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MC: Hi Everybody, I'm Mike Cuthbert in Washington. Welcome to Prime Time Radio.

The disease is so frightening that brave men find themselves referring to it only by its initial. Everyone knows what "the Big C" is and nobody regards it with anything less than horror. It seems omnipresent - food links, air links, even a link between the use of antibiotics and cancer, make news daily. Some say we hear more about it now because we are living long enough now to make cancer more likely. Others blame changes in the environment, both outside and in the workplace. Others blame stress, and then there is always tobacco. There are more types of cancer than we care to go into, but as we learn more about the disease, it becomes apparent that certain forms are easier to screen, and not as imminently threatening, as other forms.

We discuss several forms of cancer with Dr. Nancy Lee of the Centers for Disease Control. We are going to focus on one of them— colorectal cancer. It is the third most common cancer among men and women, it is number two in deadliness, and like cervical cancer, it can be tested for and prevented when caught early. There is the rub: only 50% of those that should be getting colonoscopies are doing so. Colorectal cancer is the third leading cancer for both men and women, as we mentioned, but there are geographical differences, and racial and ethnic differences, in the rates of colon cancer— we will discuss those.

But our primary message in this program is whether you think that you are at risk or not, there are cancers that can be taken care— oh, wait a minute— you've heard all this before, right? You wave your hands at the radio and say, "Oh yeah, oh yeah, I'll call the doctor." I know, because I do these programs and I've put off calling the doctor and getting the full colonoscopy he recommends. No longer! Stay with us during this segment. Call your doctor for a referral right afterward, before you say, "oh yeah, oh yeah" one more time.

Dr. Lee, welcome to our program.

NL: Thanks very much for having me.

MC: How did you get into this business?

NL: Well, I am an internist— general internist by training— and I had some important professors in my life that were doing public health and got me very interested in the work at the CDC. I went there 23 years ago and I've been there ever since.

MC: What is under your rubric as Director of CDC's Division of Cancer Prevention and Control?

NL: Well, CDC's role in cancer prevention and control is to take what we know works, the proven strategies, and then to disseminate them, for the U.S. as a whole. We got started with our breast and cervical cancer screening programs in 1991 and we now provide screening services to pay for screening and diagnostic services for over 500,000 women a year who are poor and uninsured, in all 50 states, some territories, and tribal organizations. And it is the largest national organized screening program for cancer in the country.

We also support cancer registries in 45 states that collect high-quality data every time somebody is diagnosed with cancer. And then we support other efforts in skin cancer prevention, colon cancer screening, prostate cancer, informed-decision making, and then we now have an overarching effort in comprehensive cancer control. But we really try to bring the public health sector to cancer control. We work with partners like the NCI, the American Cancer Society, and many other partners such as AARP.

MC: As I mentioned, we'll try and get into some of those other cancers this morning or today, but let's focus on colorectal cancer. One of the puzzling things to me is when I went on the Web site at the CDC, I went back into the archives and Donna Shalela introduced the *Screen for Life* program which is ongoing back [to] July of 2000.

NL: 98, maybe— something

MC: Why are we still worried about [colorectal cancer]? What's not happening?

NL: Well, unlike breast and cervical cancer screening, which have been around for a long time, it's only been since the early to mid-90's that experts have agreed that when you get screened for colon cancer, and then take the appropriate actions if there is something wrong, that lives are actually saved. We now have excellent scientific evidence that colon cancer screening actually reduces deaths from colon cancer. And so we started with that effort. But it's been hard to get the message out. And what we also know is that from the time we knew that breast and cervical cancer screening worked till the time we had 80% of the population screened, it was 20 years. We don't want to take that long. There are too many people, men and women, dying from this disease. And they don't have to— they don't even have to *get* the disease.

MC: How much of the problem is caused by the fact that at least breast cancer can be determined by the victim herself — she can feel the lump and get involved— whereas colorectal cancer has no easily detectable symptoms?

NL: Well, actually, most breast cancers, when you want to get them, aren't felt either. So the whole issue here with screening for cancer is to find it early before you know you have it. And for colorectal cancer, it has the added advantage of when you find it in its early state - before actually this growth, which is called a polyp, turns into cancer - When you find it in its early state, which you can with these tests we are talking about, you prevent from getting it— so people don't ever have to get it. It's the same way [that] we work in cervical cancer. By finding, early, what we call pre-cancerous legions, you

remove them and the person never gets it. We don't have that benefit right now in breast cancer, but for colon cancer we do and we know that it is a powerful way to prevent deaths and prevent even getting it.

MC: Would it be too simple to compare this to visiting your dermatologist to have him ice those pre-cancerous lesions from your face and wherever else?

NL: It's similar— it's a little bit more difficult to find those lesions than just finding them on your face, but it has the same effect. That is a nice analogy that I would expect many people have experience with.

MC: Our guest is Dr. Nancy Lee. She is the Director of CDC's Division of Cancer Prevention and Control.

We know that screening is recommended for everybody over 50 that one is clear, but what are some of the other risk factors that make screening perhaps even more urgent?

NL: Well, the most important issue around screening is that less than half of the eligible population over 50 are getting screening. So, what's urgent is that we could be reducing the number of people getting and dying from colon cancer by a marked amount. There are a few people that we actually recommend getting screening at age 40— and those are people with high-risk problems - they have a strong family history of colorectal cancer in their family, they have a history of colorectal polyps, which are these little growths, or they have certain unusual colon diseases, like Crohn's disease or ulcerative colitis. And so those people, we recommend start at age at age 40— because they are at higher risk. Everyone else we recommend beginning screening at age 50.

MC: One of the things that disturbs a lot of these folks that look at all these diets, and we are seeing another explosion of diets and pieces of advice. Do we know what leads to colorectal cancer in terms of food and digestion? At one time, I remember, one of the reasons to not eat red meat was colorectal cancer. Too much drinking was part of it. Do we really know the dietary…

NL: We don't and there is an active research agenda going on in that regard, but our message is we don't want people to wait around to figure that out. They have something they can do now that is very powerful, and that is get screened.

MC: What are the geographical factors, if any, that apply to this cancer – for example; you are sitting in the prostate cancer of the world throughout Washington, DC, for some reason that I guess nobody knows. But, what about colorectal cancer? Are there conceivable geographic patterns to its distribution?

NL: There may be, - I'm not – I would have to sit down and look around at that. What I do know is that there is definitely more screening for colorectal cancer on both coasts. It is sort of a bicoastal effect. So – and I call it the "great, unscreened" middle of America. So the area of the country in the middle really has lower screening rates. This

is a cancer that is a large cancer killer no matter where you are. And so there are differences, what causes those differences we're not sure yet. But we do know that we all need to get screened and there is a special lack of screening going on in sort of the middle states.

MC: Is there a perceivable sexual difference between men and women getting colorectal cancer?

NL: There is a bit. I think men – it's pretty even though. Men are more likely to get it; women are slightly more likely to die from it. But it's not great differences. And we do know that men are more likely to report being screened for colorectal cancer.

MC: In some circles I am told that it's become something you brag about in the way men used to brag about vasectomies. I suppose— [laughing] I don't know if they get a colon pin or anything!

NL: Well, you know, women have had a long history of being screened and getting preventive health care starting with their reproductive systems and having babies and getting contraception. And when they would go to their gynecologist for that, they would get their Pap smear. And then they are used to, since the 80's, having a mammogram. This is a new kind of experience for men, because the other common screening is prostate cancer and that is a blood test, by and large. Screening for colorectal cancer does involve some discomfort sometimes and some unpleasantness, but that – I want to go back— there are four good tests to use for screening for colorectal cancer. And they have different pluses and minuses for people and it's real important to talk to your doctor to talk about what is the right test for you.

MC: I want to get into those in detail in just a moment— I'm curious, this might seem a light question, but it had so much publicity for so many reasons. Was there a perceivable increase and significant increase in the number of colonoscopies done following Katie Couric's very public colonoscopy?

NL: It's hard to measure that, but my understanding was that there was.

MC: And was it differentiated at all between men and women?

NL: I can't— I don't have information

MC: Because we are talking, let's face it; we are talking about publicizing screening— I am just wondering how many more celebrity colonoscopies would help?

NL: That's a good question….

MC: At least we have them screened…

NL: Right— that is a good question, but the important thing is to remember that if you are listening to this radio program right now, this is something that can save your life and it's safe - getting screened for colon cancer – you've got your choices and they're safe.

MC: Just before we leave the risk factors, are there any significant racial and ethnic differences in who contracts this cancer?

NL: Yes. African Americans are most likely to contract the cancer. They have the highest rates of getting the cancer and the highest rates of dying from the cancer. White Americans are next, and then I am not sure exactly the order, but Hispanic, Asian Americans and American Indians are substantially lower than whites and African Americans.

MC: As I suppose— is the question with so many things, [I'm] talking nature and nurture here, is there any evidence if this is genetic or whether this is environmental?

NL: It's probably all of the above. There is good, strong evidence of several genes that have been identified, and so familial – certain syndromes that run in families can lead to a high incidence of colon cancer in families. And I have heard estimates that 15 to 20 percent of colon cancer may have some kind of relationship to these genetic differences. But most colon cancer is not related to the genes that we have already identified and are probably an interaction with what you are inside and your environmental exposures after you were born. So it doesn't really matter— people still need to get screened and get screened regularly. People who have a history of colon cancer are recommended to begin at age 40.

MC: Our guest is Dr. Nancy Lee. She is the CDC's Director of Cancer Prevention and Control. We are focusing on colorectal cancer and the proven fact that screening for colorectal cancer does work.

As you mentioned earlier, as your figures at CDC indicate, 92% of women eligible are now having regular mammograms, but less than 50% for colonoscopy. I was trying to think what are the factors that you believe that might lead to this low screening rate and the first thing I came up with was the sort of the general discomfort we have of talking about the colon and the rectum on general terms anyways.

NL: Well I think the most important reason is that it is a relatively new test…new screening test that is recommended. Again, these kinds of recommendation didn't come out till the 90's. I think it is something that have had trouble discussing because it's a part of the body that is quite private. We know that back until the 70's, you didn't talk about breast cancer either. So we are becoming more open in general. I think that mammography and having a Pap smear are both not pleasant procedures, but women still go and have them done. So we just sort of have to get over this. And I think more and more people are used to— knowing that these activities really do work.

MC: As uncomfortable as they may sound, the Pap smear and mammogram are uncomfortable, but I don't know if the public mind … they match the uncomfortable sounding procedure that takes place before and during a colonoscopy. What's being done to address that?

NL: Well, let me say that colonoscopy isn't the only choice. A fecal occult blood test, which is the test that had the most proof that it will reduce your risk of dying from colon cancer, is not uncomfortable at all. It is just a little distasteful. It's where you take these little cards and take a sample of your stool and put them on these cards and you take them to a doctor's lab and they test them. So there is really no discomfort at all, it's just distasteful. So that is a proven choice for screening.

Then there is also sigmoidoscopy, and colonoscopy and barium enema, which involve, in one way or another—looking at your colon.

MC: A lot folks aren't at all familiar with the sigmoidoscopy. What are the limits of that test?

NL: The sigmoidoscopy is sort of like a colonoscopy, it just doesn't— you use a tube …or a lighted tube/// that doesn't go in as far…

MC: So a colonoscopy junior?

NL: Yes— it goes up to about a third of the length of the colon, where the colonoscopy goes the whole length. Many sigmoidoscopies are done with no anesthesia because it's not that uncomfortable. It doesn't last that long.

To do a colonoscopy, you have to have some sedation. And with colonoscopy in particular, they can go in and they can remove polyps. I think they are getting to the point now with sigmoidoscopies that some doctors are now removing polyps. So there are different choices— you can have only fecal occult blood test (the cards), you can have the fecal occult blood test and sigmoidoscopy, or you can do a colonoscopy. Or you can do a barium enema where they put— it's an x-ray test where they put barium through an enema-like procedure and then take x-rays of your colon following that.

MC: I recall, I don't know, maybe six months ago or less, a program on television and my wife, who had just scheduled her colonoscopy, said, "Why didn't they tell me about this?" And this is the virtual colonoscopy, which is done— well, you can tell us how it is done, but it involves a computer and it's not invasive.

NL: Correct

MC: It sounds like a dream screening… how close is it to reality for everybody?

NL: Well, it's— they're still studying it. It's still not certain that it will do what we want it to do, which is to reliably find legions early. It's sort of like a CAT scan of your

colon, you have to still go through the preparation where you have to take— either take an enema or take fluids the night before to clean yourself out. So you don't get rid of that unpleasant part. And we don't know that it works yet, but they are working on it, and then the other important thing is that if they find a polyp in there, you still have to have a colonoscopy. So, one of the things that all of these screening tests lead to is, if you have an abnormality from your fecal occult blood test or sigmoidoscopy, you are going to have a colonoscopy anyway. But you don't always have to start with colonoscopy. You can start with another test first.

MC: Do we have any figures on how many people have a colonoscopy and have no polyps? In other words, the virtual colonoscopy, if it were to eliminate any further procedures…

NL: We don't have it from a national level. There are studies that have looked at that and most of them are studies of specific high-risk individuals, so I have to look— there are a few settings in this country where you can look at that. There are some trials ongoing to study that sort of issue with colonoscopy and then we have a few such efforts coming out of Europe. But I am unfamiliar with the specifics of those.

MC: I want to stress that the colonoscopy is a diagnostic procedure, but it also can be a surgical procedure.

NL: It can be a screening procedure, it can be a diagnostic procedure, and also with a colonoscopy, if there are polyps, they can be removed at the time of the colonoscopy.

MC: One final question before we move on to other cancers. Well, two questions. If polyps are found and they are removed, first of all, is a polyp a polyp? In other words, are all polyps pre-cancerous or does the doctor know which are dangerous and which are not?

NL: That's a very good question…

MC: And second of all, if they are removed, what's the discomfort level and recovery time after that?

NL: Not all polyps are pre-cancerous and what happens is when they are removed, the doctor will send it to the pathology lab and they will look at it under the microscope and they'll be able to tell. People with large polyps will need to have more frequent screening procedures because they are what we call "polyp formers". And, so- I am forgetting…

MC: Recovery time…

NL: Right, right, right. My understanding, and I have not gone through this myself, having a polyp removed, is that it is virtually painless and you go home. And there may

be a little concern about residual bleeding and stuff, but it's not serious— it's an outpatient procedure done in the doctor's office often times.

MC: Our guest is Dr. Nancy Lee, Director of the CDC's Division of Cancer Prevention and Control. I'm Mike Cuthbert in Washington. Our web site includes previous broadcasts and a link to us by email for your comments. The site is www.aarp.org/radio. This is Prime Time Radio.

Let's turn our focus to other cancers— we've already mentioned mammography, and the early detection of breast cancer. How effective has the Pap smear been and what other procedures are there that women should know about rather than the basic Pap? I understand there are some new ones out.

NL: The Pap smear has been dramatically effective. We've seen declines in mortality and incidence of cervical cancer for years. It's been very effective. It's a good test. And it should be the backbone of any cervical cancer screening program. There are new ways to do a Pap test— basically getting cells from a woman's cervix and smearing them on glass and looking at them under the microscope. And there are new ways to get those cells that may be more effective. They are also more costly and whether it is going to add a whole lot more advantage is still unclear. What we know is, most women now that get cervical cancer – the reasons they get it is because they have not been screened for many years. So, it is not a problem with the screening test that women get cervical cancer, it's a problem that they are not having it. So that's been our focus at CDC – to make sure that women that are rarely or never screened get cervical cancer screening again.

MC: I don't know if this is advertising or information, but I read about three very [inaudible] Pap smear— the Thin Prep, Auto Pap and Pap Net. Are those commercial products and what's the difference?

NL: Well, I think some of those are no longer available. The Thin Prep is this one where they take – they get the cells and process them in a different way, but you end up looking at cells under the microscope. You have a thinner layer; it's a little easier to tell. It costs more. It's a good test, but again, we're still pushing that women need to get screened who have not been screened, because that is where we are going to get the most benefit. We've also found that women probably, once they have had several normal Pap smears, do not need to have annual Pap smears – probably every three years would be enough. This is particularly true for women over 50 because their likelihood of developing new cervical cancer lesions is lower than younger women and so they can probably, once they have had several normal Pap tests, they can have Pap smears every three years.

MC: We have only about three minutes left and I know that you can take them all discussing the prostate cancer controversy, but as the Director of CDC's Division of Cancer Prevention you must have a take on this controversy. That is, as to whether or not if prostate cancer is found at certain ages [if] it's even worth operating on because the

nature of the disease, its slow-growing nature and so forth. What is your take on prostate cancer screening and treatment?

NL: The take is that we don't know. And we've had, as scientists and public health leaders, difficulty in helping people understand what to do in the face of uncertainty. It's not that prostate cancer screening doesn't work; and we don't know that it does work. We don't know - there is evidence for both sides and so we have done a lot of work on something we call informed-decision making, which is not only limited to prostate cancer. But what we hope is that people get some basic information, learn about it and then make the decision that fits best with their lives. We have developed some very nice material that is for the general population that can be found on our Web site and we have a booklet that targets men in general and one that targets African American men, because they have very high rates of prostate cancer.

MC: What is the Web site?

NL: It's www.cdc.gov/cancer.

MC: One quick final question. I've heard in Australia, because of the ozone layer depletion there, scientists have been working on transparent full body suits that would protect people in Australia from exposure to sun— that's how bad the skin cancer treatment, or situation— is over there. I know they are wearing body suits on the beach now— the kids are. How close are we to needing that same kind of protection? Or are sun blocks doing the job?

NL: Sun block is not nearly enough. We have a program called "Choose Your Cover" and we advocate a number of things. Hats, wear clothing, stay out of the sun during the peak hours, just like your momma taught you, and use sunscreen. They are working now with a number of school programs to develop shade in schools, to work with communities to promote sun safe practices in school. I've been to Australia and what they are doing there is marvelous. They have elementary schools where the kids - whenever they go outside – they wear a hat.

MC: With the back flap?

NL: Yeah, or any kind of hat— really just a brim. They have shade in their school systems, I mean in their schoolyards. They don't cut down trees like they do here— they build their school playgrounds with shade. So those are the sorts of things we really advocate.

MC: Our guest has been Dr. Nancy Lee. We – repeat the Web site for the Centers for Disease Control. It is www.cdc.gov/cancer. She is the Division of Cancer Control's Director. Thank you for being with us.

NL: And thank you so much for having us.

MC: Thank you at home for joining us. We invite you to call our toll—free number with reactions to our shows or any questions that you may have. That number is 800 424 9343. Previous broadcasts of primetime radio are online at www.aarp.org/radio. Primetime Radio is a production of AARP. Our producer is Jenelle Haskel, Associate Producer Alene Ellis. Our Engineer is Bruce Youngblood. I'm Mike Cuthbert in Washington.