

Multicancer Detection (MCD) Test Use for Cancer Screening in Primary Care: The Patient Perspective

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Primary Care Patient Perceptions of MCD Testing in a Health System

Myers RE, Hallman M, Shimada A, DiCarlo M, Davis K, Leach W, Jackson H, Indictor A, Chambers C. Primary Care Patient Interest in Multi-Cancer Early Detection in Cancer Screening. *J. Pers. Med.* 2023, 13, 1613. <https://doi.org/10.3390/jpm13111613>.

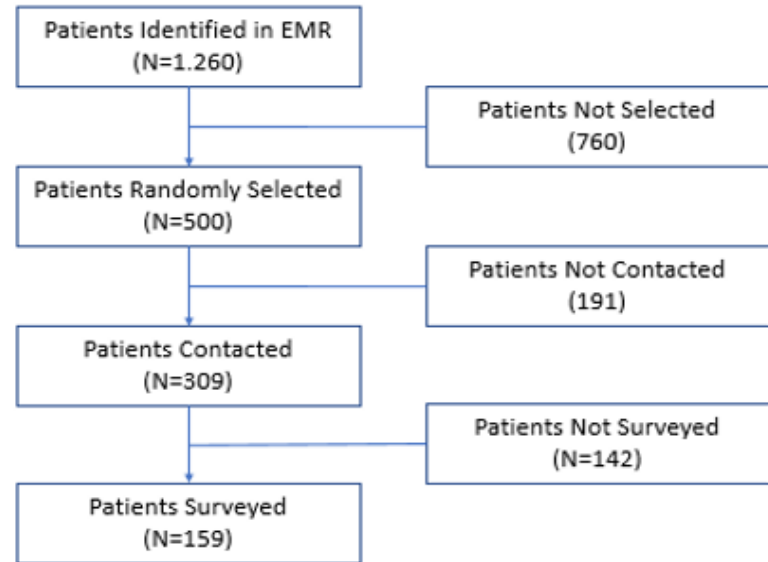
Methods

- Our team conducted a prospective, observational study among primary care patients from 3 practices in Jefferson Health, a large, urban health system.
- Patients were contacted by telephone, consented, and asked to complete a survey (15-20 minutes) that briefly described a new MCD blood test being developed.
- The survey also included items to assess respondent background characteristics, perceptions about MCD testing, and interest in having an MCD test.
- Univariable and multivariable analyses were conducted to identify background characteristics and perceptions associated with patient interest in test use.

Results: Survey Administration

- 1,260 patients were identified via the EMR across three practices
- 500 patients were randomly selected for contact
- 309 patients were contacted via telephone by a trained research coordinator
- 159 patients responded to the survey

Figure 1. Study Design.



Methods (continued)

- At the beginning of the survey, a research coordinator followed a script to describe the following:
 - Standard of Care (SOC) cancer screening for breast, cervical, colorectal, and lung cancer is currently recommended by guidelines and is normally covered by insurance.
 - MCD testing would use a blood sample that is analyzed in a laboratory, and a positive (abnormal) MCD test result would be followed by a full-body CT scan.
 - MCD testing is still being evaluated in clinical trials, is not currently recommended as SOC in cancer screening guidelines and is not currently covered by insurance.

Methods (continued)

- The survey included 14 items to assess respondent perceptions and attitudes related to cancer and having an MCD test for cancer screening (Preventive Health Model or PHM).
 - Cognitive (i.e., perceived salience, convenience, and response efficacy)
 - Affective (i.e., fears, worries and concerns plus perceived risk and susceptibility)
 - Social (i.e., provider support and influence)
- Study participants were asked to indicate their level of interest in having an MCD test now on a scale of 0-10 (0 = Extremely Low Interest and 10 = Extremely High Interest).

Results: Background Characteristics

Table 1. Characteristics of Survey Respondents (N=159) and Non-respondents (N=341).

	Respondents		Non-respondents	
Age (EMR) (yrs), mean (sd)	64.4	7.9	64.7	8.1
Age (EMR) (yrs), n (%)				
50-59	45	28.3%	107	31.4%
60-69	65	40.9%	129	37.8%
70-80	49	30.8%	105	30.8%
Sex (EMR), n (%)				
Female	106	66.7%	179	52.5%
Male	53	33.3%	162	47.5%
Race/ethnicity (EMR), n (%)				
White	103	66.9%	199	60.7%
African American	42	27.3%	105	32.0%
Hispanic/Latino	7	4.5%	13	4.0%
Asian	2	1.3%	11	3.4%
Other	0	0.0%	0	0.0%

Results: Background Characteristics

Table 1. Characteristics of Survey Respondents (N=159) and Non-respondents (N=341).

	Respondents		Non-respondents
Marital status (SURVEY), n (%)			NA
Never married	39	24.5%	
Separated/Divorced	22	13.8%	
Widowed	11	6.9%	
Married /Living as married	87	54.7%	
Education (SURVEY), n (%)			NA
High school degree/GED or less	59	37.8%	
Associate's degree or some college	23	14.7%	
College graduate and above	74	47.4%	

Results: Perceptions About and Interest in MCD Testing

Table 2. Survey Results (N=159)

	Respondents (N=159)	Range and Reliability
Overall Score for PHM Items mean (sd)	4.2 (0.4)	Range=2.6-4.9. Alpha=0.54
Interest in MCD test, mean (sd)	8.4 (2.1)	
Interest in having an MCD test, n (%)		Range=0-10, med =10
Moderate (0-6)	34 (21.4%)	
High (7-10)	125 (78.6%)	

Conclusions

- When given limited information, patients had favorable perceptions of MCD importance, safety, and effectiveness and reported high interest in testing.
- Research is needed to assess patient perceptions and uptake when more complete and balanced information is provided:
 - Test effectiveness in finding early-stage cancer that can be cured
 - Impact of finding and treating early-stage disease on cancer mortality
 - Likelihood of having an abnormal test result
 - Diagnostic evaluation of abnormal test results
 - Management of false positive/negative results
 - Test use in concert with standard of care (SOC) screening
 - Out-of-pocket costs related to screening and diagnostic follow-up

Limitations

- The study was conducted with primary care patients in only three practices of one health system and the survey response rate was low.
- Limited information on the attributes of MCD testing was provided to respondents.
- Participants were asked to share their views about the hypothetical scenario of having an MCD test if it were offered in the future.

Recommendations

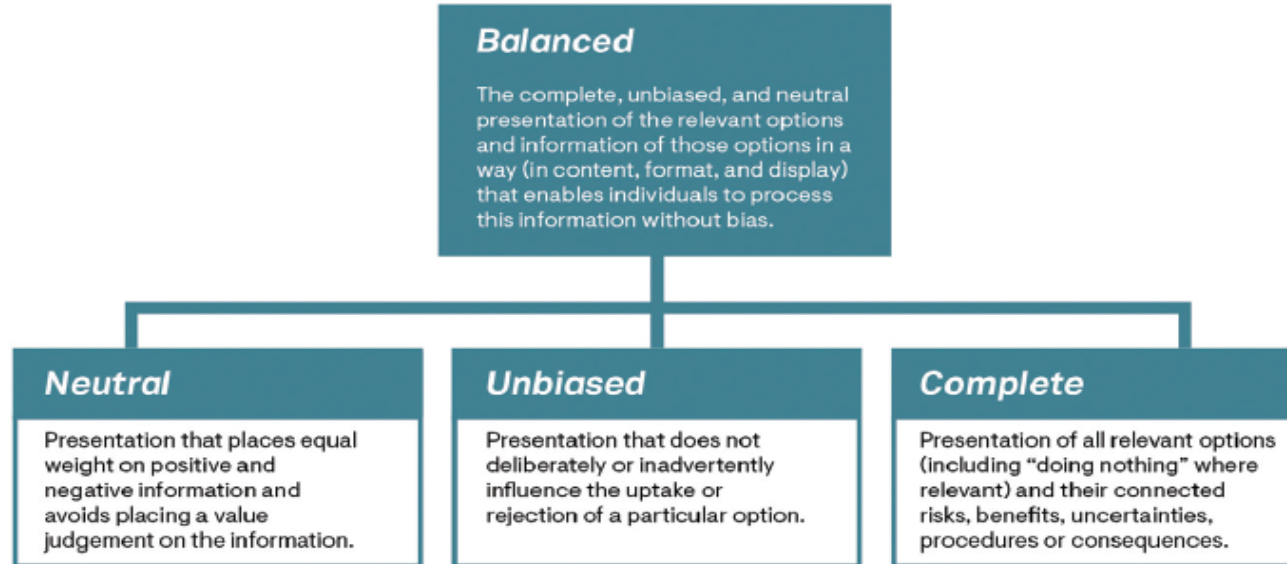
- Guidelines for MCD test use should recommend/mandate:
 - Shared decision making (SDM) about initial testing
 - Patient navigation through initial testing, diagnostic evaluation, treatment, and repeat testing
 - Coverage for testing, diagnostic evaluation, and treatment
- Research is needed to assess the impact of SDM and patient navigation on initial testing, diagnostic follow-up, repeat testing, and SOC screening in diverse populations (the Vanguard Study?)

A Cautionary Tale: MCD Test Advertising

- The test is being provided as a way to add value to life
- Standard of care cancer screening tests can find only 5 cancers
- MCD testing can detect more than 50 types of cancer
- MCD testing increases the chance of finding cancer early
- MCD testing can reduce the cost of care
- MCD testing is being provided at no additional cost
- MCD test results will not be shared with your insurance carrier
- The quantity of MCD tests is limited

Educational Content in Shared Decision Making

- International Patient Decision Aid Standards (IPDAS) for Patient Education Tools



(Martin et al., 2021)

SDM Tools: A Patient Infographic

LUNG CANCER SCREENING

If you are still smoking & need help quitting, talk with your healthcare provider & call: **1-800-QUIT-NOW (1-800-784-8669)**

WHO SHOULD GET SCREENED?

Current Smoker OR **Quit in the Last 15 Years**

20 Pack-Year History

2 Packs/Day OR 1 Pack/Day X 10 Years OR 20 Years = 20 Pack Years

50-80 Years Old

HOW IS SCREENING DONE?

A LDCT machine takes an x-ray or 3D picture of your lungs:

- You lie down on the table & raise your hands above your head.
- The table slides into the scanner. The machine only covers your chest area.
- You hold your breath for about 30 seconds.

SIGNS THAT MAY MEAN YOU HAVE LUNG CANCER:

If you notice any of the following symptoms, you should contact your healthcare provider:

- New cough that doesn't go away
- Coughing up blood (even a small amount)
- Hoarseness
- Shortness of breath
- Chest pain
- Unexplained weight loss

REMEMBER:
Getting screened early can save your life!

Find more information at:
<https://www.cancer.org/cancer/lung-cancer.html>

LUNG CANCER SCREENING BENEFITS AND RISKS

Screening can find lung cancer early and treatment can reduce the chance of dying from this disease.^{1,2}

Of 100 people who have annual screening and recommended follow-up...

About **5** are likely to be diagnosed with lung cancer. Three (60%) of those 5 are likely to be diagnosed with early-stage disease.*

Of 100 people who DO NOT have annual screening and recommended follow-up...

About **5** are likely to be diagnosed with lung cancer. Only 1 (20%) of those 5 is likely to be diagnosed with early-stage disease.*

Among 100 people who are screened...

About **14** are likely to be advised to have follow-up evaluations such as imaging, needle biopsy, bronchoscopy, or thoracic surgery, which may have complications.*

& About **86** are likely to be advised to have follow-up repeat screening in a year.*

Over-diagnosis

Screening may find a cancer or some other condition that is not likely to cause harm.

Safety

Exposure to radiation from a screening test (low-dose computed tomography) is about the same as a back x-ray.

Cost

Screening and diagnostic follow-up are covered by Medicare and by most state Medicaid and private insurance plans.

Quitting Smoking

Quitting smoking can reduce the risk of developing lung cancer and many other types of cancer, and can improve overall health.

Please let your healthcare provider know how you feel about being screened.

I don't want to be screened. 0 1 2 3 4 5 6 7 8 9 10

I'm unsure about screening. 4 5 6 7 8 9 10

I want to be screened. 0 1 2 3 4 5 6 7 8 9 10

¹ The National Lung Cancer Screening Trial Research Team. Reduced Lung Cancer Mortality with Low-Dose Computed Tomography. *The New England Journal of Medicine* 2011;363:991-999.
² Borner JJ, et al. Reduced Lung Cancer Mortality with Volume CT Screening in a Randomized Trial. *The New England Journal of Medicine* 2019;381:880-891.
³ Thrany P, et al. Mortality of Lung Cancer in the National Lung Screening Trial. *A Thoracic Oncology Assessment* 2015;10(12):1885-95.

Shared Decision Making and Decision Counseling

- SDM is a provider-patient conversation that involves:
 - Providing balanced information about available options
 - Guiding the patient through a personal values elicitation and preference clarification exercise and developing a preference-based action plan
- Decision counseling is a structured approach to engaging patients in an SDM conversation

(Emery, 2001; Myers, 2005; Elwyn et al., 2012)

SDM Tools: A Decision Counseling Guide

Decision Counseling Guide - C

Patient: _____ MRN: _____
Decision to be made: _____
Counselor: _____ ID: _____
Date: _____

People have values that may favor Option A: _____ or Option B: _____
Use this guide to identify your patient's values (reasons/goals) and clarify their preference.

STEP ONE: Identify reasons/goals that make your patient favor one option (A/B) over the other (A/B)

Reason(s)/Goal(s) That Favor Option A	Reason(s)/Goal(s) That Favor Option B
_____	_____
_____	_____
_____	_____

STEP TWO: Select the most important reasons/goals (up to the top 3), and rank those in order of importance (1= most important, 2 = 2nd most important, 3 = 3rd most important). Enter the top reason(s)/goal(s) below. Review the top reason(s)/goal(s) to make sure the order is correct.

Top Reason(s)/Goal(s)	Favors Option A	Favors Option B
1. _____	<input type="checkbox"/>	<input type="checkbox"/>
2. _____	<input type="checkbox"/>	<input type="checkbox"/>
3. _____	<input type="checkbox"/>	<input type="checkbox"/>

STEP THREE: Check a box below showing what your patient wants to do about _____
on a scale of 0 to 10 (0 = I really don't want to, 5 = I'm unsure, 10 = I really want to). Enter the result.

I don't want to			I'm unsure			I want to				
0	1	2	3	4	5	6	7	8	9	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

STEP FOUR: Indicate the decision you and your patient have made.

Choose Option A: Choose Option B:

STEP FIVE: Enter the action plan developed with your patient.

Do Option A: Do Option B:

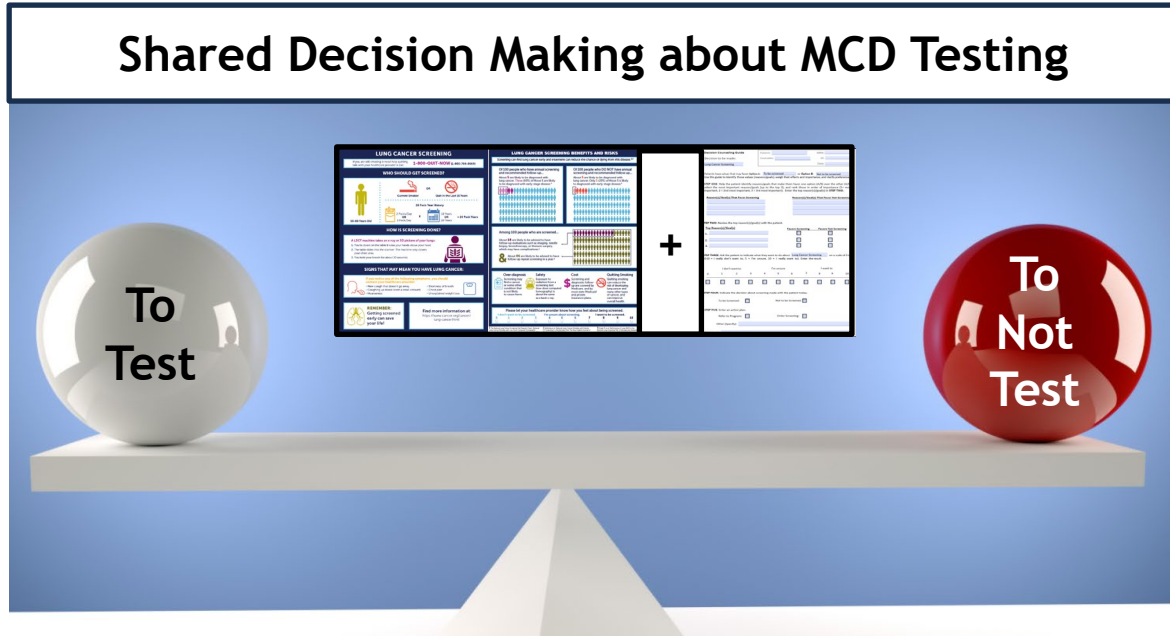
Other (Specify): _____

Comments: _____

Use the QR code below:



Shared Decision Making about MCD Testing



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