Appendix 2 (as supplied by the authors): GRADE Basis of Recommendation Decision Table for Screening for Lung Cancer

Questions: 1. What is the effectiveness of screening for lung cancer to improve outcomes?		
Populations: 1. Asymptomatic men and women over the age of 18 years		
Interventions: 1. Low-dose Computed Tomography (LDCT) 2. Chest x-ray (CXR) with or without sputum cytology (SC)		
Setting (if relevant): Primary care practice		
Decision domain	Summary of reason for decision	Subdomains influencing decision
Quality of evidence (QoE) for screening studies *Is there high or moderate quality of evidence* Yes☐ No ☒	**QoE for benefits of screening:** Low Varies depending on age and smoking history **QoE for harms of screening:** Low	Key reasons for downgrading or upgrading: **QoE for benefits of screening:** Risk of bias and imprecision
Balance of benefits and harms *Is there certainty that the benefits outweigh the harms?* Yes☒ No ☐	Benefits: Among 1000 people screened annually for three years, and after 6.5 years follow up: 3 fewer lung cancer deaths with LDCT vs CXR 5 fewer deaths from any cause with LDCT vs CXR 8 more early-stage lung cancers found with LDCT vs CXR Harms: Among 1000 people screened annually for three years, and after 6.5 years follow up: 2 more people experience major complications from invasive follow up tests with LDCT vs CXR 0.2 more people die from invasive follow up tests after being screened with LDCT vs CXR	Is the baseline risk for benefit similar across subgroups? Yes☐ No☒ No, those at higher risk for lung cancer have more potential for benefit. Greatest benefit seen for current or former smokers (quit within the last 15 years) with heavy smoking history (at least 30 pack-years). Should there be separate recommendations for subgroups based on risk levels? Yes☒ No☐ Is the baseline risk for harm similar across subgroups? Yes☒ No☐ Should there be separate recommendations for subgroups based on harms? Yes☐ No☒

Appendix to: Canadian Task Force on Preventive Health Care. Recommendations on screening for lung cancer. *CMAJ* 2016. DOI:10.1503/cmaj.151421.

Values and preferences *Is there confidence in the estimate of relative importance of outcomes and patient preferences?* Yes☒ No ☐	Seven studies of participants' preferences were identified in the literature. Most people in the target groups who were mostly considered high risk were willing to undergo screening for lung cancer with LDCT.	Perspective taken: Patient Source of values and preferences: Relative value of importance of outcomes determined by the guideline panel. Patient preferences were determined by literature review, focus groups, and a survey. Source of variability, if any: No evidence identified Method for determining values satisfactory for this recommendation? Yes☒ No☐ All critical outcomes measured? Yes☐ No☒
Resource implications *Are the resources worth the expected net benefit?* Yes☒ No ☐	Costs justified as there is evidence for effectiveness of intervention	Feasibility: Is this intervention generally available? Yes☒ No ☐ Screening for lung cancer with LDCT should only be considered in settings that can deliver comprehensive care similar to that offered in the NLST trial, e.g. certified and trained radiologists and radiologic technologists, with examinations and diagnostic follow-up guidelines aligned with the NLST study protocol. Opportunity cost: Is this intervention and its effects worth withdrawing or not allocating resources from other interventions? Yes☒ No ☐ Is there lots of variability in resource requirements across settings? Yes☒ No ☐
Overall strength of recommendation: STRONG **Overall strength of recommendation: WEAK**	Given the lack of benefits, a strong recommendation against screening with CXR with or without sputum cytology is being put forth. Given the overall body of evidence for the benefits of screening with LDCT was low quality, and the potential of harms listed, a weak recommendation for screening for lung cancer using LDCT was put forth. For all other adults, regardless of age or smoking history, a weak recommendation against screening for lung cancer using LDCT was put forth.	

Remarks and values and preference statement	As further trials on the effectiveness of LDCT for lung cancer screening are completed, more information is expected on the optimal interval, frequency, benefits among other at-risk populations or those with lighter smoking histories. These guidelines will be updated within five years, or sooner if required.