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Cancer: Underwriting and Claims Perspectives

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Cancer

- Some background
- Underwriting and claims challenges
- A closer look at CI experience in the UK
- Mitigation options
- Q&A

Cancer

Lifetime risk

1 in 2 people born after 1960 in the UK will be diagnosed with some form of cancer during their lifetime

Source : Cancer Research UK

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Causes of death by country

Country	Circulatory disease	Cancer
EU 28	373.6	261.5
UK	264.9	278.4
Ireland	309.9	288.3
Bulgaria	1,131.0	242.4
Germany	403.5	253.2

- Cancer now leading cause of death in UK
- Very consistent cause of death rates, despite huge variance in standards of healthcare per country

Standardised death rate, 2014 (per 100 000 inhabitants) – Source EuroStat

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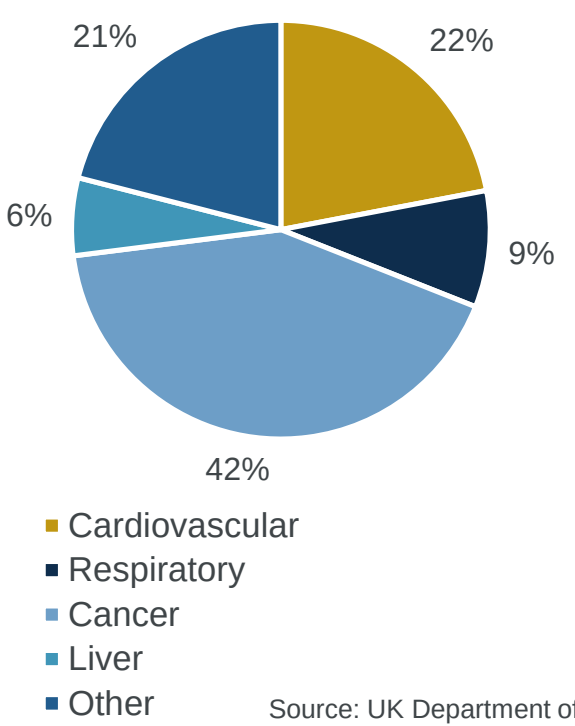
UK causes of premature death (below age 75)



- Total 150,000 premature deaths per annum
- Cancer now easily overtaken CVD as leading cause of death
- It has long been the leading cause of insured death

Source: UK Department of Health - Living Well for Longer

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Cancer : Underwriting challenges

Frankly we are not very good at predicting cancer

- The major cause of insured death has few tests suitable in an asymptomatic population
- The main tool is asking about a previous history of cancer, so we are looking for recurrence risk, not new cancer risk
- For new cancers, we rely on major risk factors such as smoking and family history
- Even possible early symptoms are often the same as those seen from risk irrelevant diseases

Cancer is usually a slowly progressive disorder

- So symptoms may be detected, or suspected, long before the first doctor consultation
- … especially in those who have seen a relative go through the same disease

Family history

- Vague, unknown, hard to validate, super-sensitive and a landmine for regulatory risk

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Breast cancer and family history

No of 1st degree relatives with breast cancer	Relative risk
0	Reference group
1	2.14 (1.92 - 2.38)
2	3.84 (2.37 – 6.22)
3 or more	12.05 (1.7 – 85.16)

Age at diagnosis of 1st degree relative	Relative risk of developing breast cancer	
None	Reference group	
< 40	3.0 (1.8 – 4.9)	2.17 (1.86 – 2.53)
40 - 49	2.0 (1.5 – 2.8)	
50 – 59	2.3 (1.7 – 3.2)	1.68 (1.44 – 1.96)
60 or over	1.7 (1.3 – 2.1)	

Risk Factors for Breast Cancer for Women –
A Systematic Review and Meta-analysis of 26 studies
Nelson H D et al.
Ann Intern Med. 2012;156:635-648.

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But cancer survival is improving rapidly

Source : Cancer Research UK

- So what about products which pay out on diagnosis not on death?

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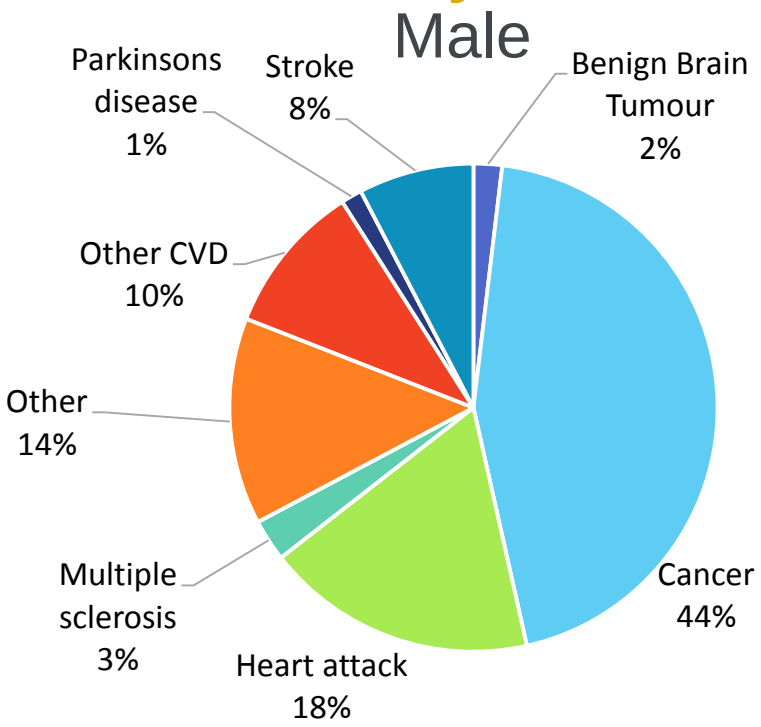
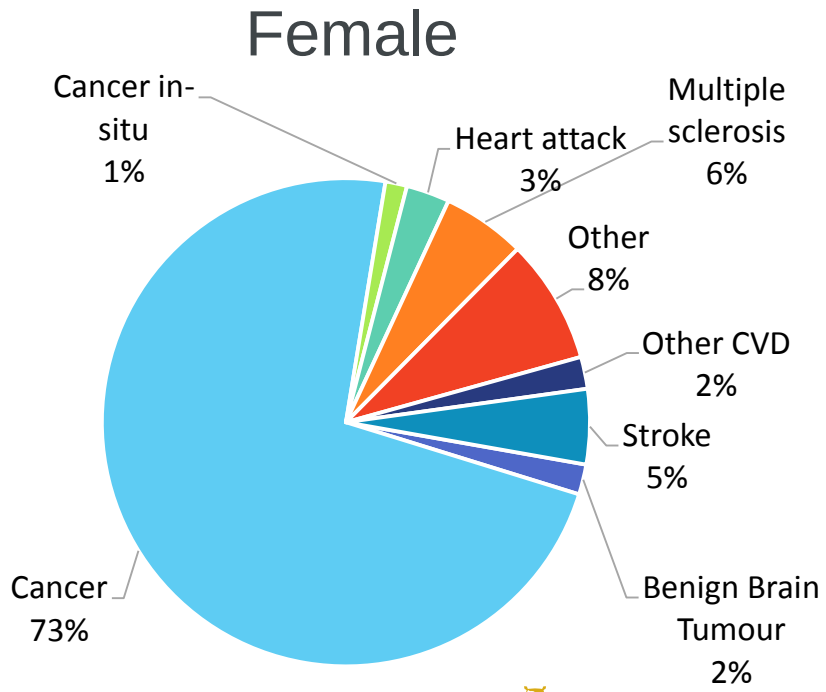
CI Claims - Key illnesses





Source: Swiss Re Life & Health UK

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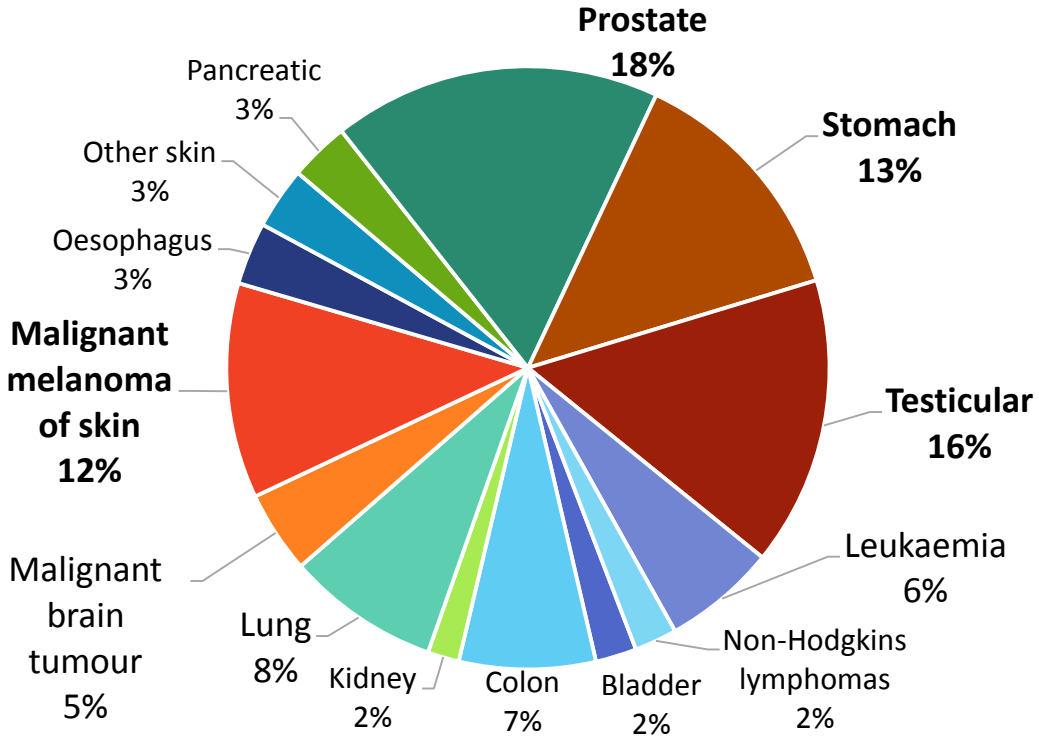
CI Claims - Male cancers



Source: Swiss Re Life & Health UK

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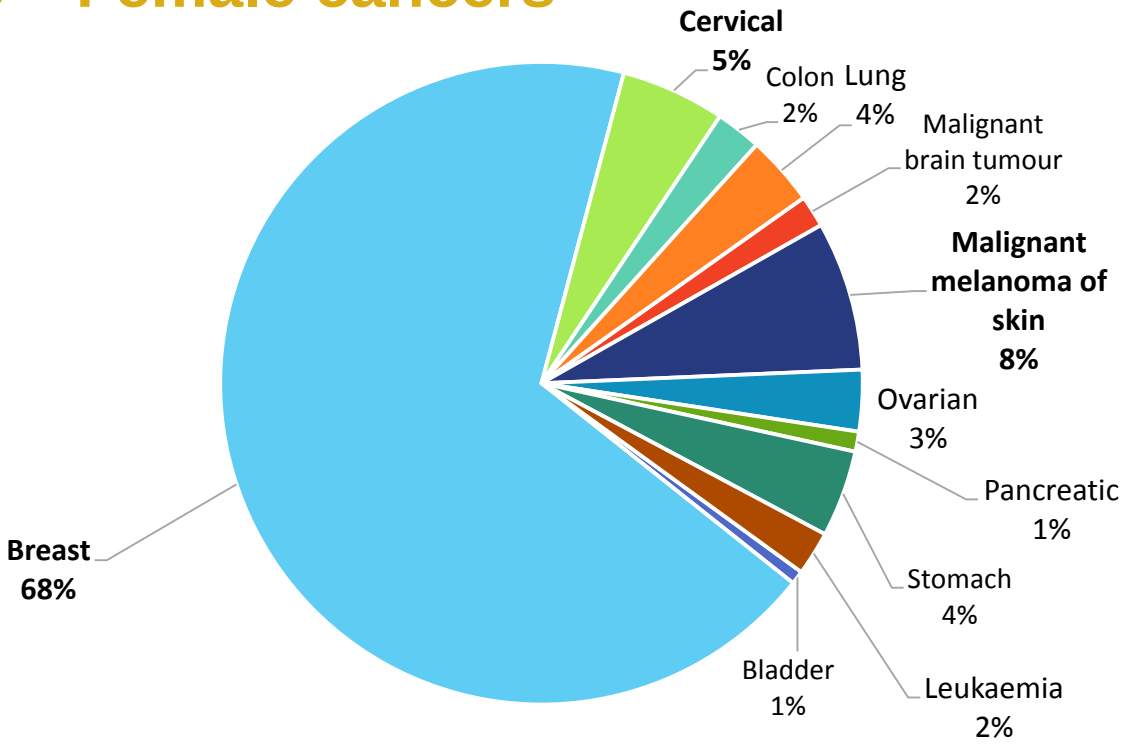
CI Claims – Female cancers



Source: Swiss Re Life & Health UK

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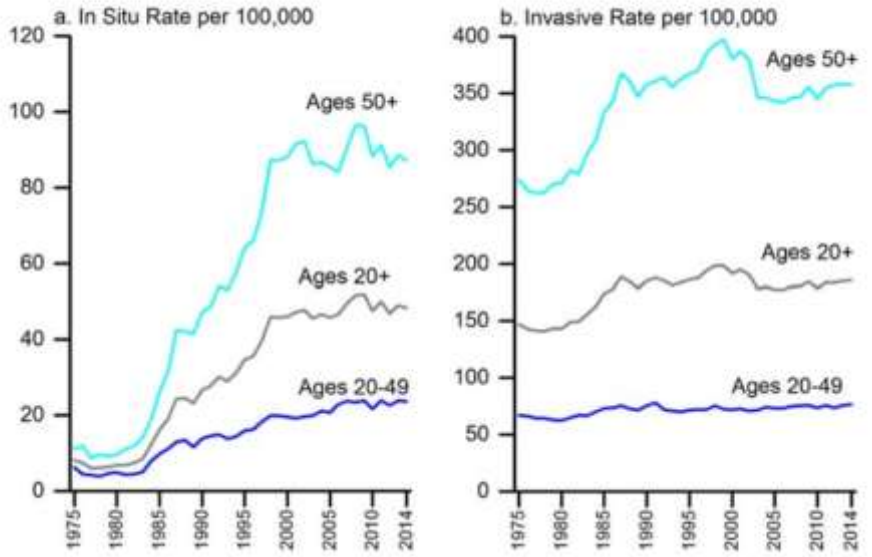
Breast cancer incidence rates over time



Breast cancer death rates in the same population:
1975 to 1989 : increase by 0.4% per year
1990 to 2015 : decreased by total of 39%
Represents over 320,000 lives saved.

Trends in Female Breast Cancer Incidence Rates by Age
United States, 1975 to 2014.

Rates are per 100,000 females and are age adjusted to the 2000 US standard population. Invasive incidence rates were adjusted for reporting delay. Source: Surveillance, Epidemiology, and End Results program.

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Regulatory risk

Cancer is emotional and common. That makes it of political interest

Not helped by different, but both correct, interpretations of same statistics:

Own doctor says “You are cured”

Insurer says “You must pay X additional premium”

Perceived unfairness, especially as ratings tend to be upfront loaded

Wider anti-discrimination legislation

- Statistical justification is key

Cancer specific

- *Le droit a l’oubli* cancer for insurance – French law, already being copied internationally

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Question:

Recognising the limitations of Underwriting, can Claims help?

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Cancer: Underwriting and Claims Perspectives

Andy Parkinson, Head of Claims EMEA

The Resilience of CI?

- Worsening CI claims experience in recent years
- Investigated by cross-functional team.
- Areas of attention:
  - Timeliness of CI claims reporting
  - Explore causes of step change in cancer experience, especially for higher sum-insured females
  - Other emerging risks

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Claims Deep Dives

- Claims reviewed in depth
  - Remote and on-site
  - Exploring traditional and softer, non-traditional data
  - Keen to collect qualitative insights; the ‘story’
  - Multi-disciplinary

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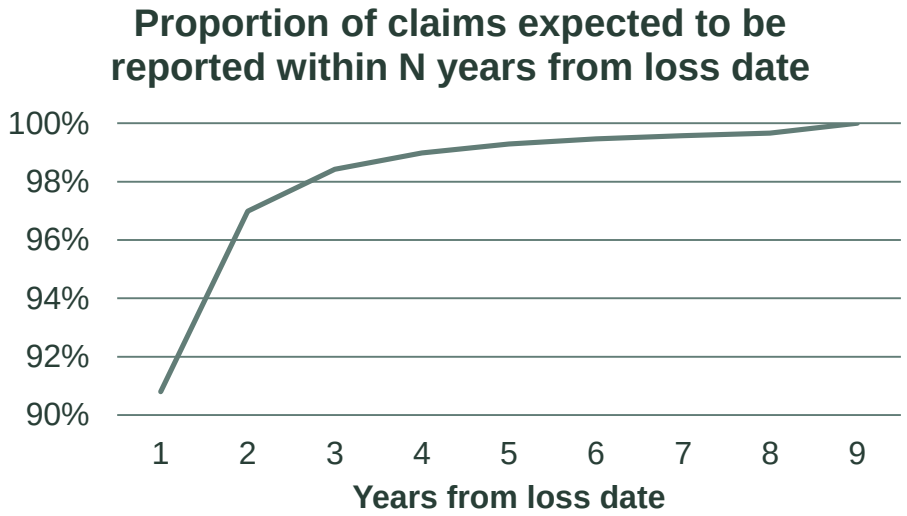
Claims Deep Dives – outcomes

- Material numbers of:
  - ‘late notifications’
  - Impact on IBNR and pricing



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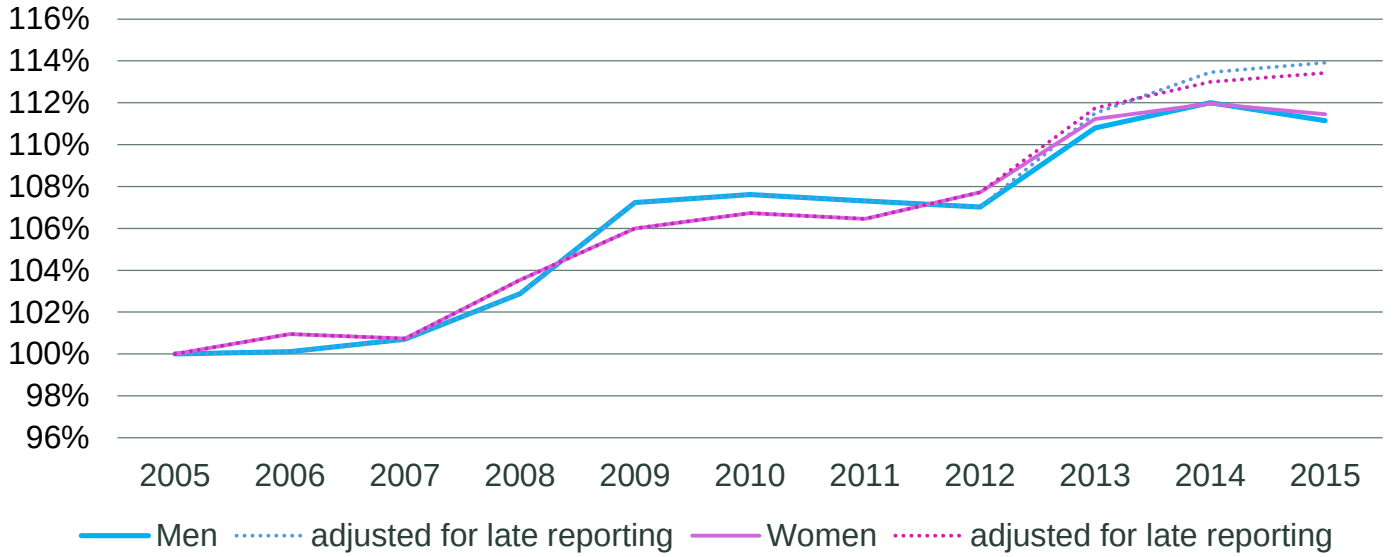
Increase in average incidence rate for age-bands in the range 20 – 59 *(base year 2005)*



Source: English cancer registry

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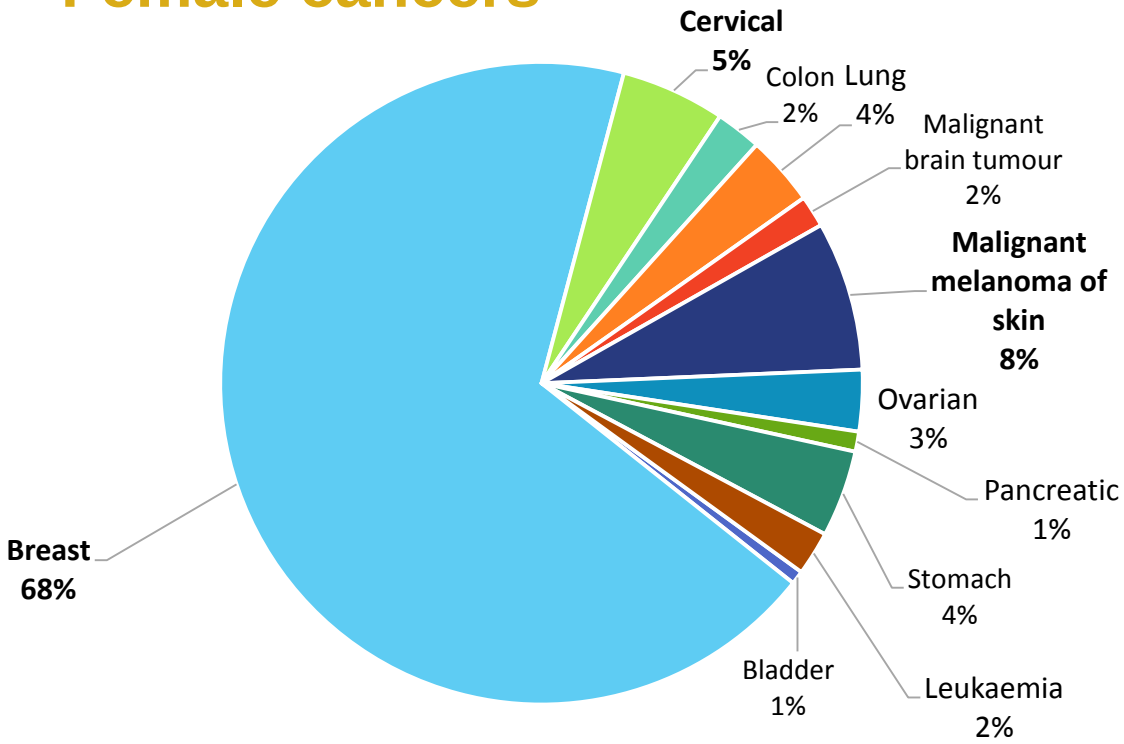
Claims Deep Dives – outcomes

- Material numbers of:
  - claims with a relevant family history
  - ‘early claims’ for claimants with a relevant family history

CI Claims – Female cancers



Source: Swiss Re Life & Health UK

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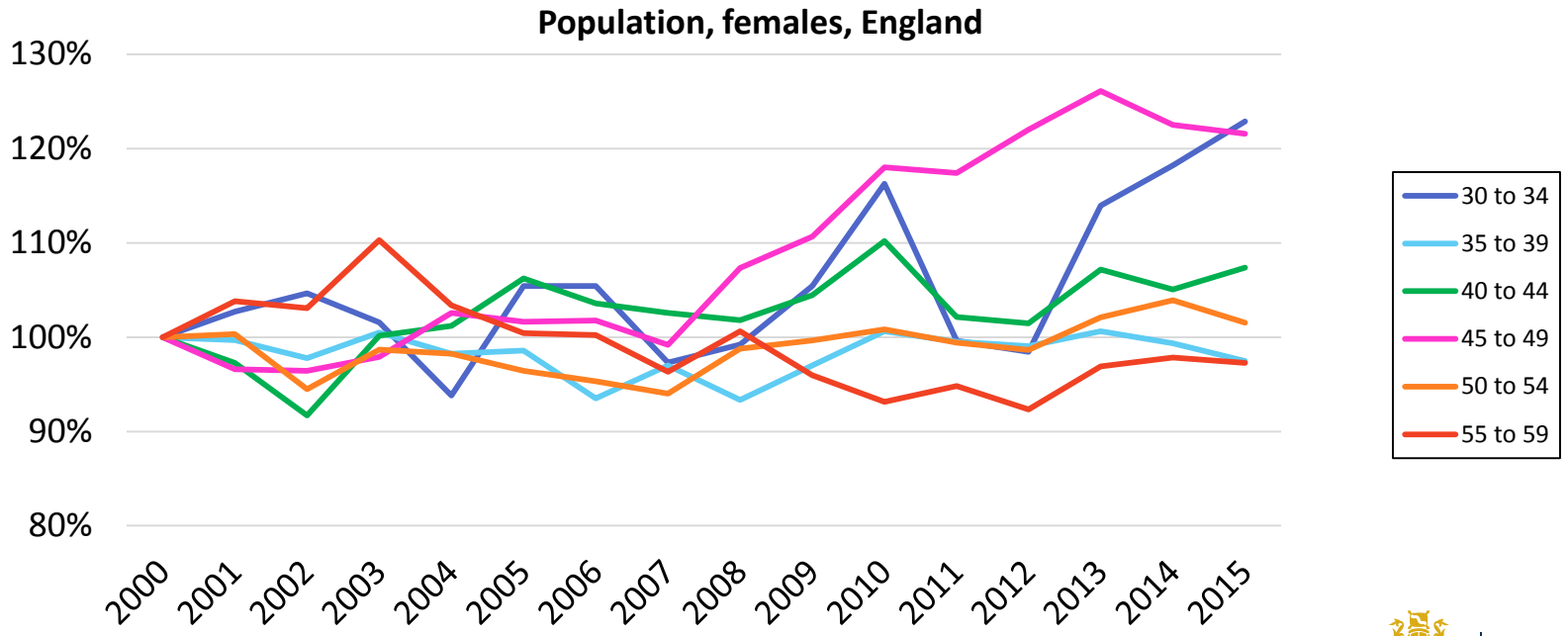
Increase in breast cancer incidence rate
(base year 2000)



Source: English cancer registry

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Claims Deep Dives – outcomes

- Material numbers of:
  - *claims with a relevant family history*
  - *'early claims' for claimants with a relevant family history*
  - breast cancer claimants who disclosed at application a benign disease history
  - claims arising from screening, rather than symptoms
- Declining / Level / Increasing cover differences
- Female amounts experience higher than simple lives experience

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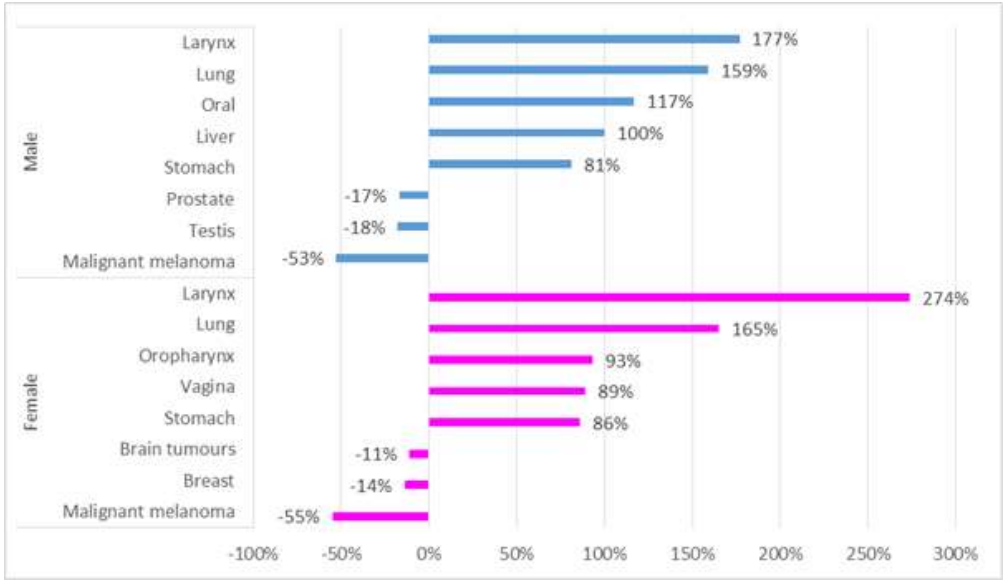
Percentage deprivation gap in age-standardised incidence rates

(% gap between highest and lowest deprivation group)



Source: Cancer Research UK

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Claims Deep Dives - outcomes

- Scope to enhance claims management:
  - investigation of misrepresentation
  - accuracy of retrospective underwriting
  - objective approach to balance of evidence
  - transparency/understanding of pricing assumptions: claims philosophy applicable to the different generations of cover

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The role of ‘environmental’ factors

Breast cancer screening

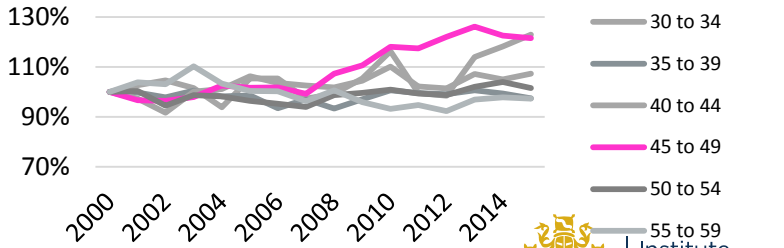
- NHS extended breast cancer screening programme extended in 2007 (previously age 50 – 70, extended to age 47 for approx. 50% of women in England): trial will run to mid 2020s.
- Greater public awareness of breast cancer risk and referral of higher risk lives for targeted screening
- Family history is a key consideration; the NHS assesses family history based on first, second and third degree relatives.

GP practice

Consumer behaviour

Contents

UK Population: Change in the incidence of breast cancer



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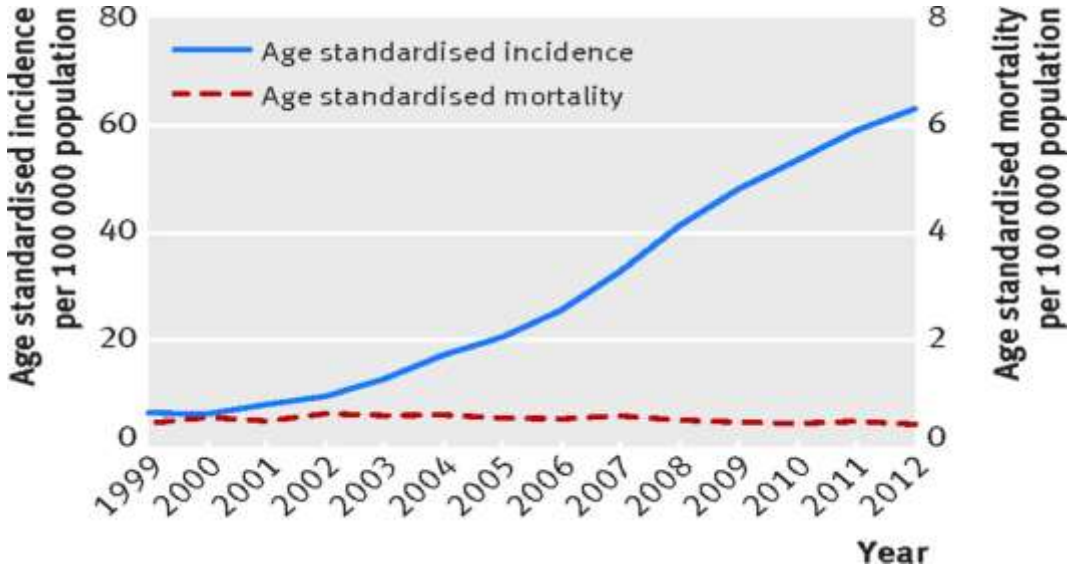
The role of ‘environmental’ factors

Thyroid cancer screening in Korea



The financial impact of this is greater where long-term guarantees are in place.

Sohee Park et al, ***Association between screening and the thyroid cancer “epidemic” in South Korea: evidence from a nationwide study,*** BMJ 2016; 355 http://www.bmj.com/content/355/bmj.i5745

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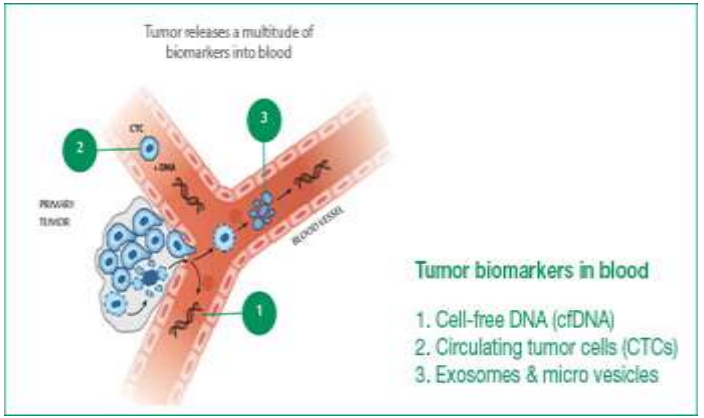
The role of ‘environmental’ factors

Medical advances

“Liquid biopsy”- the term used to describe a molecular test done on a sample of blood (or other bodily fluids such as plasma, cerebrospinal fluid, or urine) to look for tumour material circulating in the blood such as:

- circulating tumour cells (CTCs)
- cell free DNA (cfDNA)
- exosomes (vesicles containing tumour material)



http://egfrmutationtestv2.roche.com/liquid-biopsy/

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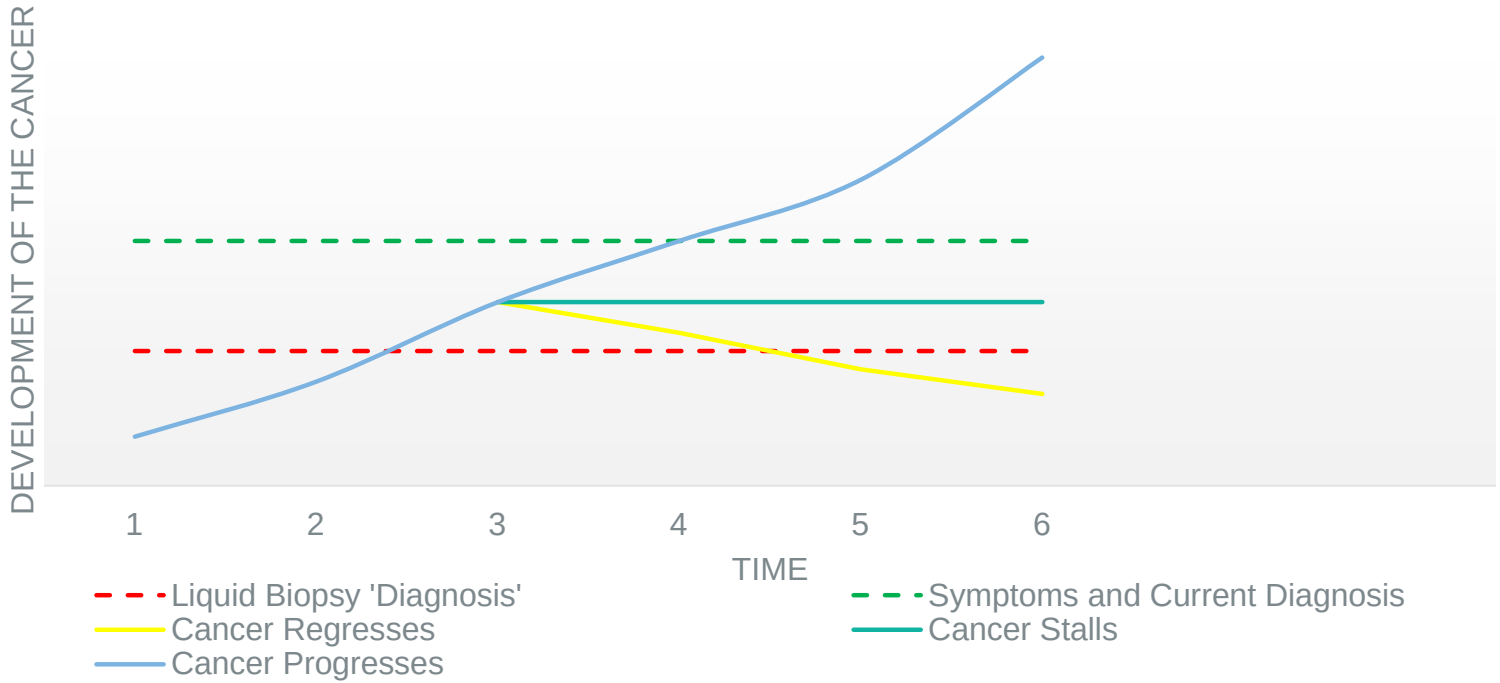
Potential impact of ‘Liquid Biopsy’

(Illustration only)



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The use of liquid biopsy for diagnosing cancer

- Liquid biopsy is not yet clinically validated for use to **diagnose** or screen for cancer. (Trials are underway to assess diagnostic accuracy of liquid biopsy in poorly detected cancers (lung, pancreas))
- However, the technology has the potential to be used in the future for **screening** for cancer

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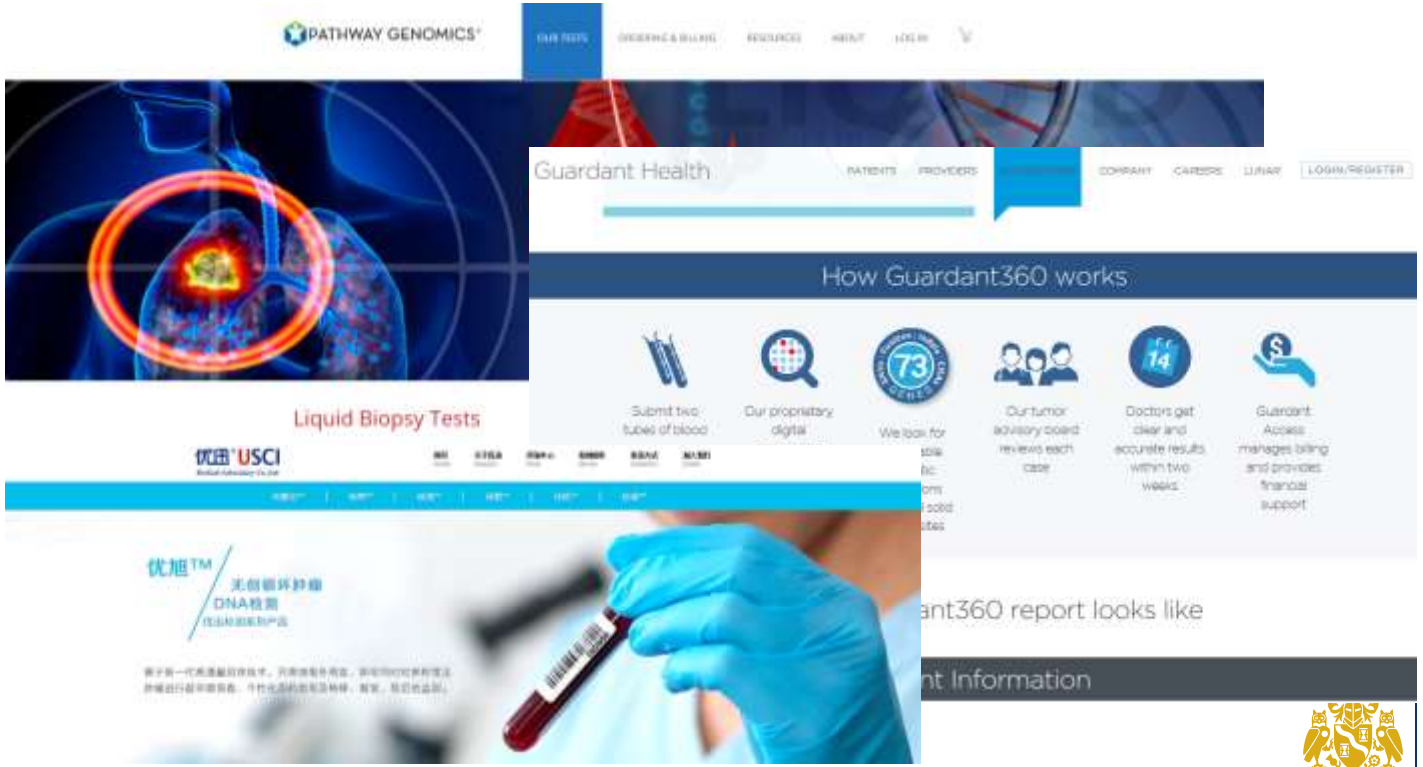
Direct-to-Consumer cancer screening test offered online



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Answer:

Claims can help, including enhancing the customer experience, but…

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Cancer: Underwriting and Claims Perspectives

John Turner and Andy Parkinson

How do we make the CI world more Resilient?

Traditional options:

- Review price
- Enhance underwriting
- Amend definitions and product design
- Objective claims assessment in line with pricing assumptions

And…

- Multi-disciplinary approach to ensure full transparency and understanding of both risks and practice
- Innovative approach to improving the health of “the inforce”
- Study the present, scan the future

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Any questions?

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