## Supplemental materials for:

Kale MS, Morgan O, Wisnivesky J, Schnur J, Diefenbach MA. Challenges addressing lung cancer screening for patients with multimorbidity in primary care: a qualitative study. *Ann Fam Med.* 2024;22(2):103-112.

## Supplemental Appendix. Interview Guide

## Intro

Hello. Thank you for agreeing to talk with me today. As you know, lung cancer screening is recommended by the USPSTF to current and former smokers who meet smoking and age criteria; however it's not recommended to individuals who are expected to be unable to tolerate curative surgery and to individuals who develop a health problem that substantially limits life expectancy. There is no further guidance regarding how to determine whether a health problem limits life expectancy or the ability to tolerate surgery, so this is a grey area that I'm hoping to fill in my research. For today, I'm hoping to learn from your how you approach shared decision making in lung cancer screening with your patients in general, and in particular in your patients with comorbidities.

OK, for recording purposes, "This is recording XXXX (study ID#) conducted by Minal Kale and Michael Diefenbach on MM/DD/YEAR."

• As you know lung cancer screening is recommended and available for smokers. I want to talk first about how you decide who should be screened?

(Do you recommend lung cancer screening for every smoker?)

(Do you ask how much they smoke?/Do you calculate/estimate pack/years?)

- Do you recommend screening to patients or do you elicit their opinion about it?
- How do you decide whether or not to discuss lung cancer screening with a patient in general?
- Can you give me some examples of how you explain the benefits of screening?
- And how do you explain the harms?
- Do you have a favorite example to explain screening?
- Does a patient's comorbidities influence whether you recommend lung cancer screening? How so?
- Can you tell me about the most recent time that you had to make a decision with a patient about whether or not they should have a lung cancer-screening test?
- What are your thoughts about the risks and benefits of administering lung cancer screening to patients with comorbidities?
- Anything else that influenced your decision making in that case?
- Once you made the decision that the test would not be in the patient's best interests, how did you proceed? I'm especially interested in how and if you communicated your decision-making process

to the patient

- If you did communicate your thinking to the patient, how did the patient respond?
- If you didn't communicate your thinking to the patient what did you do instead?
- Do you only engage in shared-decision making if you and the patient disagree?
- I personally have a case right now where because of comorbidities I don't think lung screening is in the best interest of the patient. And yet, she is a heavy lifelong smoker, and health literate, and is very, very insistent that she wants the test. How would you handle this situation in your practice?
- How have you talked to patients about lung cancer screening when they're eligible for screening but you weren't sure about whether they would benefit or not from screening?
- Have you used any decision aids for lung cancer screening?

Yes\_\_\_\_\_ NO\_\_\_\_\_

- If yes: Which decision aids have you used for lung cancer screening, what did you like about the decision aid?
- If no: can you explain why you haven't used one?
- My goal is to create a new decision aid which takes into account how a person's comorbidities would impact their screening benefit and harm (for example a competing risk of death). What features would you like to see in such a decision aid?
- What would make it most useful and least burdensome for you?
- How would you like to access the tool. For example would you like a smart phrase, a link to a web-based browser, a paper decision aid, or something else)
- I know as providers we can get swamped with shared decision making tools, apps, etc. And frankly, given the productivity requirements and short appointment times with patients, many providers are more likely than not to skip the use of such aids all together. What do you think it would take to make something you'd genuinely want to use?