Lung Cancer Screening
Who and When to Screen?

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LungCheck

National Cancer Registry Ireland

- About 2,500 Irish people are diagnosed with lung cancer every year.
- Lung cancer is the leading cause of cancer deaths in Ireland in both sexes - it accounts for 19% of all cancer deaths in women and 23% in men.
- Typically lung cancer is diagnosed at a late stage in Ireland, with 2 out of 3 lung cancers being diagnosed at Stage III or IV.
- The National Cancer Strategy 2017-2026 recognises the burden posed by lung cancer and sets out a number of targets in relation to improving lung cancer outcomes in Ireland over the course of the strategy – targeted multi-media public awareness campaigns; increasing the percentage of lung cancers diagnosed at Stage I and Stage II; and reducing the percentage of cancers diagnosed in ED.

Lung Cancer Screening

- **US National Lung Cancer Screening Trial** between 2002 and 2004, 53 456 former and current smokers were randomised to either LDCT or chest radiograph annually for 3 years. Lung cancer screening using low-dose computed tomography has been shown to reduce mortality by 20–43% and is now included in US screening guidelines.
- The ***Liverpool Lung Project (LLP)*** has recently developed a method to calculate absolute risk of lung cancer over a defined period.
- The ***UK Lung Screen (UKLS)*** is a randomised controlled trial of the use of low-dose multidetector CT for lung cancer screening.
- **Nelson Group** NEJM Publication.
- **ERS and ICS** position Statements.

NHS Targeted Lung Health Checks

- LLPv2: ≥2.5% 5-year risk. (BMJ 2020)
- Age, Gender, Smoking duration (years), Previous pneumonia/ COPD/ emphysema/ bronchitis/ TB, Occupational asbestos exposure, Previous history of malignancy, Previous family history of lung cancer; and relative's age at onset i.e. 60 years; whether first degree relative.
- Aged range from 55 to 74 and 364 days.
- Any participant assessed as being at high risk of lung cancer will be invited to an immediate low-dose CT scan. The scan will show one of three things:

Results	Action
No significant findings or nodules <80mm2 or 5mm max. diameter	CT scan 24 months
Indeterminate result	MDT, CT scan 3 months, 12 months
Requires further investigations	MDT, specialist referral

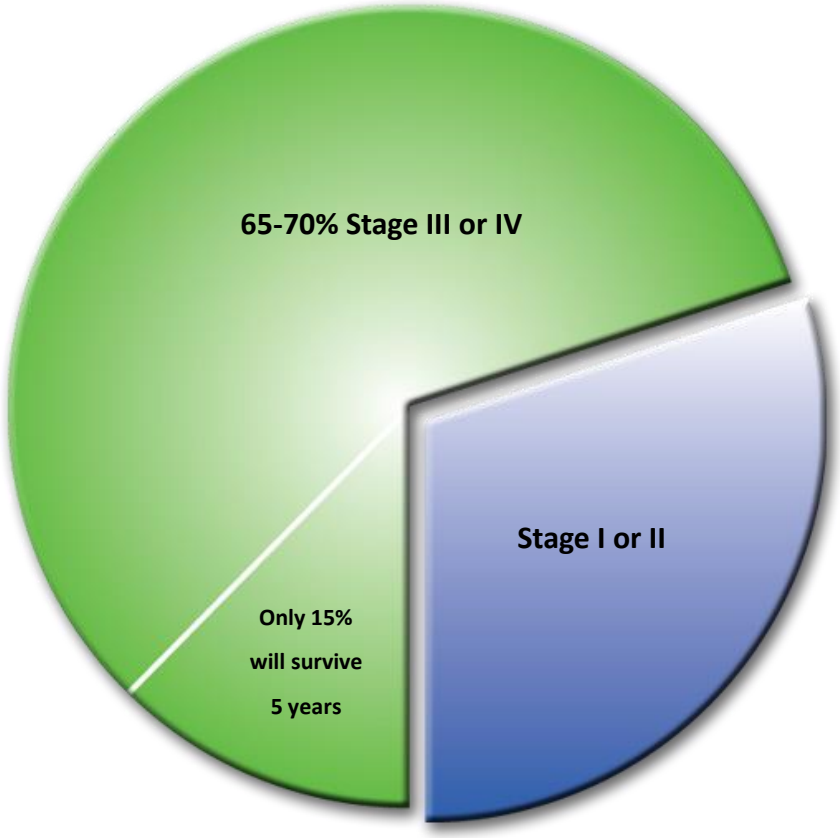
Repeat Low Dose Computed Tomography

- Nodule management should be protocolised and based upon the BTS 2015 pulmonary nodule guidelines and NICE guidelines for the management of lung cancer.
- Where local or regional programmes choose to modify nodule management guidelines, this should be clinically justifiable.
- Participants with a CT scans showing nodules are managed according to nodule size. Volumetry is the preferred method except where not possible, when the maximum axial diameter is used.

Implications of LDCT Screening

Diagnostic Dilemma of Solitary Pulmonary Nodule

Stage I Lung Cancer 88% 10-year survival.



ORIGINAL ARTICLE

Reduced Lung-Cancer Mortality with Volume CT Screening in a Randomized Trial

Harry J. de Koning, M.D., Ph.D., Carlijn M. van der Aalst, Ph.D., Pim A. de Jong, M.D., Ph.D., Ernst T. Scholten, M.D., Ph.D., Kristiaan Nackaerts, M.D., Ph.D., Marjolein A. Heuvelmans, M.D., Ph.D., Jan-Willem J. Lammers, M.D., Ph.D., Carla Weenink, M.D., Uraujh Yousaf-Khan, M.D., Ph.D., Nanda Horeweg, M.D., Ph.D., Susan van 't Westeinde, M.D., Ph.D., Mathias Prokop, M.D., Ph.D., et al.

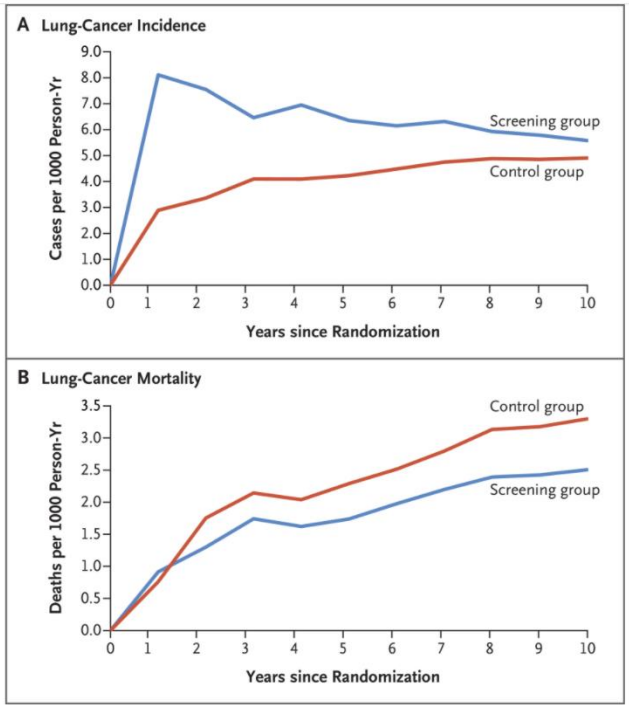
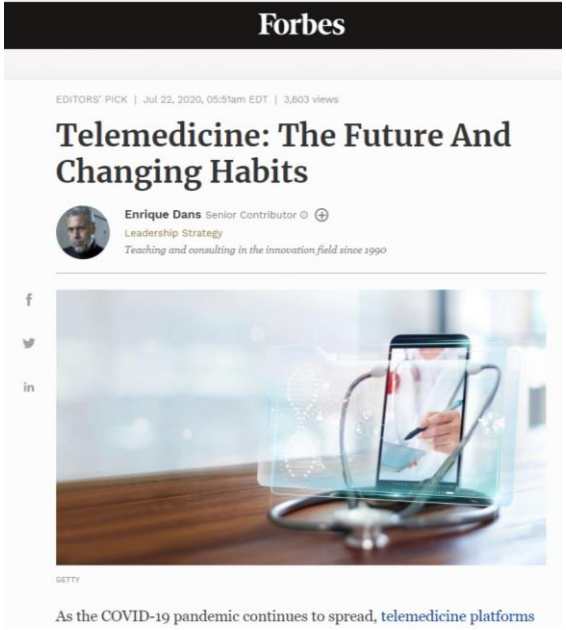


Figure 1. Lung-Cancer Incidence and Lung-Cancer Mortality among Male Participants.

Panel A shows the cumulative lung-cancer incidence (per 1000 person-years) according to follow-up year since randomization. Panel B shows the cumulative lung-cancer mortality (per 1000 person-years) according to follow-up year since randomization. Cause of death (with known date of lung-cancer diagnosis) was defined by the cause-of-death committee, if available, or by vital-statistics registries.

Beacon Lung MDT
Pulmonary Specialists

Treatment plans are collaboratively developed to ensure the individual will be referred to the right specialist who will be able to provide treatment or alternatively the recommendation of the MDT may be continue with a LDCT surveillance approach.



Forbes

EDITORS' PICK | Jul 22, 2020, 05:51am EDT | 3,603 views

Telemedicine: The Future And Changing Habits

Enrique Dans Senior Contributor

Leadership Strategy

Teaching and consulting in the innovation field since 1990

GETTY

As the COVID-19 pandemic continues to spread, telemedicine platforms

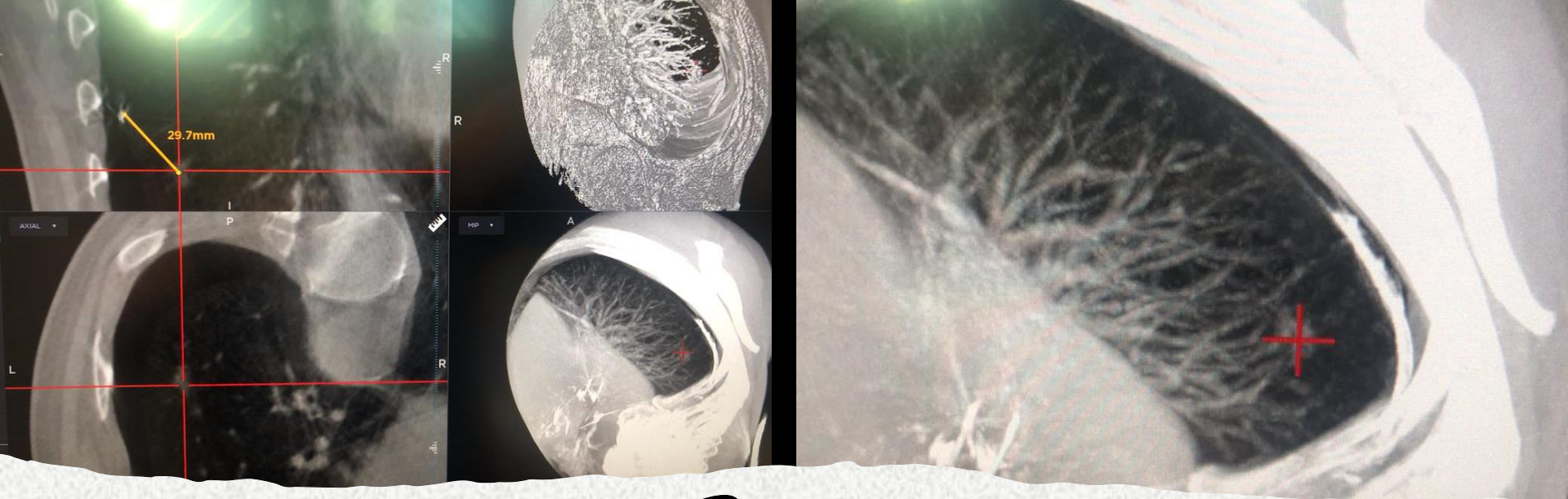
Advantages of a Multidisciplinary Team ?

- Increased survival for patients managed by an MDT.
- Access to an entire team of specialists collaborating on your care.
- Improves service coordination.
- Shorter timeframes from diagnosis to treatment.
- Patient-centred care.

Diagnostic Options

1 Continued surveillance
2 Percutaneous techniques
3 Navigational Bronchoscopy

Planning for navigational bronchoscopy



iVATS Precision Imaging Minimally Invasive Surgery Facilitates Diagnostic Excision of Sub-centimeter or Ground Glass Nodules

iVATS Programme

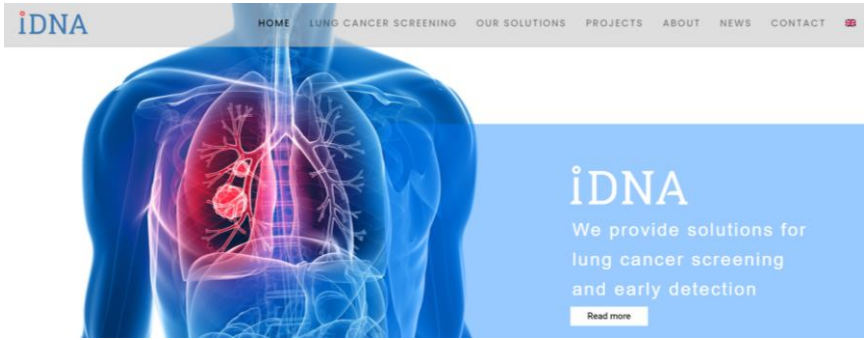
- Early diagnosis can make a different!
- Minimally invasive approaches can make a difference!
- Clear resection margins can make a difference!

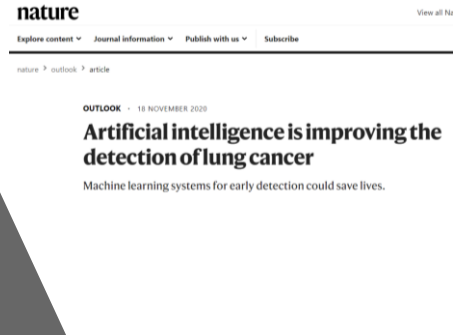
Benefits of iVATS

- **Diagnostic:** Tissue for characterisation.
- **Therapeutic:**
  - **GGO** - Long-term outcomes of wedge resection for pulmonary ground-glass opacity nodules, clinical stage Ia adenocarcinoma. ATS 2015.
  - **2cm NSCLC** - Could less be more? A systematic review and meta-analysis of sublobar resections versus lobectomy for non-small cell lung cancer according to patient selection. Lung Cancer 2015.
  - **Oligometastases > 1cm margin** - Lung metastasectomy after colorectal cancer: prognostic impact of resection margin on long term survival, a retrospective cohort study. IJ Colorectal Disease 2020.

Future Innovations

nsac
National Screening Advisory Committee





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