

Table S1. Themes, according to facilitators and barriers associated with participation in lung cancer screening.

Theme	Factor
Facilitator	
Individual (patient)	<ul style="list-style-type: none"> Knowledge [37, 44, 49] <ul style="list-style-type: none"> Awareness of early detection message [21, 32-34, 37, 41, 42, 44-46, 52] Interest to check for Lung Cancer [28, 32-34, 37, 41, 42, 44-48] High motivation to know the LCS results (seeking reassurance [32, 33, 41, 44, 48, 63]). <ul style="list-style-type: none"> Openness to be screened [42]. Perceived risk of Lung Cancer [34, 41, 45, 47] <ul style="list-style-type: none"> High Perceived Benefits [30, 41-43] Motivation to quit smoking [32, 33, 37, 44] Who has a positive CT result and needs follow-up surveillance or treatment [30] Provision of the mobile testing program or home test kits during COVID-19 [8, 48, 75] <ul style="list-style-type: none"> Considered screening a waste of money [9]. Online and telephone pre-screening decision-making and follow-up support [48]
	<ul style="list-style-type: none"> Receiving a screening recommendation from a healthcare provider [21, 30, 33, 37, 44] Shared Decision-Making interaction between discussion [20, 31, 49, 50]. <ul style="list-style-type: none"> Rapport with Care Coordinator rapport with the patient [20, 75] Good Doctor-patient relationships [42, 75]
	<ul style="list-style-type: none"> Social (cultural) <ul style="list-style-type: none"> The value of life and perceptions of age [40] Altruism [50, 52]
	<ul style="list-style-type: none"> Organizational (Institutional policy) <ul style="list-style-type: none"> A decision-making aid [50, 52] Reduced costs in specific facilities (V.A. and some Federally qualified) [30, 37, 48, 51, 52] <ul style="list-style-type: none"> Already established healthcare (VA setting) [16, 30, 51]
Barriers	
Individual (patient)	<ul style="list-style-type: none"> Low awareness of lung screening [28, 30-33, 35-38, 40, 43, 44, 46, 48, 53-55] <ul style="list-style-type: none"> Language or literacy problems [49] Insufficient input from the provider [50, 63] Self-efficacy [8, 20, 29, 44, 48, 62] Dislikes Hospital, healthcare system, Scans, and tests) [44] <ul style="list-style-type: none"> Patient's other Comorbidities [21, 51] Fear of cancer diagnosis and worry [9, 31-33, 35-37, 39, 42, 44-46, 50, 54, 56, 57]. <ul style="list-style-type: none"> Low Perceived Benefit (Feeling healthy) [30, 36, 46, 58] Concern or High Perceived Risk of LDCT [28, 33, 34, 37, 40, 41, 43-45, 47, 56] <ul style="list-style-type: none"> Concern cancer itself [21, 34, 41, 47] Futility: denies or questions the utility of treatment or procedure [28, 44, 54],

	<ul style="list-style-type: none"> ▪ Practical barrier [31-34, 37, 41, 45, 47, 48, 56] ▪ Smoking and cancer related stigma [9, 32-35, 39, 44] <ul style="list-style-type: none"> ▪ Being health conscious [45] ▪ lack of family(social) support to attend screening [36, 39, 48]. ▪ COVID-19 fear (perceptions of risk, mortality, worry, behavioral and psychosocial responses to COVID-19 [8, 57, 59-61] ▪ Disruptions in cancer care by COVID-19 [57, 60, 76].
<ul style="list-style-type: none"> ▪ Individual (provider) 	<ul style="list-style-type: none"> ▪ PCP inadequate Knowledge of LCS (Screening method, locations, eligibility criteria, and insurance coverage) [20, 29, 49, 51] <ul style="list-style-type: none"> ▪ Primary care's competing priorities [39, 50] ▪ Fear of causing misunderstanding during a risk-benefit conversation[46, 49]. <ul style="list-style-type: none"> ▪ Discontinuity of care [75] ▪ Shared Decision [18, 20, 29, 49, 50] ▪ Inadequate dedicated time for SDM [18, 58]
<ul style="list-style-type: none"> ▪ Interpersonal (Provider-patient) 	<ul style="list-style-type: none"> ▪ Lack of established relationship [18, 29] <ul style="list-style-type: none"> ▪ Poor rapport [18, 44, 63] ▪ Patient Education (provider recommendation) [21, 30, 36, 41, 45, 47, 53, 58, 62] <ul style="list-style-type: none"> ▪ False-Positive worry after discussion with the provider [44] <ul style="list-style-type: none"> ▪ The Decision Aid tool is confusing [50, 62]. ▪ Patient Misunderstanding [35, 48, 58] ▪ Inadequate encounter time [29, 30, 49, 51, 63]
<ul style="list-style-type: none"> ▪ Social (cultural) 	<ul style="list-style-type: none"> ▪ Distrust in the service/health professional [28, 31-34, 36, 56, 62] <ul style="list-style-type: none"> ▪ Fatalistic beliefs [28, 31, 33, 35, 41, 44, 46, 56] <ul style="list-style-type: none"> ▪ Perception of Aging [35, 36]
<ul style="list-style-type: none"> ▪ Organizational (Institutional policy) 	<ul style="list-style-type: none"> ▪ Transportation [40, 63] ▪ Costs and copays [21, 28, 30, 36, 42, 51, 62] ▪ Lack of insurance coverage [20, 21, 37] ▪ Inadequate infrastructure [16, 21, 43, 51, 64] <ul style="list-style-type: none"> ▪ Lack of care coordinators [43, 52, 62], ▪ Communication between providers [21], ▪ Lack of institutional policy [16, 43, 50, 64], <ul style="list-style-type: none"> ▪ Long wait times [50]. ▪ Public awareness [36]

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