GMCA GREATER MANCHESTER COMBINED AUTHORITY

NHS in Greater Manchester

Greater Manchester Cancer

Dr Phil Barber

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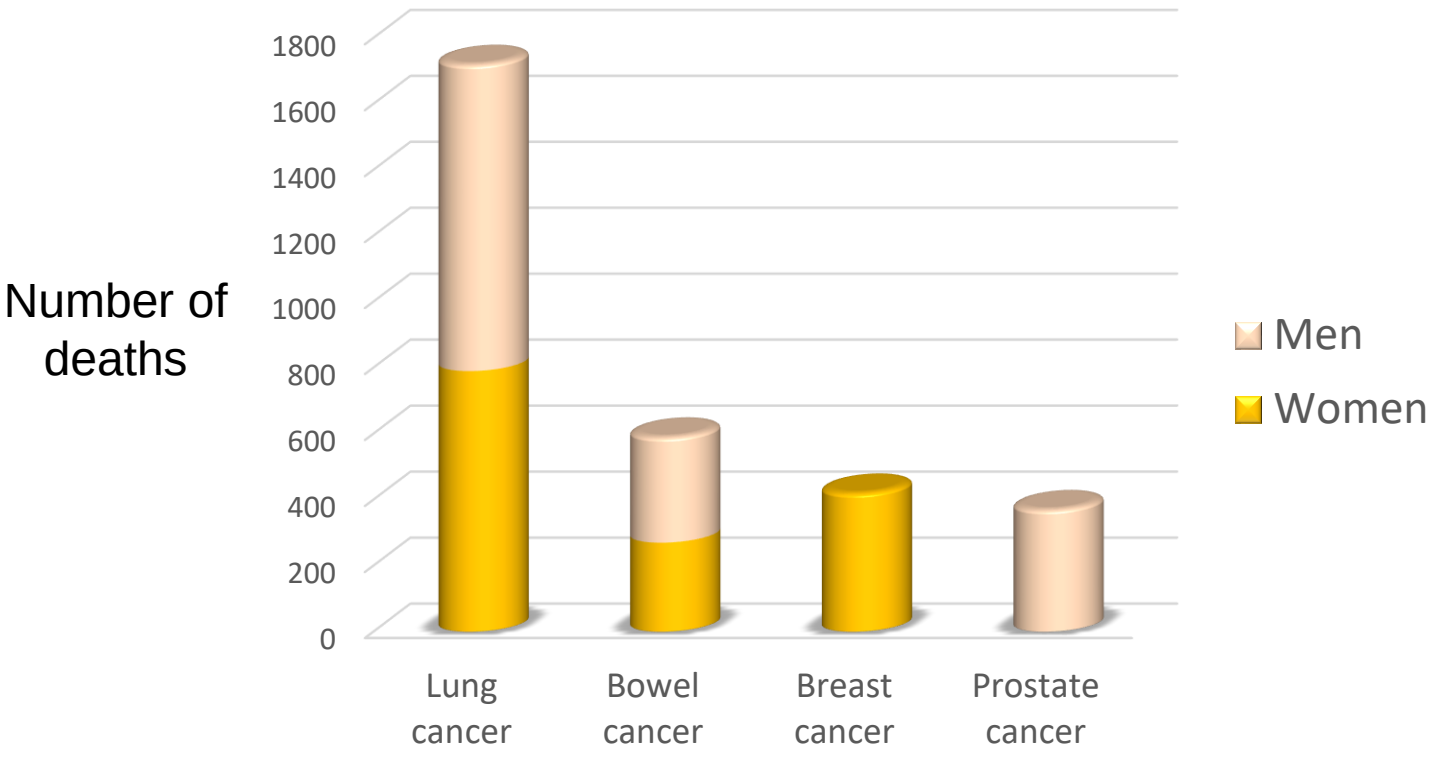
Conclusions 3

This approach across GM will:

- alone meet all our targets as a health economy for lives saved
- Achieve substantial and permanent cost savings
- Bring about an in-year improvement in respiratory health, with reduced A&E attendance, acute admissions, and bed occupancy.

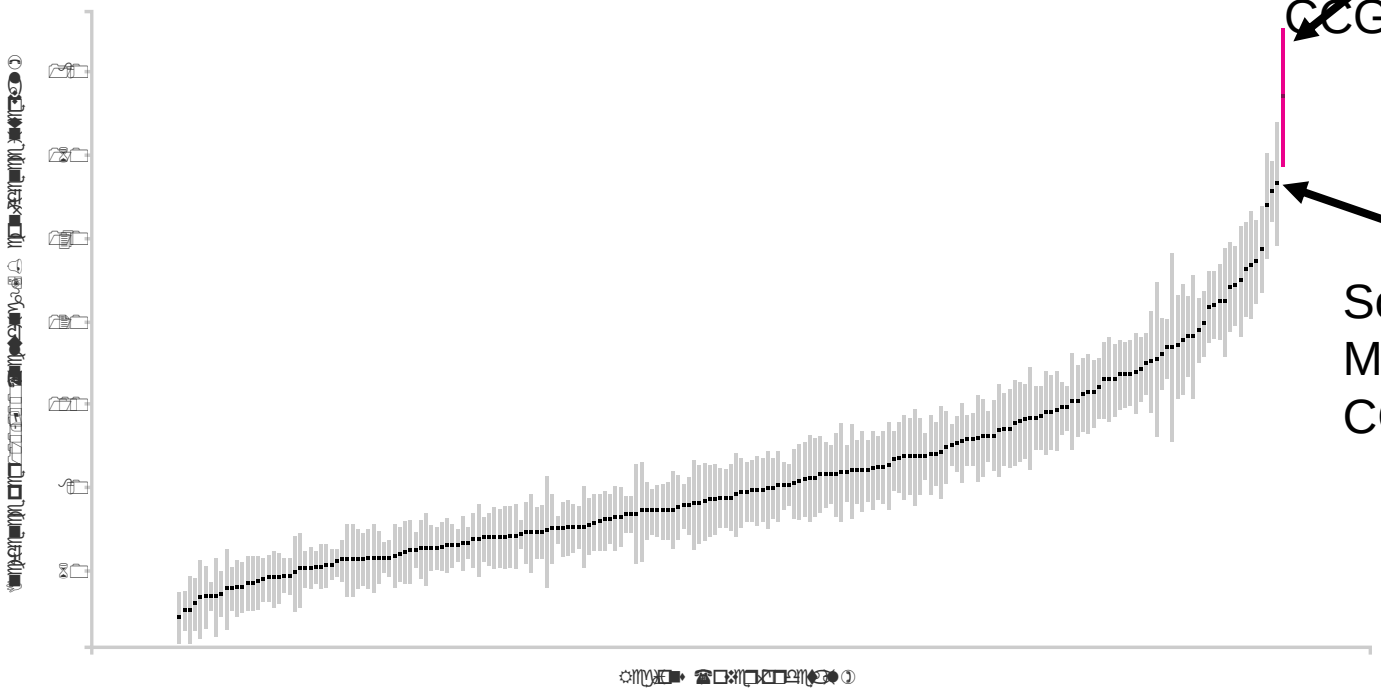
Impact of lung cancer in Greater Manchester



Lung cancer incidence rate: England and Wales

174
NHS North Manchester CCG

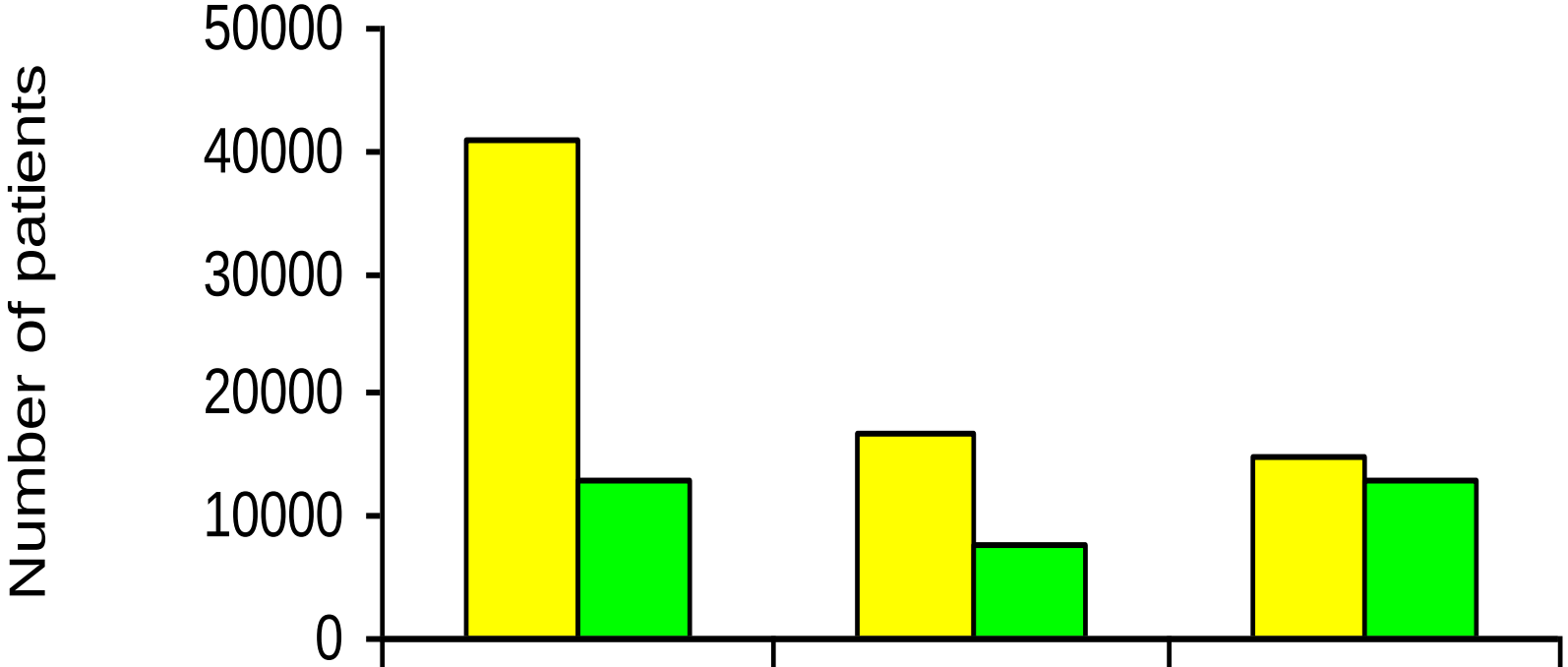
79.3
National Average



North Manchester CCG

South Manchester CCG

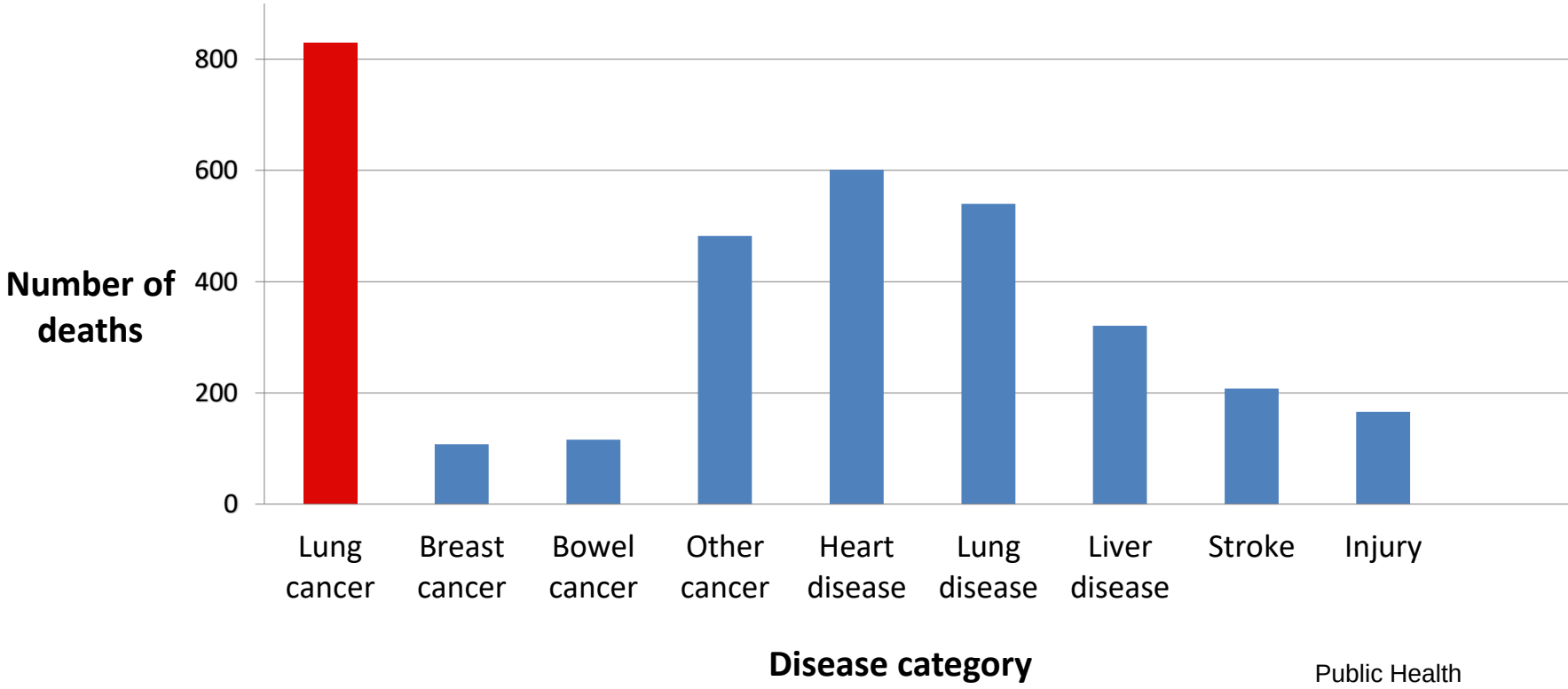
most common female malignancies, in the UK



	breast	colorectal	lung
Incidence	41000	16800	14700
Mortality	12994	7630	13038

Causes of premature death: Manchester

(age under 75)



Public Health England

http://healthprofiles.phe.org.uk/topic/mortalit

Despite the fact that lung cancer is

- Eminently curable
- Increasingly predictable
- Uniquely preventable

1

Curing Lung Cancer

Curing Lung Cancer

- Stage is critical to survival
- Delay causes stage shift
- Rapid diagnosis and treatment are essential
- Outcome
- Quality of experience

Waiting…….

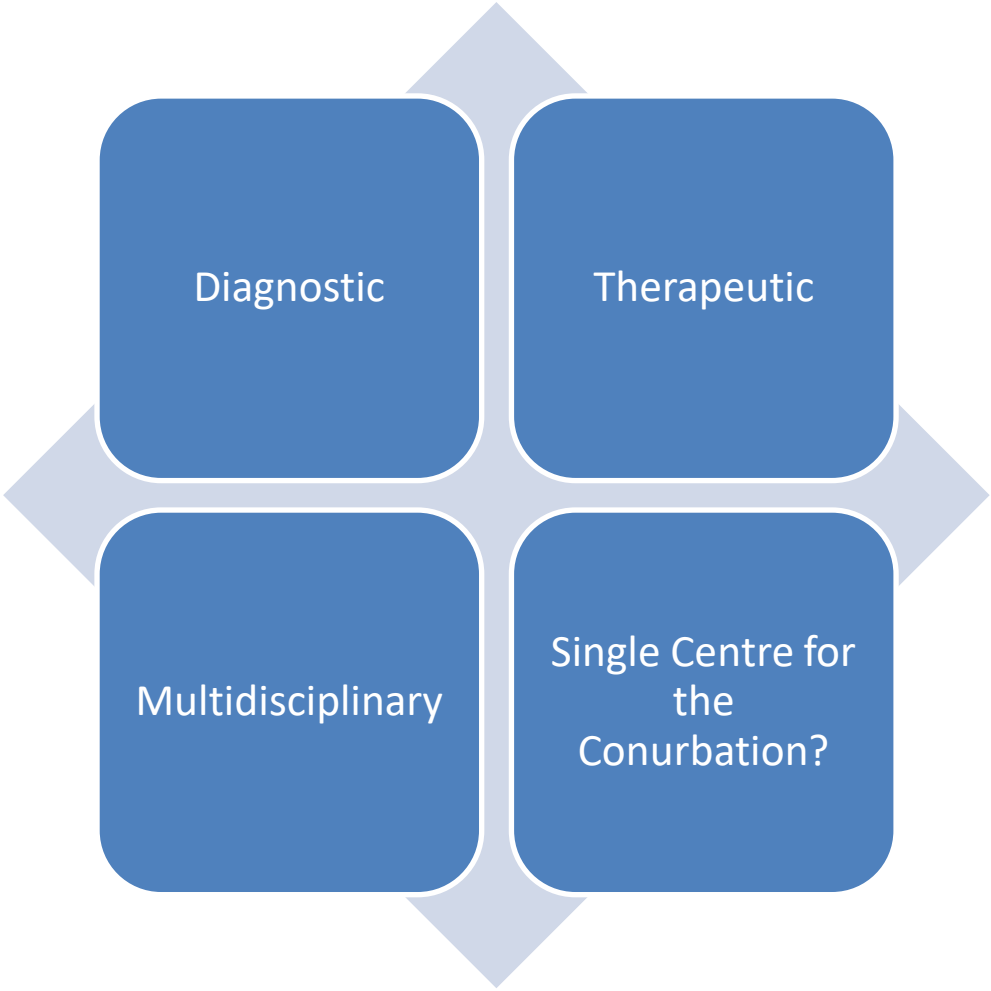
is embedded in the DNA of the NHS

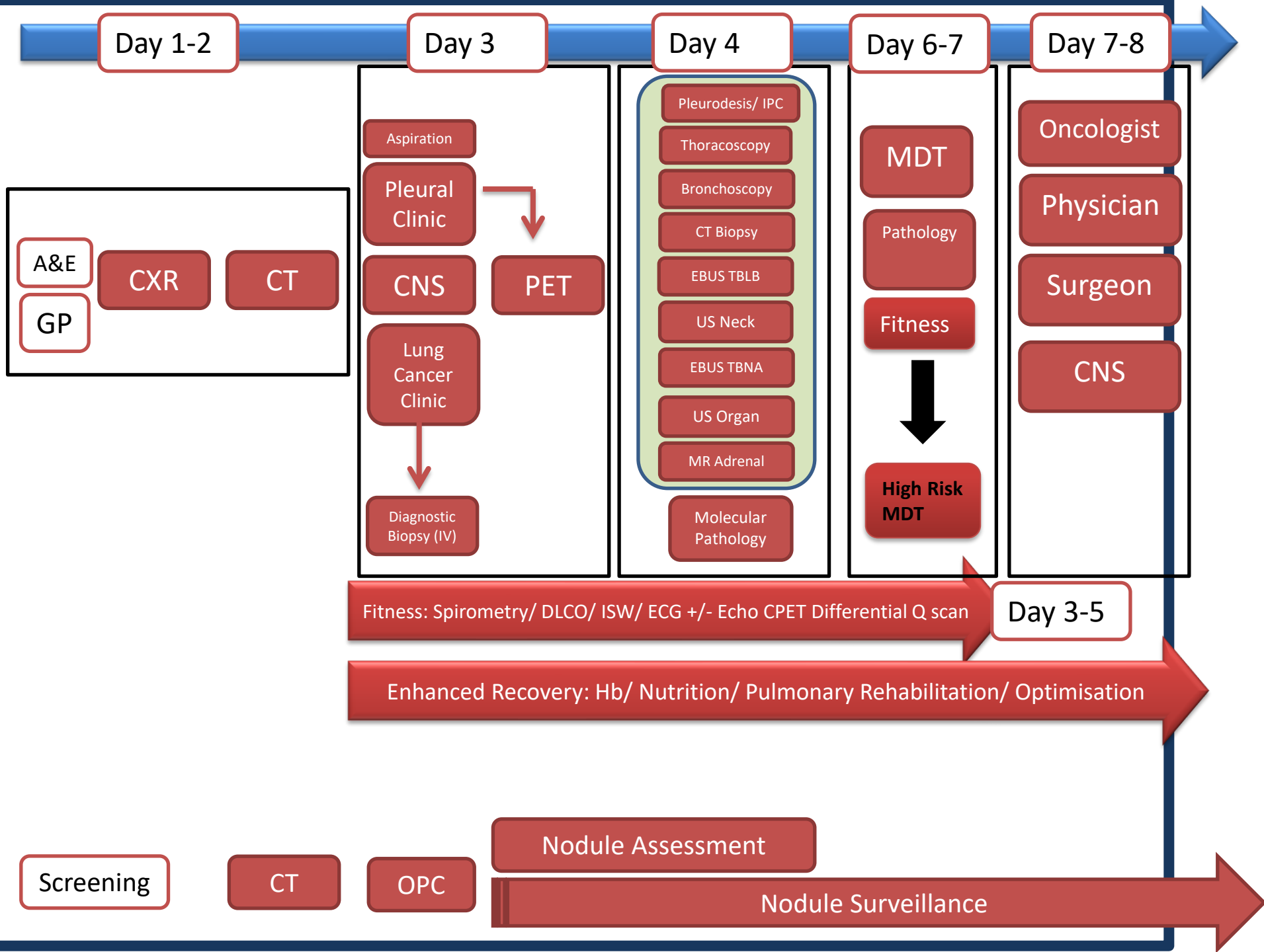
is neither efficient nor cost-effective

is not entirely, even predominantly, resource dependent

causes stage shift in lung cancer

Lung Cancer Rapid Hub

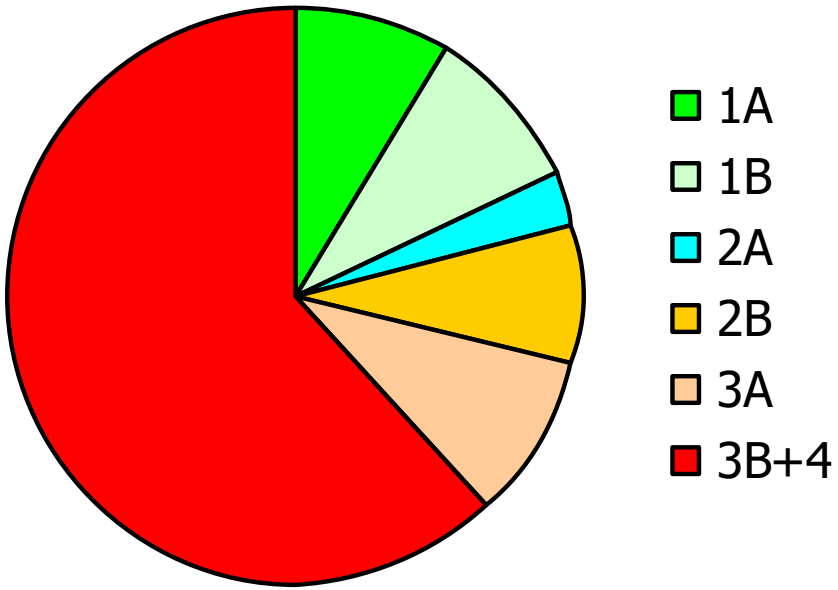



Day 1-2
Day 3
Day 4
Day 6-7
Day 7-8
A&E
GP
CXR
CT
Aspiration
Pleural Clinic
CNS
PET
Lung Cancer Clinic
Diagnostic Biopsy (IV)
Pleurodesis/ IPC
Thoracoscopy
Bronchoscopy
CT Biopsy
EBUS TBLB
US Neck
EBUS TBNA
US Organ
MR Adrenal
Molecular Pathology
MDT
Pathology
Fitness
High Risk MDT
Oncologist
Physician
Surgeon
CNS
Fitness: Spirometry/ DLCO/ ISW/ ECG +/- Echo CPET Differential Q scan
Day 3-5
Enhanced Recovery: Hb/ Nutrition/ Pulmonary Rehabilitation/ Optimisation
Screening
CT
OPC
Nodule Assessment
Nodule Surveillance

However…..

Nearly all this activity is directed at patients presenting with symptoms, most of whom are <u>already incurable</u>

Lung Cancer - stage at diagnosis:



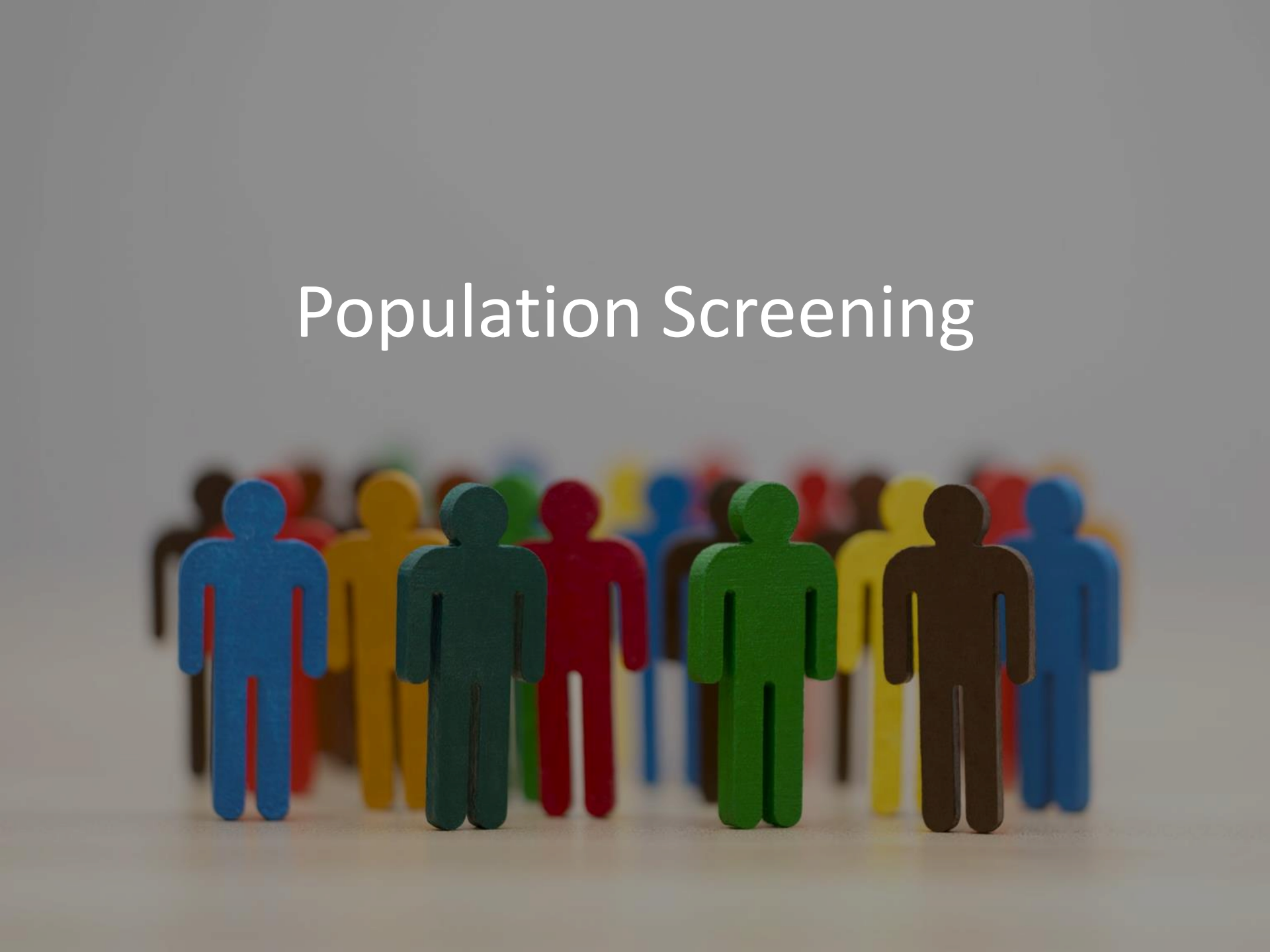
In one centre, 70% were stage 4 at presentation, most diagnosed in A&E

How do we tolerate this as a society in the twenty first century?

2

Early Diagnosis

Population Screening



The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 AUGUST 4, 2011 VOL. 365 NO. 5

Reduced Lung-Cancer Mortality with Low-Dose Computed Tomographic Screening

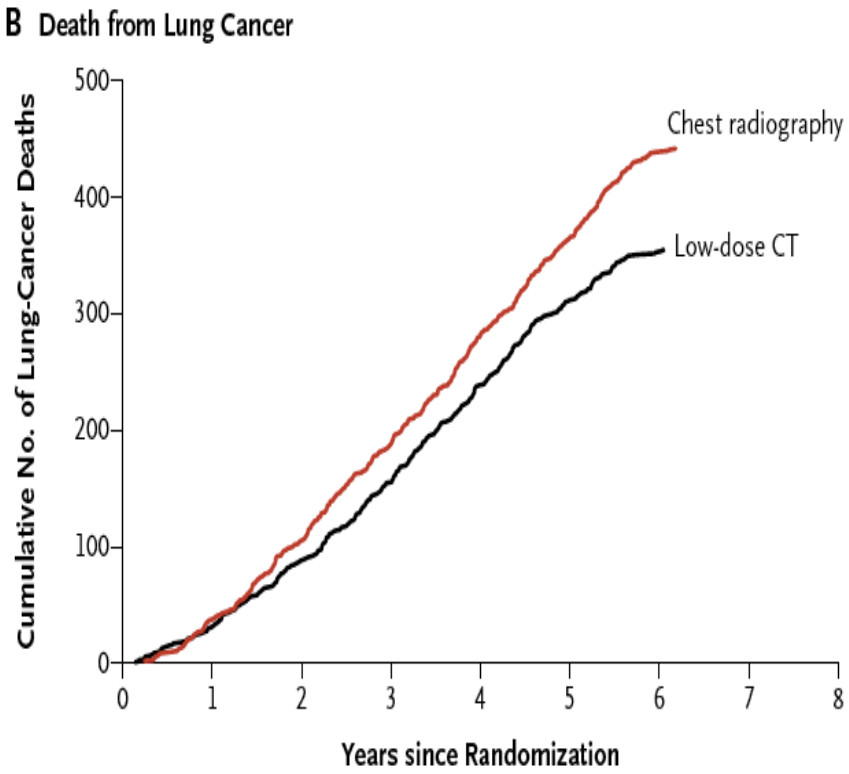
The National Lung Screening Trial Research Team*

National Lung Screening Trial (NLST)

- 53,454 participants,
- Age 55-74, >30 pack-years, smoked within 15 years
- Randomised to 3 annual low dose CT vs. CXR screening rounds.

Outcome

- 20% reduction in lung cancer specific mortality with LDCT
- 6.7% reduction overall mortality

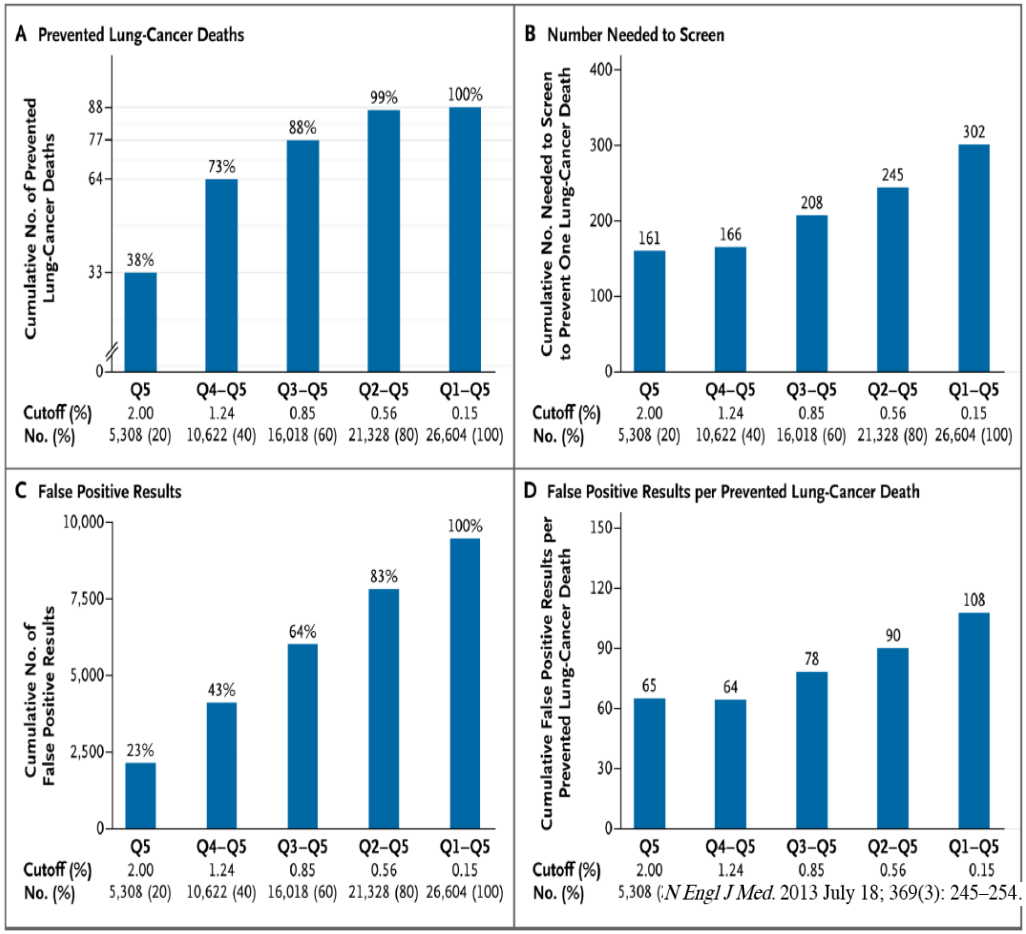


The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Targeting of Low-Dose CT Screening According to the Risk of Lung-Cancer Death

- **Almost all the benefits of screening seen in the 60% most at risk individuals**
  - 88% preventable lung cancer deaths
  - focusing on higher risk individuals also reduces screening harms
- **Minimal / no screening benefit for the lowest risk 20%**
  - Almost no lung cancer deaths



N Engl J Med. 2013 July 18; 369(3): 245–254.

Screening high risk populations

This means deprived smokers in relevant age groups, especially with background lung disease

Manchester Lung Cancer Screening Project 2015 >

- Community based
- Targeted at deprived populations
- 'Lung Health Check' methodology
- Risk based (PLCO 1.5% at 6 years)
- Immediate low-dose CT scanning

Mobile
PET/CT
Support
Unit
www.alliancemedical.co.uk

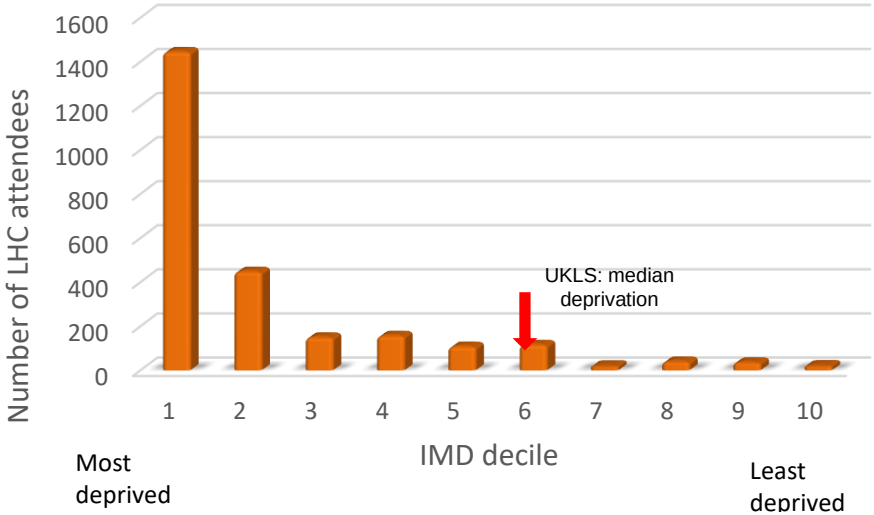
Alliance
Medical

Mobile
CT
Scanner
Unit

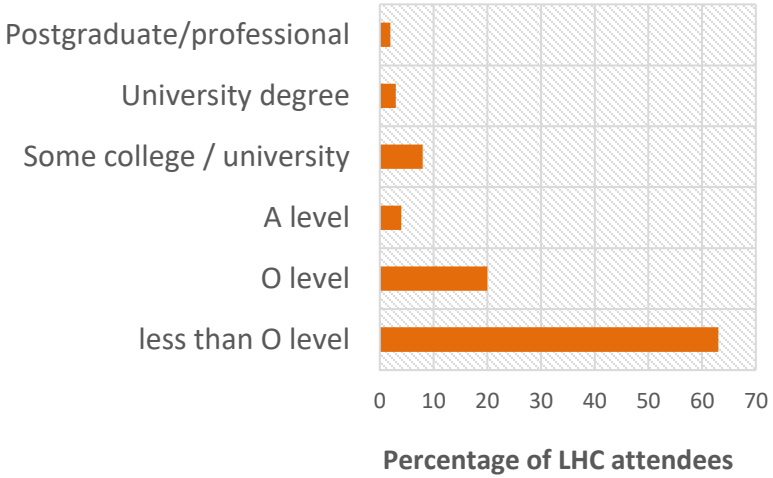
Alliance
Medical

Lung Health Check: reaching the ‘hard-to-reach’

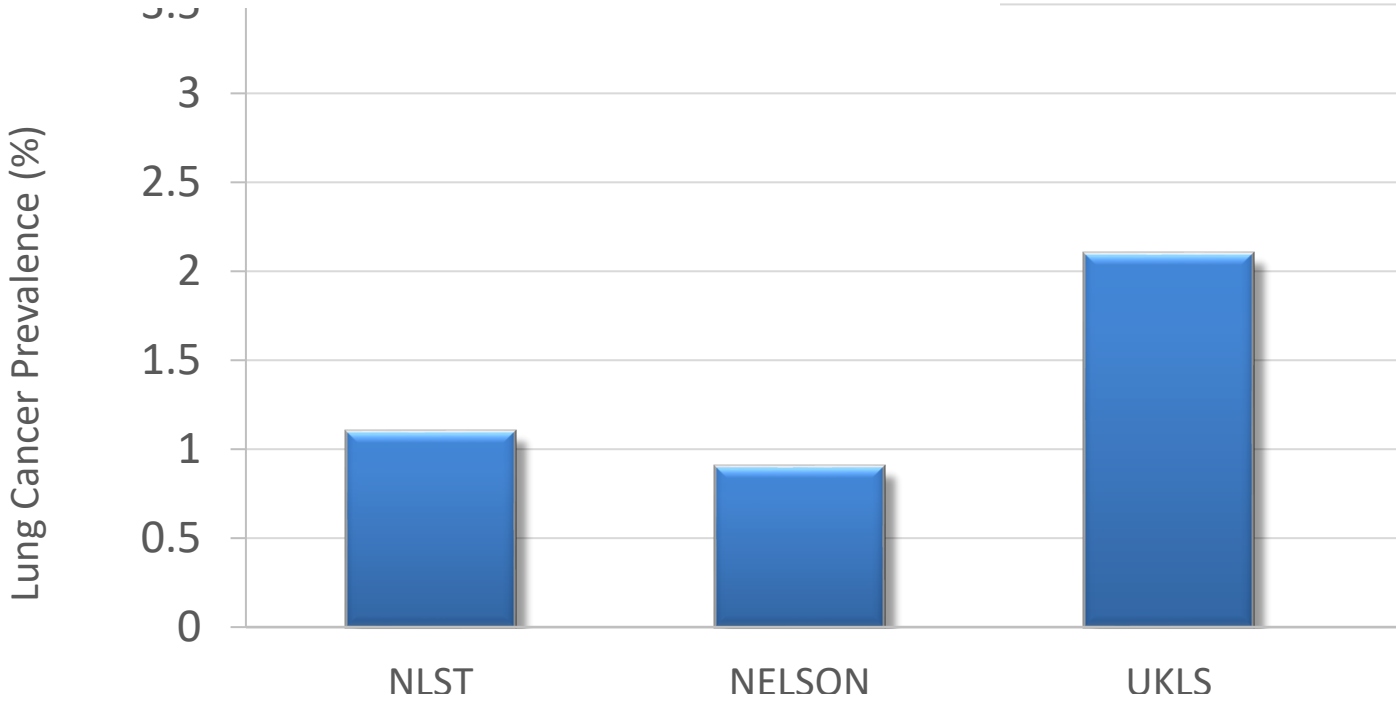
Deprivation: 75% lowest quintile
Over half lowest decile (56%)



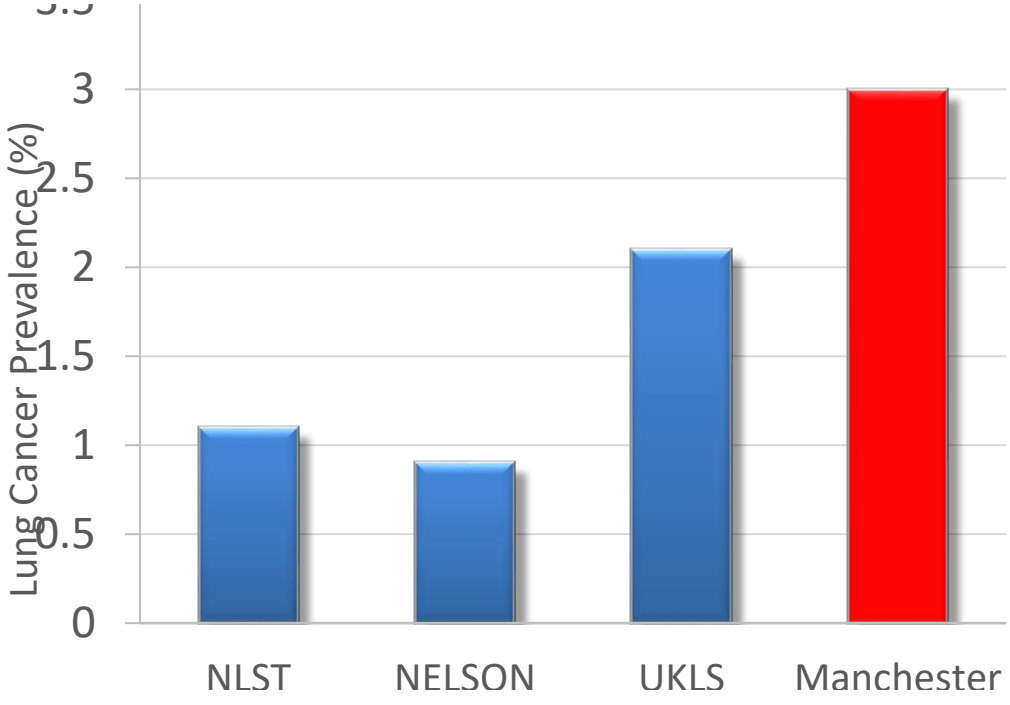
Education: 82% left school by 16
62% without any ‘O’ levels



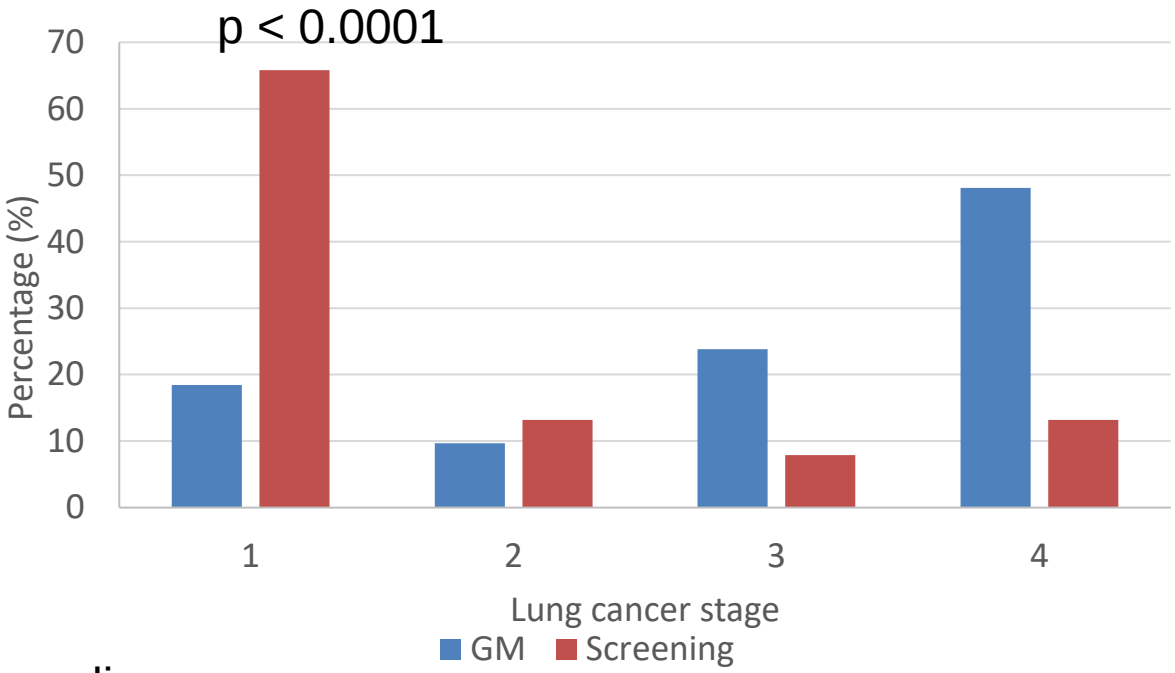
Lung cancer detection: prevalence round



Lung cancer detection: prevalence round



Screen-detected: stage at diagnosis



80% early stage disease
Almost 5 fold reduction in stage 4 disease

Treatment

88% received curative-intent therapy

64% were offered surgery

(four times the national average of 16%)

Other findings

Respiratory

- Emphysema
  - 64% (n= 880)
- Bronchiectasis
  - 13% (n=181)
- Respiratory Bronchiolitis ILD
  - 10% (n=140)
- Interstitial lung disease (ILD)
  - 3% (n = 44)
  - ?stage shift – ILD MDT

Other

- Coronary artery calcification
  - 74% (n=1,030)
  - Severe multi-vessel CAC = 198 (14%)
  - Angina symptoms =10%
- Thoracic aneurysms
  - 0.9% (n=12)
- Non-pulmonary lesions
  - 4.8% (n=62)

Independent analysis of baseline/interval scanning, including treatment cost modelling:

Incremental cost effectiveness ratio (ICER) = £10,069

(cost per QUALY)

Well below the £20K NICE threshold

Compares favourably with other organ screening programmes

(NNS 33, cf Breast Cancer 1139)

Does not include the added benefits of smoking cessation and the early diagnosis of other conditions.

The Bottom Line:

One in 30 scans showed a cancer, and nearly every one was curable

But even these curable cancers are almost completely avoidable

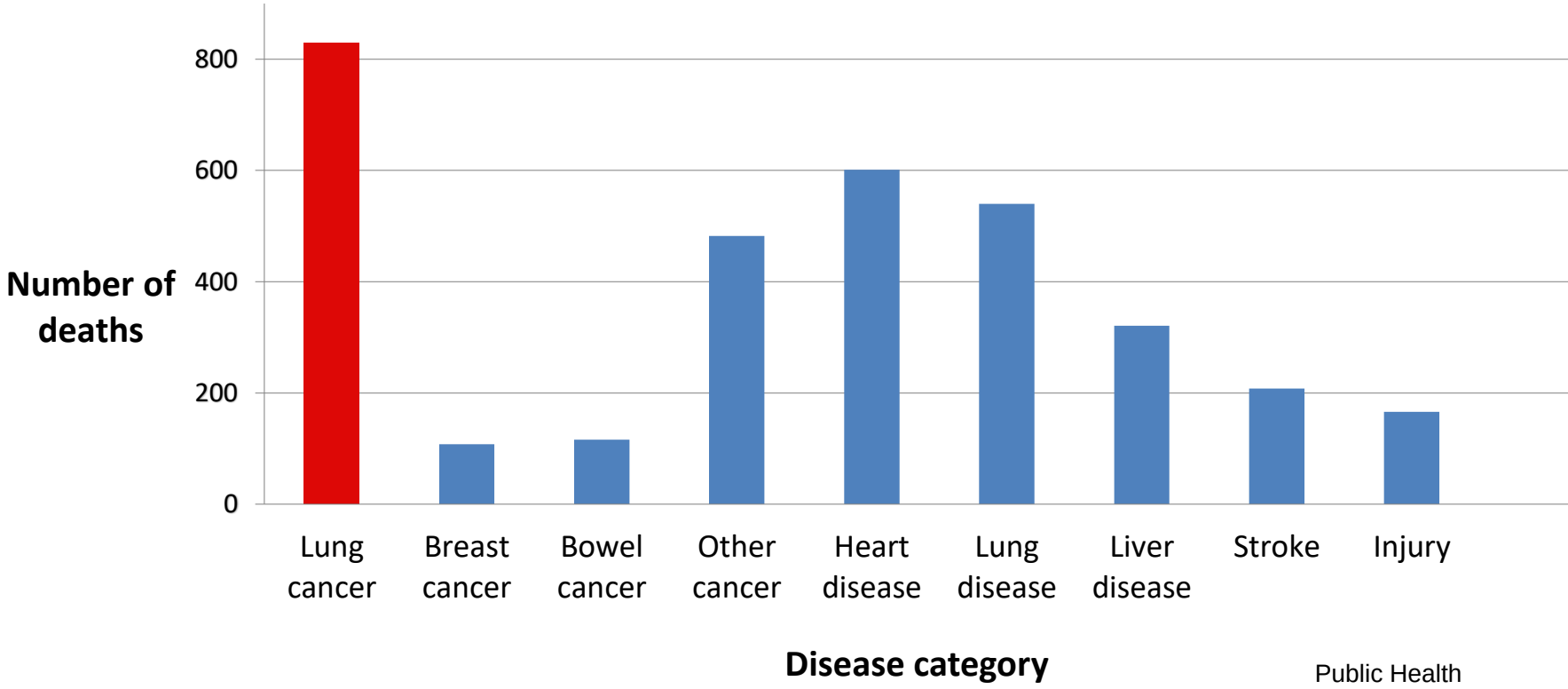
Being 90% smoking related

3

Prevention

Causes of premature death: Manchester

(age under 75; 2011-13)

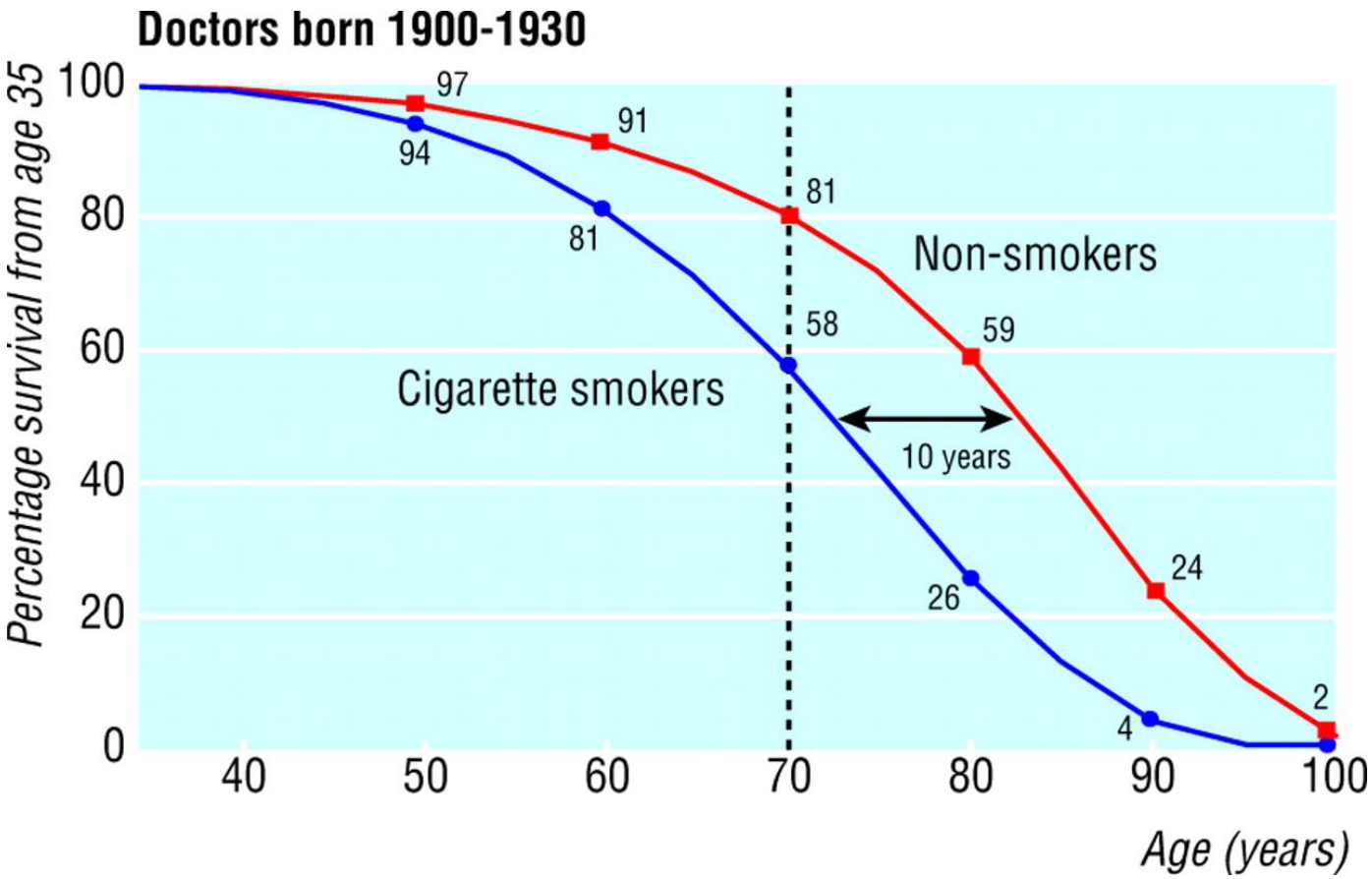


Public Health England

http://healthprofiles.phe.org.uk/topic/mortalit

Manchester’s biggest killer is almost completely preventable

Fig 3 Survival from age 35 for continuing cigarette smokers and lifelong non-smokers among UK male doctors born 1900-1930, with percentages alive at each decade of age



Doll, R. et al. BMJ 2004;328:1519

BMJ

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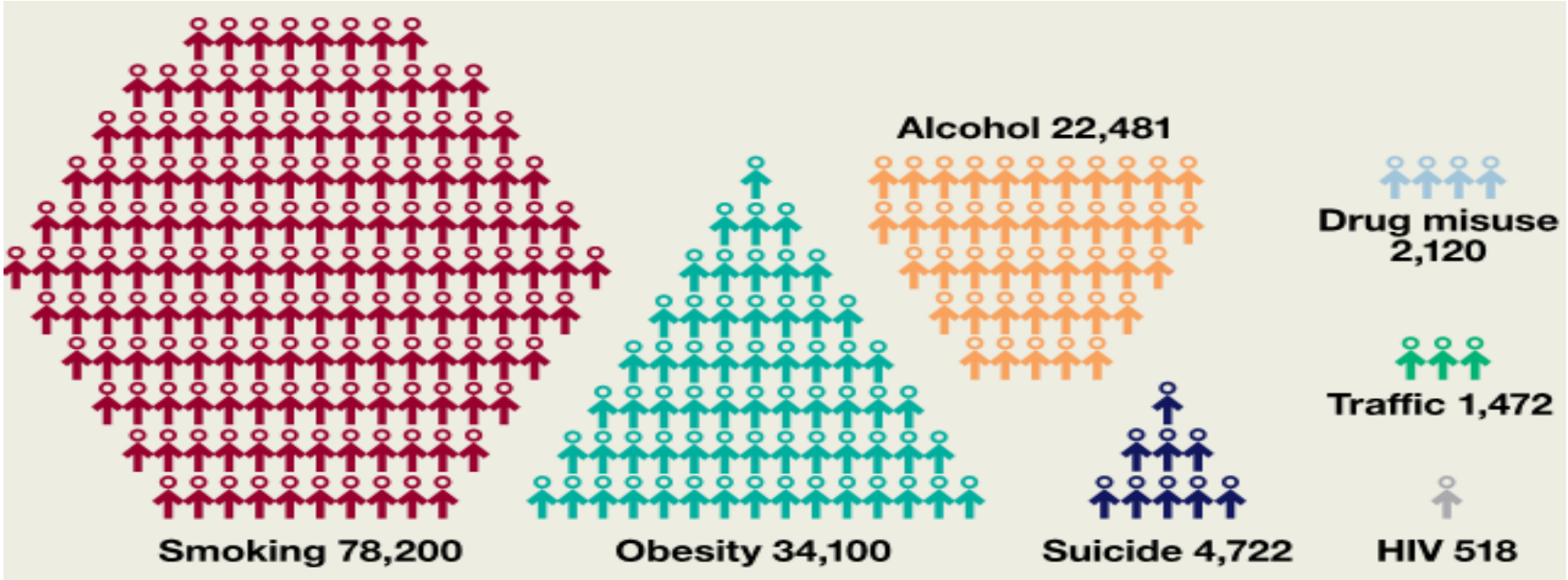
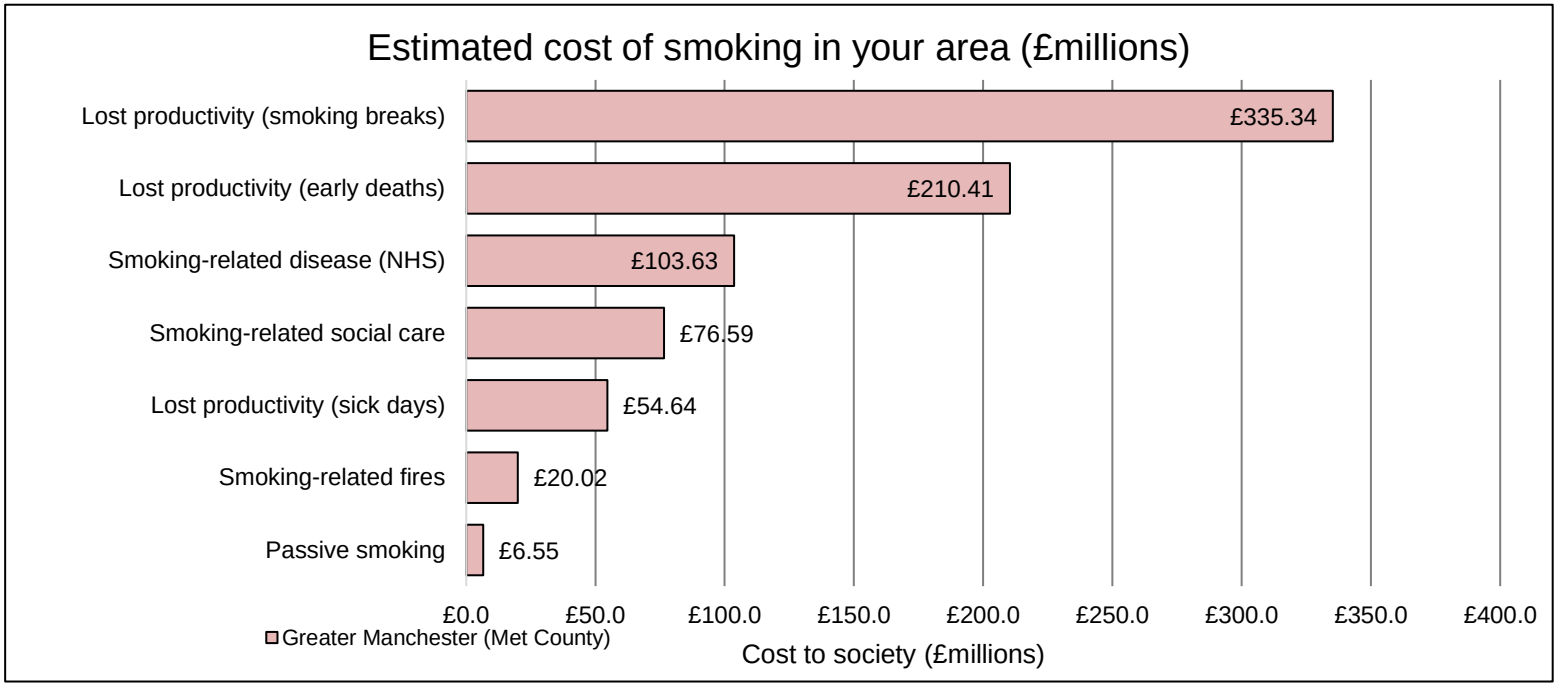
Smoking causes the greatest number of preventable deaths



Comprehensive local tobacco control: why invest? (2014)



Each year in Greater Manchester (Met County)
we estimate that smoking costs society appox.

£807.2m

That's £1,789 per smoker per year

ash.
action on smoking and health
enquiries@ash.org.uk

income (net)	% of household income spent on cigarettes (net)	
	Both parents smoke: 20 cigs a day	One parent smoker: 20 cigs a day
£10,000	51%	26%
£15,000	34%	17%
£20,000	26%	13%
£21,000	24%	12%
£25,000	20%	10%
£30,000	17%	9%
£40,000	13%	6%
£50,000	10%	5%
£60,000	9%	4%

Manchester: Smoking and deprivation

- Greater Manchester 2.73M people

- **High smoking prevalence**
  - 21% adult population (England average 18%)
  - 450,000 current smokers
  - 70,000 more smokers in GM vs. England average
  - 32% smoking prevalence in manual workers

- **High levels of deprivation**

(IMD, England average = 21.8)

  - North Manchester CCG 46.7 (208/209)
  - Central Manchester CCG 39.7 (202/209)
  - South Manchester CCG 35.0 (195/209)

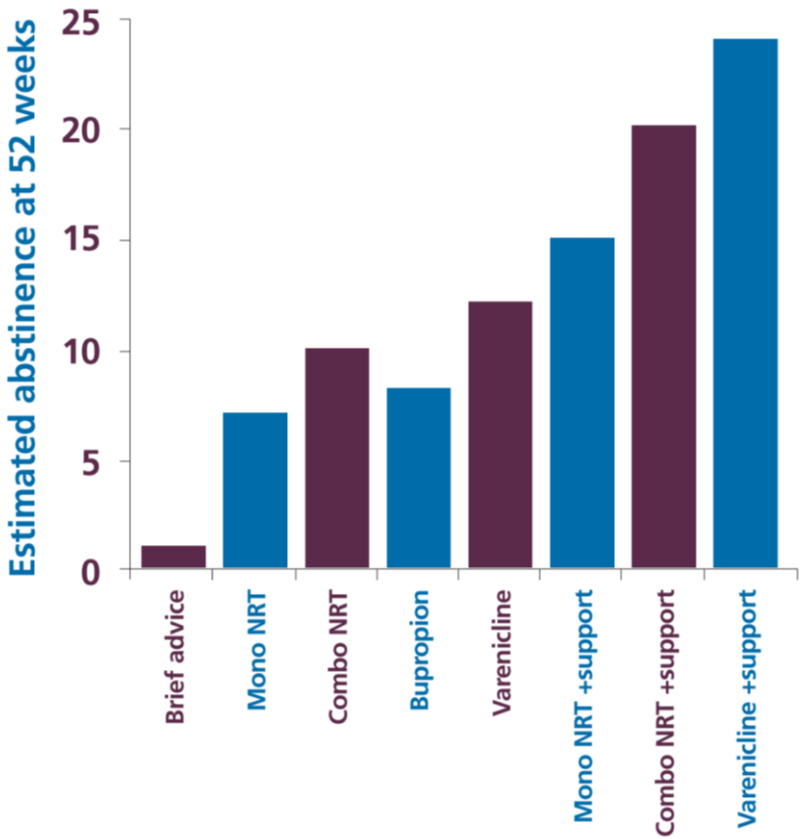
Smoking Cessation

The single most cost-effective intervention provided by the NHS

1/25 the cost of statins!

In fact, cost-benefit analysis shows that it more than pays for itself

Ticks most NHS acute priority boxes, including A&E admissions, bed occupancy, winter pressures, and respiratory deaths – IN YEAR

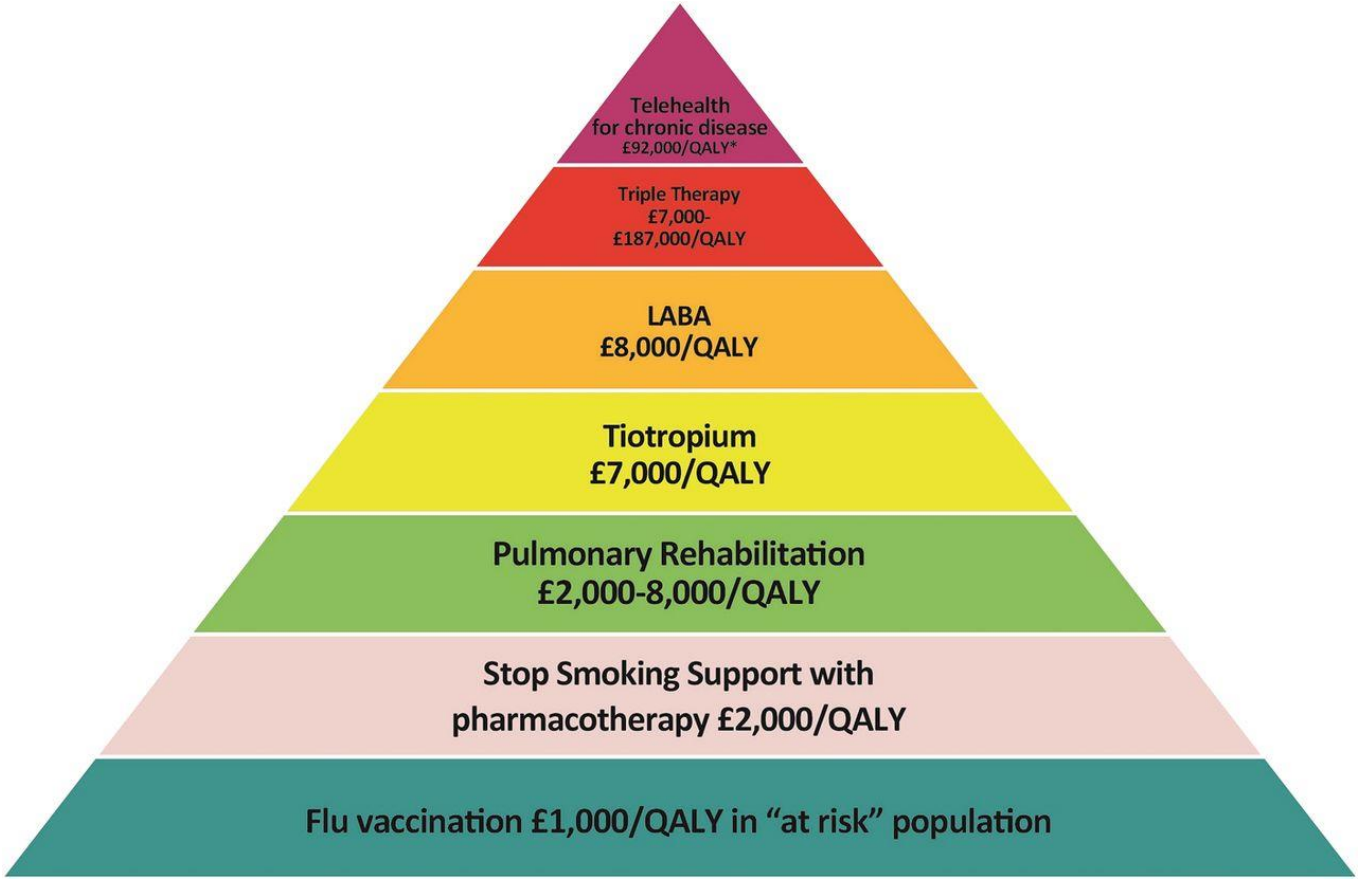


West R, Owen L (2012) Estimate of 52-week continuous abstinence
rates following selected smoking cessation interventions in England.

Varenicline started as an inpatient, added to skilled quit smoking support and follow-up:
CO-validated 4-week quit rate was 48%
Self-reported 6-month and 1-year quit rates were 41% and 20%

Varenicline
£1000 per QALY
£170 for 12 weeks treatment

Ainley A, Pang E, Coleman B, Stern M, Restrick LJ. Assessing The Impact Of Varenicline Initiation During Acute Hospital Admission For Current Smokers With Respiratory Diseases: 18-month Experience From An Inner City District Teaching Hospital. Thorax 2014;69:Suppl 2


Telehealth
for chronic disease
£92,000/QALY*
Triple Therapy
£7,000-
£187,000/QALY
LABA
£8,000/QALY
Tiotropium
£7,000/QALY
Pulmonary Rehabilitation
£2,000-8,000/QALY
Stop Smoking Support with
pharmacotherapy £2,000/QALY
Flu vaccination £1,000/QALY in "at risk" population

Menu of Preventive Interventions

Developed to provide those developing and influencing Sustainability and Transformation Plans with evidence of interventions that would improve or prevent ill-health and reduce cost to the NHS. Includes:

- **Provide screening, advice and referral in secondary care settings**
- **Trusts to implement NICE guidance PH45 "Smoking: harm reduction"**
- **Assess all pregnant women for carbon monoxide to identify potential smoking and refer for specialist support**
- **All mental health trusts to have smokefree buildings and grounds with staff trained to facilitate smoking cessation**
- **Urgent action in Primary Care, using every opportunity for Brief Advice, with defined referral pathways to evidence based treatment and support**

Health Warning:

(Vape)

E cigarettes are not of proven benefit

Their safety profile is uncertain

They perpetuate addiction, and the inhaling lifestyle

They promote the goals of Big Tobacco rather than Health

Accelerate the savings to the NHS by treating tobacco dependence as an essential part of care plans for our smoking patients

GM Triple Offer - Timelines

- *Immediate*: Diagnostic Pathway Improvement, with a 10-day target from referral to treatment

- *Present to medium term*: the continued roll-out of targeted population screening

- *Long term*: the eradication of addiction to tobacco and related products

Conclusions 1

Lung Cancer is the commonest cause of premature death in Manchester

It is almost completely preventable

There is still an unacceptable and unaccountable complacency in relation to the lung cancer epidemic

Resolution requires a three-pronged approach:

Conclusions 2

Improved pathways for patients with suspected and diagnosed lung cancer, with a 10 day target from referral to treatment

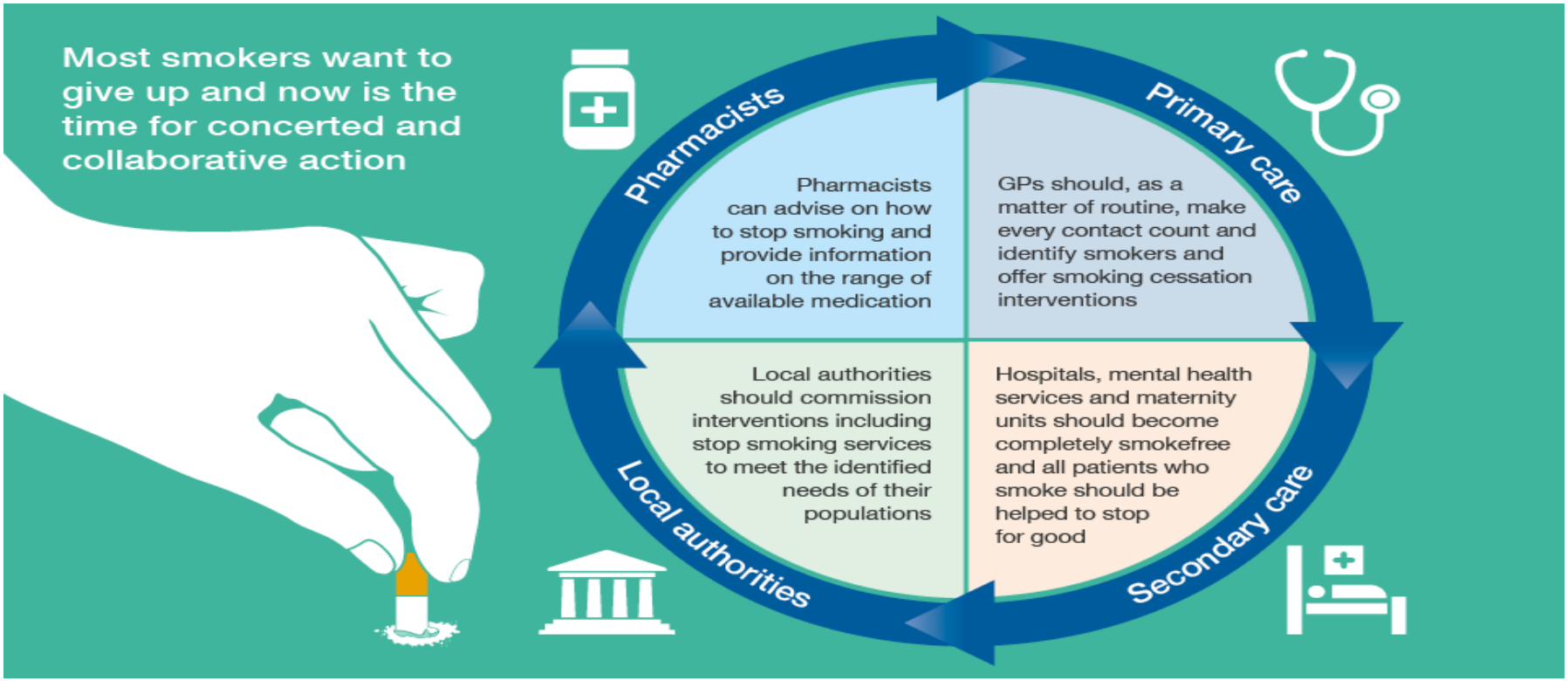
Continued expansion of our world-leading ‘health check’ screening programme

A re-invigorated smoking cessation initiative, fully supported at political level, using evidence based quit programmes

Conclusions 3

This approach across GM will:

- alone meet all our targets as a health economy for lives saved
- Achieve substantial and permanent cost savings
- Bring about an in-year improvement in respiratory health, with reduced A&E attendance, acute admissions, and bed occupancy.

What are we waiting for?

Supporting smokers to quit