Supplemental Methods 1

Attitudes and Practice about Lung Cancer Screening Survey

Dear Healthcare Professional,

You are being invited to participate in a survey developed by investigators from The University of Texas MD Anderson Cancer Center on lung cancer screening. The survey is approximately 5-10 minutes long and will assess current lung cancer screening practices at your practice, as well as the acceptability of a personalized lung cancer screening program, which tailors screening schedules to individuals based on a dynamic assessment of their personal lung cancer risk.

You may complete the attached survey or use this QR code to complete it online at :

https://redcap.link/engage

Sincerely,

Dr. Iakovos Toumazis, Principal Investigator
Assistant Professor, Health Services Research

Dr. Robert Volk
Professor, Health Services Research

Dr. Lewis Foxhall
VP, Health Policy, Of of Chief Medical Executive

Dr. Sanjay Shete
Betty B. Marcus Chair in Cancer Prevention and Professor

The University of Texas MD Anderson Cancer Center, Houston, TX

Study Description

The State of Texas currently ranks 45th in lung cancer screening rates in the US.

The goal of this research study is to learn about the attitudes, acceptability, and potential barriers healthcare providers have towards implementing a personalized lung cancer screening program in Texas. The research team will use the information in this study to create a tool to help with lung cancer screening decisions. If you agree to take part in this study, you will complete an online survey that has been designed by The University of Texas MD Anderson Cancer Center about your opinions and attitudes about personalized lung cancer screening and potential barriers you think exist regarding implementing this type of program in your practice. It should take about 10 minutes to complete the survey.

If you agree to complete this study, your personal identifiable information will be password protected and will not be directly associated with your study answers. All study data will be reported in aggregate, and no individual participant's answers will be singled out in publication or presentation.

Consent Statement

You have read the description of the study, and have decided to participate in the research project described here. You understand that you may refuse to answer any (or all) of the questions at this or any other time. You understand that there is a possibility that you might be contacted in the future about this, but that you are free to refuse any further participation if you wish.

Questionnaires and interviews may contain questions that are sensitive in nature. You may refuse to answer any question that makes you feel uncomfortable. If you have concerns about completing the questionnaire or interview, you are encouraged to contact the study chair.

You may withdraw your authorization at any time, in writing, for any reason as long as that information can be connected to you. If you have any questions about this study, you can contact the study chair (Dr. Iakovos Toumazis, at 713-792-4420).

1. How old are you?
- ☐ Less than 40 years old
- ☐ 40-49 years old
- ☐ 50-59 years old
- ☐ 60-69 years old
- ☐ 70 years or older

2. What is your sex?
- ☐ Male
- ☐ Female
- ☐ Other

3. What is your race?
(select only one from this category)
- ☐ American Indian or Alaskan Native
- ☐ Asian
- ☐ Black
- ☐ White
- ☐ Other _____

4. Are you of Hispanic, Latino/a/x origin?
- ☐ Yes
- ☐ No

5. What best describes your role?
- ☐ Family physician
- ☐ Internal Medicine
- ☐ Gynecologist
- ☐ Physician assisstant
- ☐ Nurse Practitioner/Advanced Nurse Practioner
- ☐ Other _____

6. What Zip code do you primarily work in?
- ☐ [_____] Zip Code

7. How many years have you been in active medical practice?
- ☐ Less than 1 year
- ☐ 1-2 years
- ☐ 3-5 years
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ 16-20 years
- ☐ More than 20 years

8. On average, how many patients do you see per week?
- ☐ Less than 10 patients
- ☐ 10-49 patients
- ☐ 50-99 patients
- ☐ More than 100 patients

9. On average, how many patients do you see per week who are eligible for lung cancer screening (50-80 years old, ≥20 pack-years, currently smoke or quit ≤15 years ago)?
- ☐ Less than 10 patients
- ☐ 10-49 patients
- ☐ 50-99 patients
- ☐ More than 100 patients
- ☐ I don't know

10. Do you have a dedicated staff member (e.g. a nurse navigator or a nurse coordinator) in your practice tasked with notifying individuals who are due for lung cancer screening, scheduling future screening and follow-up diagnostic exams?
- ☐ Yes
- ☐ No

11. Have you ordered lung cancer screening for your patients in the past?
- ☐ Yes
- ☐ No

12. In your opinion, do the benefits of lung cancer screening outweigh its potential harms for eligible patients?
- ☐ Yes
- ☐ No

13. Is your practice a residency training site?
- ☐ Yes
- ☐ No

14. How do you handle lung cancer screening in your practice? Do you...

	Yes, almost always	Yes, sometimes	No, never
assess patients for eligibility for lung cancer screening?	☐	☐	☐
recommend lung cancer screening to eligible patients?	☐	☐	☐
refer patients eligible for lung cancer screening to a screening facility in your health care system?	☐	☐	☐
refer patients eligible for lung cancer screening to other facilities?	☐	☐	☐
have a shared decision-making discussion with patients about lung cancer screening?	☐	☐	☐
use a decision aid tool when talking with patients about lung cancer screening?	☐	☐	☐

15. How much time do you spend discussing with your patients...

	Less than 2 min.	2-5 min.	6-10 min.	More than 10 min.
the potential benefits of lung cancer screening?	☐	☐	☐	☐
the potential harms associated with lung cancer screening?	☐	☐	☐	☐

16. How much do you agree with the eligibility criteria from the United States Preventive Services Task Force for lung cancer screening? The patient should...

	Strongly Agree	Agree	Disagree	Strongly Disagree
be at least 50 years of age.	☐	☐	☐	☐
be at most 80 years of age.	☐	☐	☐	☐
have at least a 20 pack-year cumulative smoking exposure.	☐	☐	☐	☐
have quit smoking no more than 15 years ago (if not a current smoker).	☐	☐	☐	☐
be of good overall health.	☐	☐	☐	☐

17. Lung cancer screening eligibility criteria should be expanded to include patients...

	Strongly Agree	Agree	Disagree	Strongly Disagree
under 50 years of age.	☐	☐	☐	☐
over 80 years of age.	☐	☐	☐	☐
with less than a 20 pack-year cumulative smoking exposure.	☐	☐	☐	☐
who no longer smoke, regardless of how long ago they quit smoking.	☐	☐	☐	☐
who never smoked but have other risk factors (e.g. family history of lung cancer).	☐	☐	☐	☐

The following section is about *implementation of a personalized lung cancer screening framework* (i.e., a framework that tailors screening recommendations to individuals based on their personal risk of developing lung cancer).

17. Do you use *any* type of risk calculator (for example, cardiovascular risk calculator) when managing your patients?

☐ Yes. For which diseases? _____

_____

☐ No

18. Do you currently use a risk calculator to facilitate the risk assessment of individuals for *lung cancer screening*?

☐ Yes

☐ No

19. If yes to the previous question: Which risk calculator(s) do you currently use in your practice?

☐ PLCOm2012 (also known as the Tammemagi model)

☐ Bach et al risk model (also known as the MSK model)

☐ Liverpool Lung Project (LLP) model

☐ Lung Cancer Risk Assessment Tool (LCRAT) or the Lung Cancer Death Risk Assessment Tool (LCDRAT)

☐ Other _____

20. Would you be interested in implementing a personalized lung cancer screening framework in your practice?

☐ Yes

☐ No

☐ Not sure

21. What would be the *benefits* of personalizing lung cancer screening? (check all that apply)

☐ Maximize the benefits accrued from lung cancer screening

☐ Patients will adhere better to personalized recommendations

☐ Minimize the harms associated with lung cancer screening

☐ Patients will feel more comfortable

☐ Include patients at high risk of developing lung cancer who are not eligible per the existing guidelines

☐ Other _____

22. What would be the *barriers* for personalized lung cancer screening? (check all that apply)

☐ Time consuming

☐ Patients will not adhere to personalized recommendations

☐ Patients will not trust personalized recommendations

☐ Difficult to communicate risk information

☐ Does not have the accuracy to predict an individual's risk

☐ Other _____

23. Would you use an FDA-approved blood-based biomarker test *to assess individuals' eligibility* for lung cancer screening?

☐ Yes

☐ No

☐ Not sure

24. Would you use an FDA-approved blood-based biomarker test as a *standalone screening modality* for lung cancer?

☐ Yes

☐ No

☐ Not sure

25. Would you use an FDA-approved blood-based biomarker test *to guide the management of indeterminate findings* (i.e. small screen-detected pulmonary nodules of unknown clinical significance)?

☐ Yes

☐ No

☐ Not sure