Stacey Kenfield: Today, I'll be speaking about diet and exercise. As I introduced myself earlier. I'm a professor and epidemiologist in urology at UCSF. I've been in the department since 2012. I did my training at Harvard School of Public Health, and thank you for everyone who submitted your questions about diet and exercise. This year, we focused on answering your questions in this talk, and so hopefully I will answer your questions, and if you have further questions, please don't hesitate to contact me. I'm going to start with exercise because exercise has been the most consistent finding in prostate cancer and it has the biggest benefit. If you were to ask me what factor to focus on between exercise and dietary factors, hands down, I would recommend exercise. There have been multiple studies, at least five, looking at exercise in observational studies, cohort studies among men with prostate cancer. What we see from studies in Sweden, the United States, and Canada that examined exercise, so higher levels versus lower levels after diagnosis in men with prostate cancer was a 30 to 40% reduced risk of prostate cancer specific mortality and about a 40% reduced risk of overall mortality. These results are very strong, very consistent, and made it into the US Physical Activity Guidelines in 2018. I led the first study back in 2011, and the last study was published in 2023. I'm going to just share those results next. I want to highlight that two of these five studies included men at all stages of disease. This is not just looking at localized prostate cancer, but also men with stage IV or metastatic disease. Here are the results from the very study that was published in 2023. This study looked at it was a pan cancer study, so that means people with various cancers were part of this analysis. There were over 11,000 cancer survivors and 4,000 of them had prostate cancer, and this study looked at a cutoff. The cutoff was 150 minutes of moderate to vigorous exercise per week versus people that were doing less than the cutoff. Again, that is the guideline. The 2018 physical activity guideline is that cutoff of 150 minutes of moderate to vigorous exercise per week. This study compared people doing more or less than that cutoff, and what you can see is that those who were doing more had a lower risk of cancer death, a 21% lower risk of cancer death, as well as a 25% lower risk of overall death. I just wanted to highlight this because that provides some rationale for what the cutoff is 150 minutes of moderate to vigorous aerobic exercise per week. If you are not doing that, I recommend starting slow and gradually increasing that over time. My next slide goes over this a little bit. This slide is part of a paper published by Kerri Winters-Stone as the senior author for people to start slow if you're not exercising and to gradually increase that over time. The left hand column has different categories of activity inactive, somewhat active or regularly active. If you go across the columns, you can see recommendations for flexibility exercise, aerobic exercise, resistance exercise, and other types of exercise. The take home message here is that, "Clinicians can reassure their patients with prostate cancer that exercise of any type, frequency or duration. At tolerable levels of intensity can have a benefit for overall health and wellbeing." We recommend finding exercise that is fun because we want you to do exercise that you can do repeatedly over time. Finding long term exercise that is effective and fun. I know a lot of you, I'm going to talk about exercise opportunities here at UCSF in a few short slides from here. Another study that has been done since that paper came out was published by our group early this year in 2026, led by Ryan Allen et al. Instead of just emphasizing one to two sessions per week of resistance exercise, we actually recommend a little bit more two to three non consecutive days per week of resistance exercise. This is because we have published data showing that acute bouts of resistance exercise release myokines, anti cancer myokines. Myokines are produced by the muscles during exercise, and they have been associated with reduced inflammation they promote metabolic health and potentially slow prostate cancer growth, and so that is short term, that is short lived. The more exercise resistance exercise you do releases these myokines. The lead author of this paper, our senior author, Rob Newton, has recommended to do shorter bouts of resistance exercise multiple days per week to get this myokine effect. We recommend doing at least two to three resistance exercise sessions, working all major muscle groups and to alternate between your upper and lower muscles to allow muscle recovery. This is another slide highlighting the benefits of exercise. How many people in this room do aerobic exercise on a regular basis? Can you raise your hand? Awesome. At least 80% of you in this room do aerobic exercise. What about resistance exercise? How many people do at least two sessions per

week of resistance exercise? I think it's about 40%. Maybe half of you do resistance exercise twice a week. As you can see from the far column in this slide, There are different benefits for each type of exercise. With aerobic exercise, this actually increases energy, increases endurance, improves fitness, whereas resistance exercise really builds your muscle mass, it builds your strength, and it also helps with function. One should try to do each of these types of exercise is as part of your exercise routine each week. I'm happy to answer any more questions about this. I wanted to highlight opportunities that we offer at UCSF. You may have heard about the strength and numbers group exercise class. How many went to the exercise class today? Can I have a raise of hands? Two, three of you, four. Wonderful. This is a class offered at UCSF by Jordan Labrek. He's a physical therapist. This occurs twice a week, focusing on aerobic and resistance training. If you have questions about what you should be doing, I recommend you go to this class. You'll learn how to exercise safely and effectively, both aerobically and using resistance exercise. The phone number and the email are located on this slide, and it costs $85 for the initial intake appointment and $20 per class. UCSF also offers exercise counseling for UCSF patients. You can find out more information by calling the number on the slide to sign up. These are offered for free to help people develop a personalized exercise plan for you and to focus on your own physical activity goals. Now I'm going to switch gears and talk about diet. Diet is a lot more complicated, I think an exercise. There's been a lot of papers that have come out that are somewhat conflicting. There are few papers on diet, so I want to highlight that the data there are very few factors where we see consistency across the literature. I'm showing this table because as you know, most men die with their prostate cancer, not of their prostate cancer. Among other causes of death, heart disease is the most common cause of death. Here we're presenting the recommendations side by side for heart disease prevention, cancer prevention, and lethal prostate cancer progression after diagnosis. What you can see, so these recommendations come from the American Heart Association, for cardiovascular disease progression. The American Cancer Society for Cancer Prevention and a review paper that we wrote by Long Le et el for prevention of lethal prostate cancer. What you can see is that the findings, the recommendations are very similar across the diseases you see in this table. The green checkmarks are things to do, and the red Xs are things to avoid or limit, and what you can see is things are very consistent. What we would say here is that the eating a heart healthy diet agrees with the recommendations we would give for prostate cancer progression. The findings in the far right column are very specific guidance we would give for those foods that are within that food group. For example, for fruits and vegetables, we would recommend cooked tomatoes to get the lycopene that's more bioavailable in cooked tomatoes, eating cruciferous vegetables like kale, broccoli, cauliflower, and eating raw vegetables. I got a question about coffee, which is not on the slide, but the data show that coffee is actually beneficial for cardiovascular disease prevention, overall survival. The data for coffee, we published a paper in the capture cohort in the diet and lifestyle sub study at the capture cohort. We did not see an association for coffee among never smokers or former smokers. However, we did see a five fold increased risk of progression among current smokers. I just wanted to highlight that. There was another consortium study looking at coffee intake, but it was measured at the time of diagnosis or slightly before, showing that it may increase disease specific survival in men with localized prostate cancer. There aren't very many studies about it, but it does not look like it increases risk. I also got some questions on sugars, so I wanted to address that as well. The current dietary guidelines for Americans came out in 2026 for the period of 2025-2030. They were very enlightening. I wanted to just put the added sugar recommendation, which says no amount is recommended as part of a healthy diet. One meal should contain no more than 10 grams of added sugars. The old dietary guidelines for Americans published in 2020 used a cutoff of less than 10% of calories, which is about 50 grams per day on a 2,000 kilocalorie diet. And then I put the American Heart Association guidelines where they have a cutoff of less than or equal to 36 grams per day for men and slightly less grams per day for women. As you can see, I put some examples here of foods that have added sugar. Soda has 39 added grams of sugar, and honey has 17 grams of sugar. You will easily get there to the 10 grams by eating some of these foods. Actually, table sugar has 12 grams of sugar, maple sugar has 13, and agave syrup has 14

grams, so you're past the cutoff of 10 grams just by having a tablespoon of these foods. I want to just say, though, that there's no direct evidence of added sugar being related and associated with PSA progression or prostate cancer specific mortality. These findings are really based on overall metabolic or overall health benefits. I mentioned before that we published a systematic review by Ryan Allen et al in our group. We had a table in this paper focused on things to do and things to limit or avoid. This table is for clinicians to advise their patients. Today, I'm going to show you what we put in that table for all of you to know. First and foremost, we recommend adopting a plant based eating pattern, and this does not mean that everything you eat must be plants. A plant based diet is saying that most of what you eat is from plants such as fruits, vegetables, beans, nuts, seeds, et cetera, and whole grains. You can still incorporate meat, dairy, eggs, and fish and other seafood, but you're eating less of that. They make up a smaller portion of your overall diet. However, a well planned plant based diet can provide adequate levels of protein and meet all your essential amino acid requirements. I have one minute. Thanks, Dan. [Laughter] I'm going to skip ahead. These findings were for overall health. When we looked at diet scores within the systematic review, we saw that limiting processed meat and saturated fat were important for prostate cancer progression. I wanted to highlight that whole milk was one of the more consistent findings in these papers showing that higher levels of milk were associated with either lethal prostate cancer or prostate cancer progression. I got some questions about low fat dairy. Low fat dairy has not been consistently associated with prostate cancer progression or with lethal prostate cancer. Some of the findings for advanced disease were really for all cause mortality, and then only one study showed that total dairy intake with a cutoff of three or more servings per day was associated with all cause mortality. Let me go to this slide. You already heard about calcium. Dr. Friedlander mentioned calcium getting at least 1,200 milligrams of calcium per day. I got some questions about how do you incorporate calcium if I'm telling you not to eat or drink whole milk? This is a slide that shows different sources of calcium that you can get from your diet broken into a low fat dairy category, fortified foods, leafy greens, specifically the kind with low oxalate, which allows for more calcium absorption, and then other sources like tofu, oranges, other vegetables, almonds, and beans, and canned fish. Eggs and prostate cancer. There are two main findings for that. One is about pre diagnostic egg intake, which is that first bullet showing an increased risk. I want to focus on the post diagnostic findings where you can see no association related to lethal prostate cancer in two cohort studies. We did see an increased risk in the capture cohort, but at levels of 5.5 eggs per week. The next level down had no increase, and that was at three eggs per week. We recommend less than three eggs per week, which showed no harm. Finally, I'm going to talk a little bit very quickly about protein. This is a slide from Greta Macaire, one of our cancer dietitians at UCSF. As you can see, older adults should get at least 1.2 grams/kilogram per day of protein. These are the sources that we recommend for protein, healthy sources of protein that vary from beans and lentils, soy foods, seeds and nuts, fish, low fat dairy, skinless poultry, and then vegetables and whole grains. This is just to remind me to tell you about our resources on our website. We have guidance for you in all of the different food categories on what to eat. If you would like to have more information, you can print this out from our website. Finally, free counseling is available to UCSF patients. This can help you answer cancer specific questions, help manage nutrition related side effects of treatment, and also help you decide whether or not to take supplements. Please reach out to your urology practice directly for referral and to schedule. Our resources are available at this QR code. There's a picture of this in your pamphlet that you got today, so you have this if you picked up one of the brochures, feel free to reach out to me with any questions. Thank you. [Music]