe this is something that you should consider giving to all of your patients who are newly diagnosed with this so that they've got some foundational information that is user friendly and accurate and helpful." So, just wanted to make sure that... and I think, Dee, do you still have some extras or were you able to give them all away?

Dee: (inaudible 2:23) I can always send you one if you need one (inaudible 2:27).

Jean Ridgeway: She just doesn't want to go home with any. It's a hassle going through security.

Dee: What I'm passing out now is the evaluation (inaudible 2:37).

Jean Ridgeway: Okay. So, she'll pass out the eval. Just fill it out and...

Dee: Just give it to me at the end.

Jean Ridgeway: At the end when you're leaving. Fair enough? Alright. So, I'm going to take my cue from Barbara who said that when we did this... So, this is replicated all over the country.

Dee: (inaudible 2:57)

Jean Ridgeway: I'm not going to show my slides, but that's okay because like all the...

Dee: (inaudible 3:03) she's not going to show her (inaudible 3:04).

Jean Ridgeway: I'm not going to show my slides, but we'll just continue... If people have questions then we can go through the question kind of forum and then if there's some specific question... I guess to start out there's one thing I also send you home with is that we all need flu shots and so if you haven't had a flu shot you need to get your seasonal influenza shot. It is not a live virus. It's a dead virus and so make sure you and the people you live with get your flu shot because the risk of getting the flu far outweighs the risk and years ago they used to be made with horse serum and that's not true anymore and people say, "Oh, I got sick from it," and your arm gets sore. Mine does, too. You may feel a little achy, but you'll get over it and nobody wants to get H1N1 or the bad flus that are out there. So, make sure you do that. Somebody else asked a question about the shingles shot. So, the shingles shot is recommended for people who are under the age... First of all, 60. It is a live virus and so you... if you are immunocompromised or have a compromising medical illness that is not a good idea for you. Okay? So, don't do that and with the seasonal influenza, younger people, I think it's up to the age of 50 can do the nasal inhalation. That also is a live virus. So if you live in a household with younger people, they shouldn't get the nasal inhaled influenza. They should get the injection.

Q1: And why is that?

Q2: It's too late for us, but for the (inaudible 4:41).

Jean Ridgeway: So you shed it. So when you get it... the majority of vaccines are "inactivated viruses," so they have activity that they're going to educate your immune system. We get it now because the height of the flu season in the Midwest really is January through March and so your body... it takes about six weeks for it to kind of get up to speed and so if somebody gets it nasally, then they shed the virus in their sputum for a number of weeks.

Q2: You already had your shot though. Right?

Jean Ridgeway: It depends on the age and the immune system probably about like a good two weeks.

Q2: No, but Esra and Daisy both have gotten (inaudible 5:27).

Jean Ridgeway: If you're immuno compromised you don't want to do that because you don't have an immune system to fight it.

Q2: (inaudible 5:35) and the grandchildren were climbing over all over him so they got (inaudible 5:40)

Jean Ridgeway: We'll see what happens. You get back to us. Maybe nothing. The best thing you can do to fight infection is wash your hands.

Q3: That's terrible that the doctor... I would think that somebody would just tell that (inaudible 5:53)

Q2: Well, now we know.

Jean Ridgeway: You forget. You forget. We all kind of live in this area where a heightened sense of awareness to certain medical illnesses, but John Q Public doesn't really think like that. To kind of go back to a definition, some people were asking about what's the difference between low risk and high risk MDS. So, to know that MDS is what is considered a heterogeneous group of diseases. It's not just one disease. If you have strep throat, you have streptococcus and you're growing and we say that you have strep throat, but if you have MDS, that's a big term and it has a lot of different biological variations in it. Know that, again, so there's that mother cell, the pleurae potent stem cell and then what that stem cell does is it creates basically two major families. So, there's the family... the myeloid family and that's where the red cells, the white cells and the platelets come from and then the lymphoid family is where the B cells and the T cells come from. So, the M in MDS tells you that it's a myeloid disorder. So, Myelodysplastic Syndrome. That means that's the M part and people can have problems with anemia. About 85 percent of all MDS patients have problems with anemia. So, that's the most common feature of folks who have MDS needing transfusions, but it's not the only blood count that can be low. So, people can have white blood cells that are low, people can have platelets that are low. You can have various combinations of those three and there're various ways to get diagnosed with MDS. So, you were telling us how you had asthma and you had some faint... you had some... you fainted and that happened because she was profoundly anemic. So, oftentimes anemia brings people to healthcare. Men show up to the emergency room for chest pain because that's the only reason they usually go see the doctor. Right? Unless they're in healthcare or you may have a really good primary care physician who does the CBC because you're saying that you're really tired. So, folks who have anemia are usually tired. Right? But unfortunately since the common age of MDS, the occurrence of MDS is early 70s, that gets pushed aside a bit and I think there's a bit of age bias in our culture that says if you're 70 and you're tired then deal with it. That's the way it is. Right?

Q4: When did they really come up with MDS? When did the (inaudible 8:45).

Jean Ridgeway: When did the diagnosis...? So, the first grouping of diagnoses came out in the early '70s when the French, American and British pathologists got together and said we're all seeing the same thing under the microscope, let's get a consensus statement of what to call these disorders. So, in 1972 was the first published classification system and it was called the FAB Classification, French-American-British, and they came up with 5 different types of MDS based on what does it look like under the microscope because in early '70s genetic information and DNA and cytogenetics for those of you who are familiar with that. That was done at research institutions but not out into the public. So, it was what does it look like and they came up with 5 categories and 4 of the 5 were based on refractory anemia. So, refract... RA was refractory anemia. RARS is refractory anemia with ring sideroblasts, a certain type of red blood cell that and then there was RAEB, excess blasts. That's what the EB and the EB was split into 2 kinds, 1 and 2, and in RAEB-1 you had a lower percentage of blasts and in RAEB-2 you had a higher percentage of blasts and then there was RAEBT and the T stands for transformation to leukemia because if you have... you're transforming to leukemia. So, the majority of MDS patients don't transform to leukemia. Only about 20 to 25 percent do.

Q4: How do you know (inaudible 10:32)

Jean Ridgeway: How do you know? Well, the true test is how many blasts do you have.

Q4: So, you need another bone marrow biopsy?

Jean Ridgeway: Well, theoretically that's true, but how people begin to need more frequent blood transfusions. Instead of once a month it may be three³ times a week. It may recurring infections. It may be that your platelets are so low and they can't be supported by transfusions. We have common patients who live at like 7- to 9,000 platelets. Ten thousand is kind of the threshold for when you get a platelet transfusion, but the disease begins to really change character and people feel different. They don't feel well.

Q4: I just have never heard of MDS until my dad got it. That's why I didn't know and I'm a phlebotomist and I (inaudible 11:30) learned about (inaudible 11:30)

Jean Ridgeway: Well, I don't know. Maybe you missed class that day.

Q4: No, I didn't miss any of my classes.

Jean Ridgeway: But it's still a rare disorder.

Q4: Yeah.

Jean Ridgeway: I mean, it's classified under a rare tumor type.

Q4: I was going to say because I never heard of it until they came home and said this is what he's got.

Jean Ridgeway: I think that having Robin Robertson go public with her disease and her transplant brings it to the forefront and so more people are getting familiar with it.

Q4: And she has MDS.

Jean Ridgeway: She had MDS and she had a transplant and is in remission.

Q4: And you know everybody that we talked to and we'd say well what does he have and, "Oh, Myelodysplastic Synd..." What the H is this? So then you say well, MDS is what it's short for...

Jean Ridgeway: People used to call it preleukemia or smoldering leukemia. Those were terms. Those are kind of like old fashioned terms. They're not very accurate, but can be used.

Q5: Is there a typical... I know nothing's typical in this disease, but a typical timeframe for the bone marrow biopsies? I mean, I've had one five years ago and the doctor that I'm seeing now suggested the last time I seen him that in November we would do... he would do another.

Jean Ridgeway: Do another one. It's...

Q5: Is that...?

Jean Ridgeway: It's guided by practice. So, what... I'll speak to what happens at my practice. When someone's getting worked up for the diagnosis of MDS, you have to... you really do need a bone marrow biopsy and a full evaluation to get the diagnosis of MDS because we need to see the cytogenetics and we just need to look at it under the microscope and understand what it is so that we can help the... So that first of all, we're going to know what are we dealing with. Are you dealing with someone who has a low risk that has anemia that we can watch once a month or is it someone that's very high risk that needs transfusions?

Q5: Well, I have... I mean, this is my second. So, I'm just wondering do they do it every so many years.

Jean Ridgeway: So it depends. If you have a low risk disease and your blood counts are relatively stable, they're probably not going to do one. There are some practices that may do one like once every other year. If your blood counts have remained stable stable they may say, "Well, it's been five years. How about... Even though your blood counts are stable, let's take a look and kind of see what's going on."

Q6: So if that is the case, where I think I'm struggling is this balance between how does he feel and what does the score say.

Jean Ridgeway: So, there's the scoring system. So, it's called the IPSS Scoring System and now there's the IPPSR. So, IPPS stands for the International Prognostic Scoring System and then there's the revised scoring system. So, what it is it's best done when the person is first diagnosed because it's not a moving diagnosis. You can't keep changing it. It's only good when the person... and that's kind of like one of the faults. So, there's some other scoring systems. MD Anderson has their own scoring system and it looks at 3 criterias – the number of blasts in the bone marrow; what your genetics are, what are the cytogenetics are and then how many cytopenias. So, cytopenias... anemia is a cytopenia. That's low red cells. Neutropenia, that's low white cells and thrombocytopenia, so how many. So, you add those altogether and you get a score. So if you have, let's just say 62 year old woman who on a... was complaining of fatigue. She goes in. She has bad anemia. They do a bone marrow biopsy and her DNA, her cytogenetics is normal. She's 46XX. That's what little girls look like under the microscope and little boys look like 46XY. Right? And she's just anemic and she has 1 percent blasts. Well, there's criterias for each of those. So according to all of that, she would get a 0 score. So, that would be a low risk. Now, you can take somebody else like, say, a 65 year old man goes to the emergency room because he's a mailman, he's walking around. He gets crushing chest pain while he's delivering the mail. They bring him to the ER. His hemoglobin is 5, his white count is 0.5 and his platelets are 10. Okay? Now, he gets a bone marrow biopsy and he's got 15 percent blasts and his cytogenetics are something called a complex karyotype which means that a lot of pieces of the DNA are missing or added or they've swapped places and so when you do his score, he has all 3 lines are down. Right? He's got... He's what we call pancytopenic. So, that gets a score of 1.5 and then he's got 15 percent blasts. So, that's another 1 and then he... so, you add the scores

together. So, his cytogenetics are complex and his number of blasts are high and he has all 3 cytopenias and so he's going to be given a score probably of like a 3 to 3 ½. That's as high as the score goes. So, he's considered a high risk person.

Q7: Once you're diagnosed through a bone marrow biopsy, what's the value of future bone marrow biopsies?

Jean Ridgeway: So, the value of future bone marrow biopsies is to understand how is the disease behaving. So...

Q7: (inaudible 17:25) treatment?

Jean Ridgeway: Most of the time if someone is not on a clinical trial because when you're on clinical trials oftentimes they'll say you do this test at this time point. In most clinical trials follow good practice... standard care, but so you do four... Say you do four cycles of Dacogen or Decitabine and your blood counts haven't changed a wink. They're exactly the same. You're still getting the same transfusions, etc. So, the practitioner will say, "Well, let's do a bone marrow and kind of see what's going on." So, they could do the bone marrow and now you could have 50 percent blasts even though your blood counts are relatively the same. So, it's to evaluate the disease.

Q7: Thank you.

Q8: How did you get so smart?

Jean Ridgeway: I go to school a lot. I go to school a lot.

Q8: I go to school a lot.

Q9: Can we follow up just a little bit more on that?

Jean Ridgeway: Sure.

Q9: You mentioned a CBC every 30 days or 60 days or 90 days?

Jean Ridgeway: It depends. It depends. If you're somebody who... I will say that if you come to... you get diagnosed at my office and we know that you have low risk disease, we're going to say to you, "We'll check your CBC in two weeks," and then you can get it checked locally and then we'll see you in a month and we'll see what it is and if in a month's time your... everything is relatively stable. You feel fine. You haven't had... you haven't been hospitalized. Nothing's happened to you, we'll say, "We'll see you in a month," and so then we follow on a monthly basis or at every other monthly basis, but you need... once... Honestly, there's... I'm sure most of the people in this room can attest to that. It took a while to get the diagnosis because you may not have been feeling well and these other things we're going on and no one kind of put their finger on it, but once the diagnosis made, it's good medical practice to watch you and take a look

at it to make sure there's nothing changing, but everybody's different. I mean, somebody... you might be getting a blood count less frequently than another person.

Q10: (inaudible 19:55)

Jean Ridgeway: What about clinical trials.

Q10: It's pretty general, I know, but I mean are there any clinical trials going on to stop the progression of this disease? Are there just clinical trials once you've reached a certain stage how...?

Jean Ridgeway: So, her question is about clinical trials. You mentioned that you were in a couple clinical trials and they didn't work for you.

Q9: Been in 2...

Jean Ridgeway: Been in two of them.

Q9: Well, what you do basically you go in and you go through a whole series of tests and bone marrow tests, blood tests, everything to see where you're at.

Jean Ridgeway: To see if you qualify. You have to qualify. Every clinical trial is unique. Every one is unique and some may be for people who are transfusion dependent or some may be for people who are transfusion independent and so there are an awful lot of clinical trials out there. There's a website. It's nci.gov. That's the National Cancer Institute.gov and when you go to their homepage, there will be a dialog box and you can put in there 'MDS' and look through and up will pop all the clinical trials that are...

Q10: I mean, is this something...

Q9: ... clinical trials...

Q11: How you get...

Jean Ridgeway: Can you use your microphone, sir?

Q9: I don't pretend to be an expert on this, but I've been through a couple of them that lasted six or eight weeks. The point of the clinical trials, I think, is the drug companies come up with ideas that they think may be an effective medication for whatever you've got, MDS or whatever. So then they... The ones I've gone through, they've gone through a phase one and phase two, phase three. Phase one they start with a low dose or a very restricted dose of whatever medication they're testing. Phase two, they step it up a dose. Phase three, they step it up a dose then they add more people to it. The phase one is...

Jean Ridgeway: So, phase 1 studies are actually studies that for patients... there are 3 different... You're right. There are three different phases of clinical trials. Phase 1 clinical trials are for...

they don't really know exactly what population that it's going to work in and so they'll give it for people who maybe don't have any options. So, they need... A phase 1 study is for someone who is failed all traditional therapies. Phase 2 is that now they've found that drug X works for people with, we'll say, it works for MDS. So then everybody in the phase 2 trial gets drug X. Okay? And say it works really, really well. Now, they want to test it against the standard of care and when the drugs for MDS came to the FDA and it's... it actually is usually physician scientists that say they work at the bench and they'll say we've noticed that this compound has activity, say, for preventing anemia. Then it's tested against the standard of care. So, in MDS, there are 3 currently approved therapies. One of them is an oral pill and it's called Lenalidomide or Revlimid and the other 2 are either infusible or injectable and they're from the same family of medicines. They're called hypomethylators. They take away a methyl group from... in the genetic stream of things to stop the progression of the disease and so when the first study was done with a drug called Vidaza or 5-Azacitidine, it was a phase 3 study and so patients enrolled in the study... Now, this was back in the '90s and they could have... they had the FAB classification and they were enrolled to either get the drug or the standard of care and the standard of care at that point in time was transfusions and supportive care. So, patients got it and then after a couple of cycles if their disease progressed in supportive care, they were allowed to cross over and get the medication and so from that study it was shown somebody talked about there's a 20 percent benefit. That study showed that there was about a 17 to 20 percent benefit for patients who had MDS who received that drug. Now, does everybody respond to that drug? No, not everybody does respond to that drug and that's in scientific terms because there'll be criteria set up for what's a response, number of blasts and your CBCs, but a lot of people will become transfusion independent or their blood counts will get better, they feel better and so they have somewhat of a partial response and the other drug that was the FDA approved for the treatment of MDS was Dacogen or Decitabine and that also went through these clinical trials and it was found that you get it infused every day for 5 days on a 28 day cycle and that about 20 percent of patients benefit from it. Now, I've seen people on Azacitidine. We had 1 gentleman on it for... I think he was on it for 56 cycles. Fifty-six cycles.

Q12: So, you work with your doctor on these clinical trials.

Jean Ridgeway: I work with... I see the patients and if a clinical trial... since I work on a university setting, I mean, it's a little bit different. Just like MD Anderson or the Mayo Clinic. When people come to us if they may come for a second opinion because if you can get the same drug at your local oncologist, why would you make the big trip? There's nothing magical about getting the drug in a different zip code. So, but at the university setting, they may have drugs that aren't available. So for instance, we have a trial going on right now for people who have transfusion dependent MDS and it's 5-Azacitidine plus an investigational agent and those two drugs are given together and patients have to come to the university since it's an investigational trial to get the medicine because that's how some of these medicines are... that's the only way the environment you can get them. Now every once in a while, you can get on a trial that's oral and then you can get the medicine from the University and take it home and take it, but you're still... you're linked up with that University setting in order to be enrolled in the clinical trial and I don't know if there are any prospective studies looking at patients with MDS in observing them and kind of seeing what happened. I just don't know. Now, they may be out there, but I just don't know. I can tell you what's available like at my institution for people who have MDS. We

have another study for people who have failed 5-Azacidine or Decitabine, both. There's like a newer generational called Sapacitabine. So, we have the trials for that.

Q12: So, is it best to be connected with the University then? It sounds like it is.

Jean Ridgeway: You know, it's a good idea to get. You can go for a second opinion, but again if the standard of care can be delivered with your oncologist and he's comfortable treating you then...

Q12: With the advice from a university...

Jean Ridgeway: Sometimes yeah.

Q12: ... sometimes they work...

Jean Ridgeway: Most of these hematologists, I mean, they go to all these educational sessions in there. They're pretty savvy with keeping up on things.

Q12: What was that... What was that website that you...? That...

Jean Ridgeway: N... National Cancer Institute. So, it's N as in Nancy, CI.gov or you could Google clinical trials and it will probably come up.

Q13: This is on behalf of dad.

Jean Ridgeway: Yes.

Q13: Can there be any detriment to overexertion, exercise, work under...

Jean Ridgeway: When you have MDS?

Q13: ... any of the condition that might be caused by MDS?

Q14: I still try to do like I did 25 years ago.

Jean Ridgeway: That's because you're a boy.

?: So does he. He tries the same thing.

Jean Ridgeway: I think that remaining active is a really good thing. I would probably be a little bit... that risk benefit. If you're profoundly anemic and you're doing like a really big stressful... I'm not quite sure what would... like running a marathon or...

Q13: Tearing out concrete. Removing a whole section (inaudible 28:33).

Jean Ridgeway: You got to use a little balance with that because if you're anemic you have less available oxygen. So, you have to be a little bit careful and then in fact, I mean, I don't know if your white count is low. Just be careful with infection, but I think if you feel well, you should try it. If you're not feeling well, I don't know if I told you this, but I really have this thing about people driving. I mean, if you're really not well enough to go up and down to the basement then you don't drive the car. If you have trouble walking from the chair to the exam table, don't drive the car. You're driving a... So, you have to be a little careful.

Q13: But you get tired easy.

Linda: (inaudible 29:20) as a child. Have you ever seen any kind of connection with that and down the road?

Jean Ridgeway: Can you use your microphone? I'm going to just summarize that. Linda said that her husband as a child had anemia. Now, was he treated for it?

Linda: He was treated for anemia and he's mentioned it, but I don't know exactly and of course he just left. I didn't know if there was any correlation that you found between that and people encountering MDS down the road.

Jean Ridgeway: We don't really see... I haven't seen that. There's different types of anemia. Right? I mean, there's iron deficiency anemia and so I don't know what type of anemia he had.

Linda: I don't know if he specifically knows. We can ask him when he comes back, but I do know when he was a year old he had a birthmark, a large birthmark from his forehead with radiation. I don't know if maybe that triggered that anemia at that time which may not even be related to what's going on now.

Jean Ridgeway: I just don't know. Don't know. People used to have thyroid nodules and it was really common to get radiation. I think and then the tonsils, they did a lot of radiation when people had enlarged tonsils back in the '50s.

Q14: A follow-up that I asked Dr. Cripe about vitamins, supplements, foods. Is there any... From your experience, do you agree...? I don't know that I got a direct answer quite frankly. Are those things helpful and not curative, but a better quality of life and maybe push off time when you need to have treatments. Are there any natural things that we can do including exercise?

Jean Ridgeway: From a scientific perspective, I would say there's no data that says if you exercise 20 minutes a day you're going to live longer or better or you won't develop MDS. I think part of good health says that if you're eating a well-balanced diet. Since the American diet is readily fortified. If you're eating foods that are natural. I don't mean like buy them from Whole Foods that they have to be organic, but I mean if you're eating like fresh fruits and vegetables and you're not losing weight, you can take a multivitamin since the majority of the vitamin is going to be water soluble, it's going to wash out of you anyway. So, that's not going to really make a difference. Mega doses of vitamins can be harmful. Mega doses of some of the minor elements like copper. We've seen a number of patients through the years come in and

they'll be younger guys who go on the body building phase and they do mega doses of some type of super vitamin and then they come in really toxic and they like have heavy metal toxicity and we had another gentlemen that his wife was poisoning him with arsenic and that wasn't a good thing. But your question is are vitamins helpful. I think they can be helpful. There just is no data saying that here's the magic recipe. I will say though that for red blood cells you need red blood cell building blocks. So, you need enough iron, B6, folate and B12 to make a good...

Q14: I get monthly B12 shots.

Jean Ridgeway: And some people are B12 deficient and that happens sometimes because of it... B12 is the enzyme has a lot to do with your intestines, but B6 is something that is... and folic acid. We usually put our MD... We ask our MDS patients to take a milligram of folic acid a day for their anemia. It's not going to harm you. It's water soluble. Did I not give you an answer either?

Q14: It helps because we don't know.

Jean Ridgeway: No, we don't know and you hear like vitamin D has been out in the media quite a bit. If you live north of Miami you basically are vitamin D deficient. So, that's all of us no matter how much time we spend outside. We spend a lot of time inside.

Q15: I have a question. Bert's really complained in the last six to maybe eight months. I'm not sure, but... about bone pain. Is that... Have you heard of that being related?

Jean Ridgeway: We hear that a lot. You hear that a lot about bone pain and some of it is you have to think that the bone marrow itself is this very complicated micro environment and there's a lot of things going on with different immuno... there's a lot of immunology that's happening in it and if you have a disorder, I mean, you can have a bit of... like just even inflammation or cytokine release in the bones. So, I'm not sure if...

Q15: Because he's talking like his hips, not just his legs, but like his hips and the pelvic area

Jean Ridgeway: And the pelvis and I don't know if the answer to that is taking a lower grade NSAID like a Motrin which... You don't want to take anything long term, but I don't know if you've noticed a difference if you take Ibuprofen or napricin if you feel better or if it's kind of the disease just making your bones feel crummy.

Q15: What about circulation. That's a big thing that's just happened where his legs and feet from knees on down, I mean, he can't get enough wrap around them. He can't get enough... They're cold.

Jean Ridgeway: Oh, they're cold.

Q15: Just cold.

Jean Ridgeway: They're cold. Now, there are other reasons for that than none just MDS I mean as far as peripheral vascular issues.

Q15: So, is that something that we should bring up to...?

Jean Ridgeway: Do you have cramping or discoloration or just cold? Just cold?

Q16: Just cold.

Jean Ridgeway: Just cold.

Q15: See, he's like these other guys here that they don't know when they have different pain and they don't know when they have to go... It's all the same. So, it's hard... Am I right, girls?

?: Yes.

Jean Ridgeway: They got to be a little bit specific.

Q15: You guys are tough. You're tough to work with, man.

Jean Ridgeway: More info. When you have anemia, you're cold period. I mean, that's just... that's part of being anemic is really having less of a threshold for being...

Q15: So, what's really weird is that he's having these hot flashes which I should be having and instead I'm cold all the time and he's hot all the time and now we can't seem to get things together in our house at all. So, it's pretty... Yeah, there's its moments.

Q17: I've noticed I have to keep the thermostat higher than I did two years ago to feel comfortable. I get... I just... I feel cold all the time.

Jean Ridgeway: Right and a lot of that is driven by anemia. I mean, it's normal to be anemic period and if you get transfused when you're 8 grams per deciliter, that's pretty low. I mean, it's not normal. The people living with you are living at like 13 grams per deciliter. So, they have a lot more red blood cells to hang onto that oxygen and you're going to feel cold. Some people like to wear like a knit hat to keep their head a little bit warmer because you lose a lot of heat through your head, but you're going to find out that. Yes, ma'am.

Q18: Jean, I'm passing a sheet of paper around. If you could just list your hematologist's name, city and state and if you know the phone number, but if you don't, don't worry about it. Hematologist name.

Jean Ridgeway: And are you just trying to get a list or are you going to...? What's that for?

Q18: I'm just pass a piece of paper around.

Q19: Did you start it already?

Jean Ridgeway: Question over here.

Q20: Yeah. You know, it seems to me since I was diagnosed that I have more like achiness and stuff and I'm like is that because you're under such stress? I mean, from the diagnosis maybe? I keep attributing it to that.

Jean Ridgeway: I think I would really... I defer back to this whole cytokine issue with your bone marrow. That probably has a lot to do with it.

Q21: I (inaudible 37:48) help her and maybe other people. I found because I... I've had this for seven years and (inaudible 37:57) diagnosed five years ago. I think truly that the first year that you're diagnosed with this because it's such a mystery disease. Nobody's every heard... A dentist wouldn't even clean my teeth because my gums bled and I felt like... I mean you would have thought I had some kind of horrible, contagious (inaudible 38:14) and it's upsetting and there's so many things that people think you're making up what you have because nobody's heard of it and I think that first year you do (inaudible 38:25) everything happens to your... everything you feel (inaudible 38:29). Oh, God. I wonder if that's because of that. It's just like a whole big question mark in your head and I think that can cause your body to have pains. I mean, (inaudible 38:43) emotional stress (inaudible 38:44). I think it can (inaudible 38:46). That's just me. Now, I don't know if there's a lot of people in here who got the same thing I have (inaudible 38:51).

Q22: It's just old age, too.

Q21: Yeah and you think that, well, I'm not 25 anymore.

Jean Ridgeway: Can you use the microphone so we can hear you, Roger.

Roger: I don't have an answer to this, but you may.

Q18: Did everyone see this hematologist list?

?: No.

Roger: Do you know anywhere in this MDS organization is there collaboration among these various clinical trials that would bring the information together?

Jean Ridgeway: So, his question is within the organization, is there collaboration. When clinical trials are set up, there's a couple different mechanisms that clinical trials, the forms that they take place. Sometimes they're just at an institution like MD Anderson. Other times if it's a very large and they're looking to accrue, say, 500 patients, it's a multi-site. So, Stanford might be involved, Detroit you will see and then all that information is gleaned together and what you see then is at scientific presentations and then even on the Internet if the drug then is purchased by a company or it comes out and it's approved, you'll see the results of those clinical trials. So, a lot of that data it has to be collaborative data because there aren't going to be 500 people in the

Indianapolis area within the next 3 years that get diagnosed with this to come up with any meaningful information. So, there are very large... they're called cooperative groups and they're coordinated by the National Cancer Institute and there's 4 of them. There's the Children's Oncology Group. That's called COG. There's Southwest Oncology or SWOG. There's the Eastern Cooperative Group called ECOG and then there's the Cancer and Leukemia Group B, CALGB. So, those are very large cooperative groups that take these trials without investment... You remove the potential for investigator bias. So, it's not like I own this drug and I'm going to conduct this trial and... So, they're done by multiple sites with lots of different patients. Maybe the people in Indiana are just like a hearty bunch compared to the people who live in Texas who are kind of wimpy and so maybe the results here are going to be really good, but the results down in Texas are going to be really bad and so it's better to get a very broad... Now, they do set up what's called... You have to meet some standards so that they're comparing apples and apples, but you have to be, say, like between the ages of 45 and 99 to get into the clinical trial. You can't have tuberculosis. You can't have a concomitance malignancy going on like some people have prostate cancer or breast cancer at the same time as they're dealing with MDS and so those all get weeded out and the data gets analyzed and it put together and then there are professional publications that this information comes out in, *The Journal of Clinical Oncology*. The American Society of Hematology publishes these papers. So at the very beginning of December, every year the international group, the... it's called the International... the American Society of Hematologists, ASH. We have a meeting once a year and it's an international meeting. This year it will take place in New Orleans and during that time if you just Google like 'ASH updates' starting about the 8th or the 10th of December, they'll have highlights every day of investigators that are going to come and they'll bring their data to the meeting and they have posters and they'll talk about like updates in certain areas of hematology both benign like hemophilia and then malignant like MDS. So, you can look at that.

Roger: Then how does this collaboration of information go to the FDA for FDA approval?

Jean Ridgeway: So, there's a committee called ODAC and it's the Oncology Division and so the lead investigators on a clinical trial, say for example when Decitabine... I'll just use it because I'm going to use it. So, when Decitabine went to the FDA for approval, they had to go to this whole committee. Now on the committee sit like suspicious people and they scrutinize the work and it's not only physicians, but it's nurses and pharmacists and statisticians and people who know research and they say here's the purpose of the study. Here was our eligibility criteria. Here's what we did. Here's our data. We enrolled 171 patients and out of that 40 percent of these patients X, Y and Z happened and they'll say well because of this we feel like you should approve this drug and the FDA may say, well, like you didn't look at... what about... you didn't include this. Now, we want you to go back and add this little piece to it. So sometimes it's an easy approval and many times it's not or...

Q23: It's a long (inaudible 44:26).

Q24: She went for TYSABRI for MS.

Q25: From mouse to patient about eight years average.

Jean Ridgeway: At least. At least. It can be at least 10 years from bench to bedside.

Q25: That's if it makes it.

Jean Ridgeway: If it makes it. A lot of them don't. I think like it's 1 to 10.

Roger: If we're talking about research, one question is I was going to ask Dr. Cripe and it was not enough time, but what is the degree of collaboration between the various... I'm talking basic research on MDS with Germany, Italy, Japan and the international group and with the local doctors, for example. How do they get together?

Jean Ridgeway: So, how do they get the information?

Roger: Or how... Do they collaborate like they should in your opinion?

Jean Ridgeway: So, say that... say I'm treating somebody for MS, okay, and I find out that the drug I'm treating her with cures people of anemia. Okay. So, then I go and I go to the company and I try to set up a research and then the company will say, well, I have an investigator in Germany. Why don't you invite them and then people start getting invited globally and as their sponsorships for these collaborative efforts, people get invited and the MDS Foundation, actually, does an international meeting every other year and like in Italy, Maria Santini does a lot of stuff over there and so there's a lot of things internationally and it's interesting. There's this skepticism from United States physicians that like is the data in Europe really believable and then you turn the coin over and then you see the European physicians say oh, is the United States data really believable and so there's a bit of discordance, but when all the data is filed together then it proves true.

Q26: Well, it's a good thing.

Jean Ridgeway: It is a good thing.

Q26: (inaudible 46:25)

Jean Ridgeway: It is a good thing. Right. And actually when in Europe, for example, when we talk about people getting transfusions or growth factors, we say that those people are receiving supportive care. In Europe, you're receiving active treatment and transfusions are treatment. So, it's just a little bit of differentiation and not all the drugs that we have are available in Europe and Europe has some drugs that aren't available here and some of that is national health insurance. They become the gatekeepers. So, what's available...? I mean, we... our current healthcare system allows for us to have access to a lot of drugs. So, that looks a little bit different in different parts of the world, but MDS is... it's an international problem. It's not just people in the US that have this. Worldwide it mirrors the same characteristics. The average is 70. The most common problem is anemia and the scales when you look at the IPSS scoring system, it is used internationally so that people are really beginning to speak in a very similar fashion and deal with these problems on a consistent basis.

Q27: Do you see clusters of it in the United States?

Jean Ridgeway: Do we see clusters of MDS...?

Q27: In certain states that have...

Jean Ridgeway: I live in Chicago and so our practice catches people along the southern rim of Lake Michigan and then Ohio and for us like anywhere else your insurance dictates where you can go. People aren't going to go out of network because the cost is too great. They may go for a second opinion. So, we see quite a few people from Northern Indiana and that's where the steel mills used to be and I don't know if that's coincidence or if it's reflection of an aging population because they're also now 65 or 70.

Q28: I live in an area if you've ever heard of Frenald (sp? 48:35).

Jean Ridgeway: No.

Q28: Well, it was disguised as a grain producing place, but actually they were producing nuclear... different things and people in that area years ago got a settlement because it was in the wells and radium and all those... radiation and all the (inaudible 48:55).

Jean Ridgeway: That does happen and the US Department of Public Health employs a very large statistical... There are these people who are epidemiologists. So, they look at population health and when things begin to arise in areas like there's, say, 20 cases of MDS in a 4 block area that's going to link together.

Q29: It's like the Great Lakes is MS.

Jean Ridgeway: There's the MS belt.

Q29: It is the MS belt. Great Lakes area there's more MS in the country in that belt than there is anywhere else.

Q30: Where at?

Jean Ridgeway: In the Midwest.

Q29: In the Great Lakes area.

Jean Ridgeway: In the Great Lakes area and somebody asked about...

Q29: MS. What Carol has.

Jean Ridgeway: Somebody asked about when was this disease... when was it first discovered. I mean, it's been around for a long time, but the diagnosis codes and the nomenclature really didn't come to be until the early '70s and then there's a... from epidemiology there's a database

called the SER database. That's the Statistical and Epidemiological Research. When you check into your doctor's office, your disease has a code and those codes are captured by the hospital and that information is transferred to the government and if you're somebody who's a Medicare recipient that data is captured on the SER database and you can go in... there's a group... you can go into the Internet and there's a... It's called HCUP, the Health and Human Resources, and you can go in there and find out in your area how many people have been diagnosed. You can go into states.

Q31: That's just what I was going to ask you. So, I would go into HCUP.

Jean Ridgeway: HCUP. If you go HCUP.gov that's a huge... It's a public database. You can look up all kind of stuff. You can look up how many people are diagnosed with...

Q31: All cancer diseases? All disease?

Jean Ridgeway: Everything.

Q31: That's interesting. Thank you for that.

Q32: I have a question. Can you speak more towards... you talked about hand washing being the number one of avoidance behavior. Are there other things that are what put you at a higher risk for being exposed to certain things? I know I'm not trying to get you out of the garden, Dad, but I know they talked to him about hands in the soil. Is there another... like a checklist?

Jean Ridgeway: If you're neutropenic, it's recommended that if you are going to garden, you need to double glove. If you're a woodcutter, you should be wearing a mask and there are people who are more adherent than others. One of my favorite patients, his wife, he and his wife own a lavender farm in Indiana and he was 65, he had a transplant and he sent me a picture and it was him on the tractor in the middle of the... I'm like whatever. So, you make recommendations. There is a greater risk if you're fiddling around in the soil that you could get some type of infection.

Q33: (inaudible 51:59) he's washing his hands a lot more than he used to, but it still... baby steps is right.

Q32: And thank you because I just renamed myself rather than caregiver, recommendation giver.

Jean Ridgeway: Recommendation giver. That's good. That's much better.

Q32: I give recommendation.

Jean Ridgeway: Collaborator.

Q34: What I'm really kind of curious about is not everybody with MDS has the concern about infections.

Jean Ridgeway: Correct.

Q34: I just want to make sure.

Q35: Her low white count and some folks are (inaudible 52:30)

Q36: White blood cells are alright. You don't have (inaudible 52:35)

Jean Ridgeway: It's interesting. The true test of how well are your white blood cells working if you have the diagnosis of MDS is how many infections have you had in the past 6 months because you can have a white count of 0.5 and never have an infection or you could be somebody who has a white count of 1 who gets a cellulitis of their ear, gets a cellulitis of the foot, gets a pneumonia. Perirectal abscesses, I mean, its after lunch, so but getting... that's a problem. If you get a problem, perirectal abscess or something like that that's a big problem. You got to make sure you let somebody know about it and you can get attention to it. So, infections come in all shapes and sizes and as far as going to the dentist, some dentists like to get a little piece of paper that says from your hematologist that it's okay for you to do this, blah, blah, blah. If you are neutropenic what we do is we give people a little antibiotic the day before, erythromycin, day of and day after if they're getting a heavy cleaning if they're profoundly neutropenic.

Q37: I just changed dentists. I really thought if you don't know this and I just thought... and the dentist that I currently go to and went to, I just said, "Well, I have MDS" and he said "I know about that." I thought, "Why didn't the other guy know (inaudible 54:07)?"

Jean Ridgeway: A lot of times providers will... like we'll tell our patients let your dentist know that you can have a cleaning and a scaling but nothing like... sometimes they are pretty aggressive and they do whatever. So, you just have to be careful.

Q37: (inaudible 54:25)

Jean Ridgeway: As hard as it is to change. We got two minutes.

Q38: What organs are going to fail most likely because...

Jean Ridgeway: How do people meet their demise with MDS is that your question?

Q38: Am I allowed to ask that question.

Jean Ridgeway: You can ask that question. You know what? I'd like to preface that by saying we're all mortal beings.

Q38: I know.

Jean Ridgeway: And the other thing that I really would like to say and I tell my patients this and they kind of give me... they give me the evil eye is that when you get diagnosed with a life

threatening illness like MDS you need to be proactive in your healthcare and you need to be proactive in your personal finances and make sure that you put things in order and I... I'll tell you a little silly story. My parents are both fine now and my last surviving relative, she passed away a year ago. She's 95 and I'd go out to see her and she got diagnosed with a brain tumor kind of like out of the blue and I had been urging her to kind of like... I can write you a check, but like my name needs to be on the checkbook. She goes, "I really thought I was going to live forever," and I'm telling you she really thought she was going to live forever. So, we all have to be responsible in our healthcare and those are very unpleasant and uncomfortable conversations for you to have with your family members, but I would urge all of you to have goals in mind and allow your family to know what you want and what you don't want. So, if you have an unfortunate event and have a terrible pneumonia and you end up on a ventilator do you really... is that what you want or is that what you don't want and I am of the persuasion that when I tell my family what I want, it releases them to carry out my wishes instead of forcing them into a situation of making a decision for me. So, I would encourage all of you at the table, healthy or not, to be proactive with that. Okay. So back your question. So, the majority of people have a lot of other health issues and so oftentimes it's a concomitant health issue that can be the cause of their demise. So, cardiovascular disease compounded with anemia sometimes makes people a little more prone to heart failure or heart attacks, infection. So, things... something totally unrelated as well or a pneumonia. So, infection and some of those things as well just like anyone else in your age group because the majority of folks will not progress to acute leukemia and deal with that set of circumstances, but they will live this as a chronic illness now and something that you need to be continually on top of.

Q39: So, is there a... I know you said... Oh, my gosh. I just lost brain... The progression.

Jean Ridgeway: Progression.

Q39: There isn't... Like with MDS it's less... did you say or did the doctor say something I won't say that it's less likely to turn into leukemia. Is that what I...?

Jean Ridgeway: It's not less likely. I mean...

Q39: I mean, what's the percentage of it turning into?

Jean Ridgeway: About 20 percent. About 20 percent. That's just like all comers, all comers. If you get diagnosed with MDS and you have 16 percent blasts then intuitively you can say I'm probably at a higher risk than the person who gets diagnosed with 0. Right?

Q39: Should we ask that doctor every time we go see him what his blasts are?

Jean Ridgeway: If you get a bone marrow biopsy you should ask for a copy of the report because that's...

Q40: That's the only time you can get that. Right? If you have a bone marrow (inaudible 58:33) or...

Jean Ridgeway: Correct. Sometimes people have blasts circulating in their blood. I don't know if anybody in this room is like that, but there are some people who the blasts come out of the bone marrow into the blood, but get a copy. You own your health information. Get a copy of all your records and even if you just stick them in a folder, stick them in a folder.

Q39: So, the big thing is second opinion.

Jean Ridgeway: Second opinion.

Q39: Second opinion.

Jean Ridgeway: Second opinion. Second opinion. One more question.

Q41: I don't want to end up on a morbid note, but just to sort of reflect on the last question. Are there any document cases of a person dying of MDS per se that has not progressed into leukemia?

Jean Ridgeway: From the MDS?

Q41: Sole course and not from another comorbidity not that you're aware of.

Jean Ridgeway: I'm not sure. I bet you there is somewhere because you said any, but I would bet you someplace.

Q41: Not to be (inaudible 59:42) that's a lot less common than another comorbidity in combination...

Jean Ridgeway: The most common is comorbidities in combination with the... kind of like you layer things on.

Q42: Because the system isn't functioning at its regular...

Jean Ridgeway: Right. So, you're at a higher risk which prompts you to be more vigilant with your healthcare and I would say if something's bothering you, call your doctor. If you don't feel good you're like... because you're the best person to say when something's not right. I know myself and you know what? Something's not right. I really need to come in. Go in. Call them and tell them that.

Q42: But then they want to know well what's wrong with you.

Jean Ridgeway: Well, you have to be able to give them an answer.

Q42: But when you tell them you have ache and no pain, they look at you and say the same thing.

Jean Ridgeway: Well if it's different, it should be the same. It's going to be different. If you call me and say I've had a cough for five days and it's really much worse and I'm starting to run a fever, then I'll say you need to come in.

Q42: But like if you go in and you say... because like for instance, my arms right here, they ache. They don't hurt. I don't need pain medicine. They just ache, but I was telling her and she just... ask your doctor sometime what the difference is between an achiness and a pain.

Jean Ridgeway: Now when you look at that and you're a person who's healthy versus a person who has MDS you look at two different situations. So for people who have a known chronic... a blood disease and something is different and they don't feel well they need... you need to either call your primary care doctor. I mean if you develop an upper respiratory infection that's really not getting better and you're running low grade fevers, call your primary care doctor and say, "Look, I'm coming in because you know I have MDS and I'm sick," because what's going to be a nuisance to me or you is going to land him in the ICU. So, you need to be proactive because they don't... there's not as much reserve for folks.

Q43: Do they know what sets this off all of suddenly why this would get set off at 70 and why he would come down with it (inaudible 1:01:50)?

Jean Ridgeway: Why is it more common?

Q43: Yeah.

Jean Ridgeway: They're not really sure. There are a couple theories out there. One of them is just that as we age, our body's immune responses in general are less and so we're less able to fight something off that comes up.

Q43: Is it something think you may have had and something sets if off?

Jean Ridgeway: Nope. No.

Q44: The Centers of Excellence, I mean, I feel now like because they're called the Centers of Excellence and because I'm getting all this information that's the place to be. That's the place to go.

Jean Ridgeway: I would definitely... It would be like that for anything. If you have breast cancer, you can see your local oncologist and they may give you good information, but if you feel like you're not getting enough then go see a specialist.

Q44: Because they do see more patients with that disease.

Jean Ridgeway: The doctors that I work with and really the people that I only work with people who have blood cancer. So if you had lung cancer, I'd say I have no idea.

Q44: I see.

Jean Ridgeway: So when you deal with a rare disorder, I just think you need to see somebody who looks at rare disorders on a regular basis. It's like who do you want to do your cardiac bypass? They guy who does 10 a month or the guy who does 100 a month. The guy that does 100 month because he's going to be better.

Q44: Well, my doctor, our cancer doctor, is a hematologist and oncologist, but a Center of Excellence would be just a division that just does MDS.

Jean Ridgeway: My hema docs only see leukemia and MDS, all they see. Boom. Is Dee giving me the sign?

?: We want to thank you.

Jean Ridgeway: You're very welcome.

(Applause)