



**The Actuarial Profession**

making financial sense of the future

## **GIRO conference and exhibition 2011**

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# **F10: Update from the UK asbestos working party**

11-14 October 2011

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# Introduction

## What has the Working Party done?

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- Since 2009 market estimate - entered working party passive phase
- Continued to collect survey and government data
- Comparing data against estimates
- Maintained contact with HSE and Prof. Peto

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# Agenda

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- Experience in 2010
- HSL / HSE latest work
- Legal and Other Developments
- Next steps

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# Experience in 2010

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# Experience in 2010

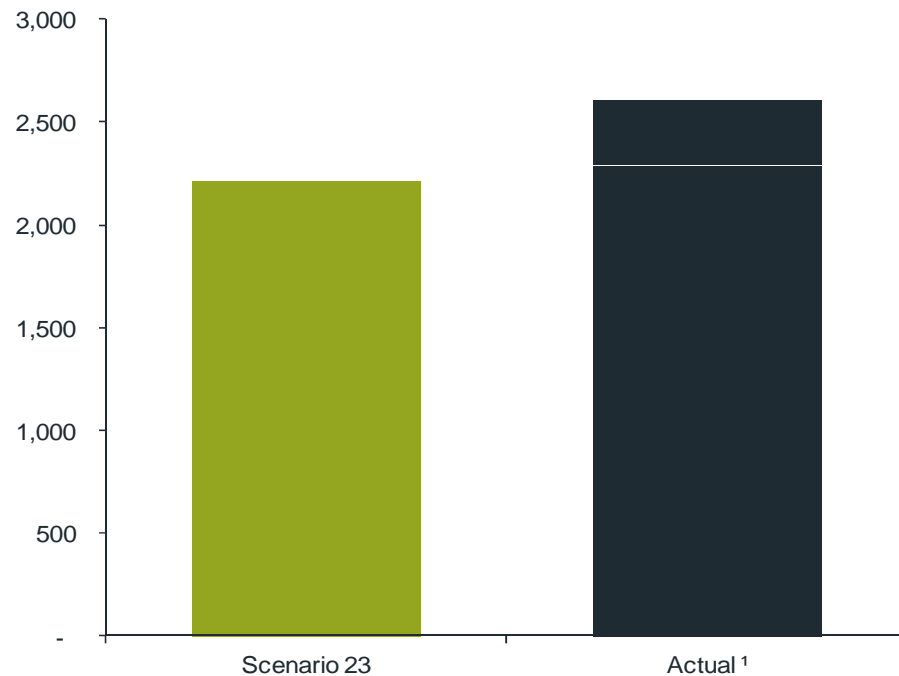
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- Update of Summary Claim data as at 1Q 2011
  - Asbestos Related Claims data from 13 companies
- New Claim Recovery Unit (CRU) data as at 2Q 2011
  - Mesothelioma data at claim and claimant level
  - Male and Female
  - EL, PL and Other
  - Live, settled and withdrawn
  - Non-State, Government and Local Authority

# Actual vs. Projected Experience 2010

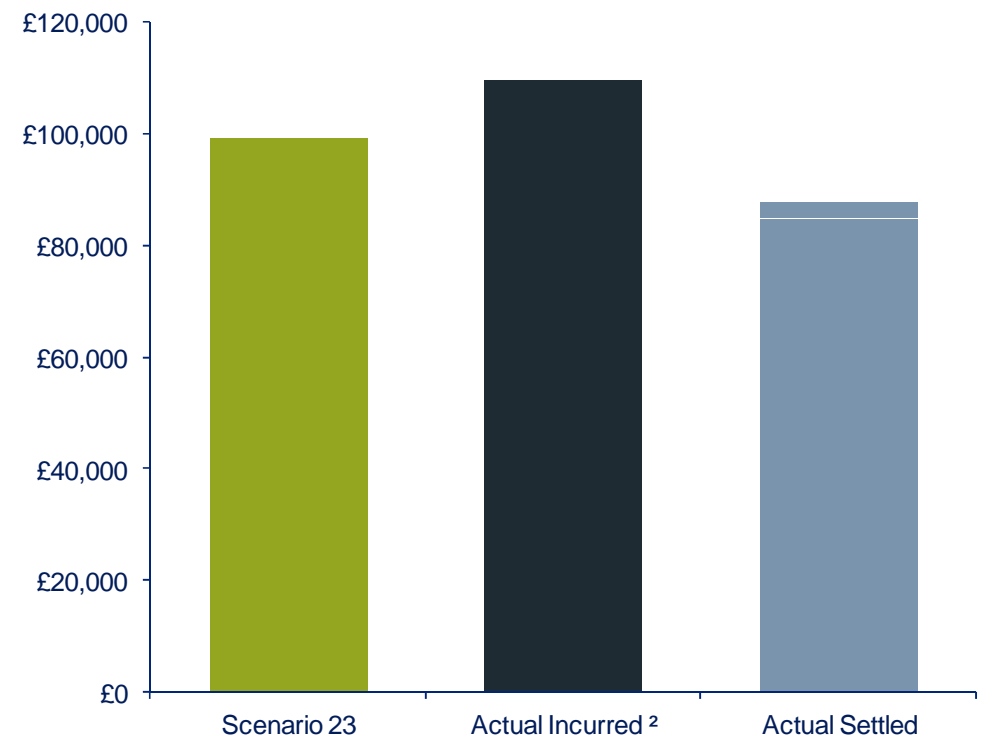
## Mesothelioma

### Number of Claims (excludes nils)



<sup>1</sup> 1Q 2011 survey data assuming the survey covered 80% and nil rate of 20%

### Average Claim Size (£) (excludes nils)

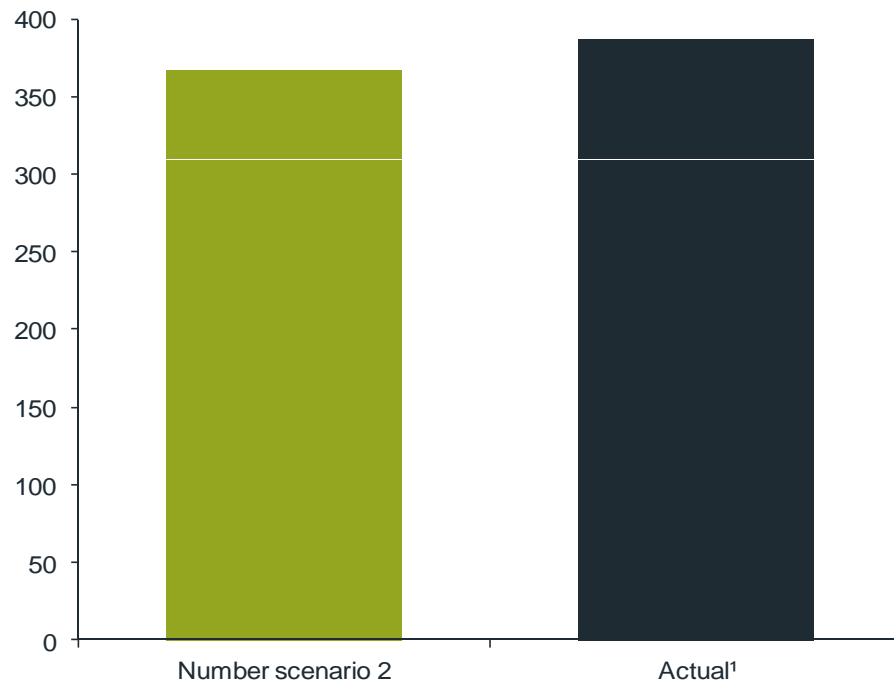


<sup>2</sup> Assuming nil claims rate of 20%

# Actual vs. Projected Experience 2010

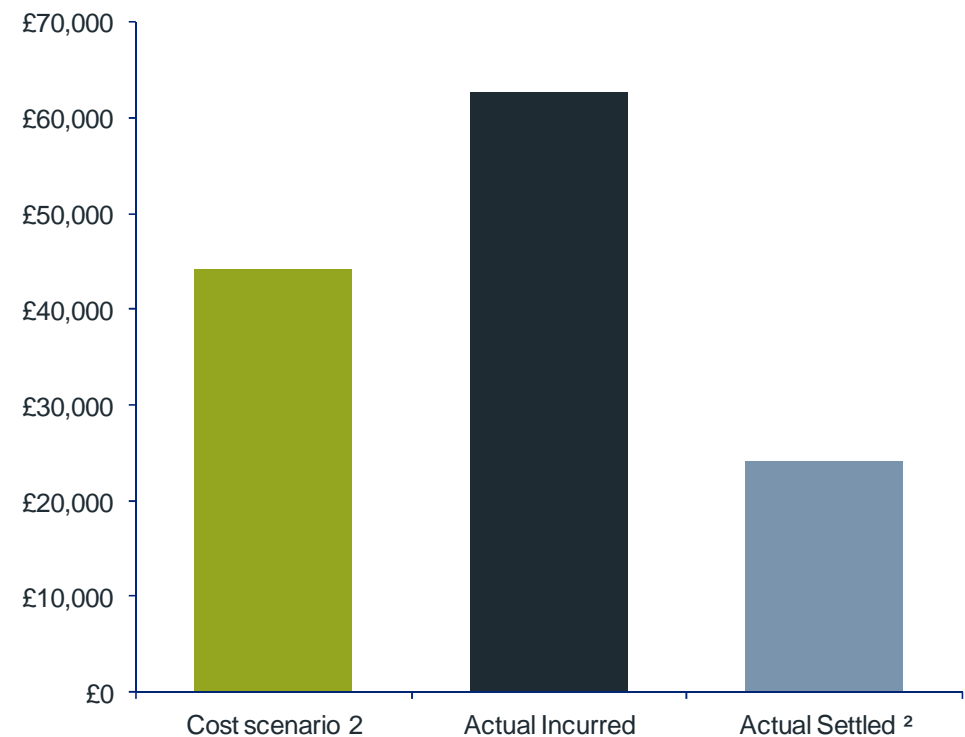
## Lung Cancer

### Number of Claims (includes nils)



<sup>1</sup> 1Q 2011 survey data assuming the survey covered 80%

### Average Claim Size (£) (includes nils)

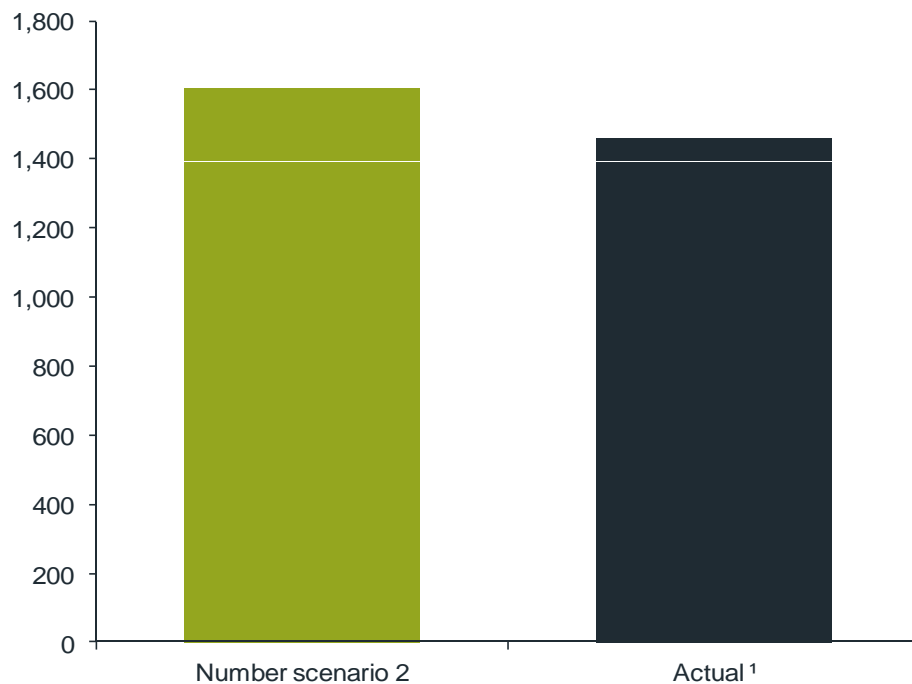


<sup>2</sup> Assuming nil claims rate of 33%

# Actual vs. Projected Experience 2010

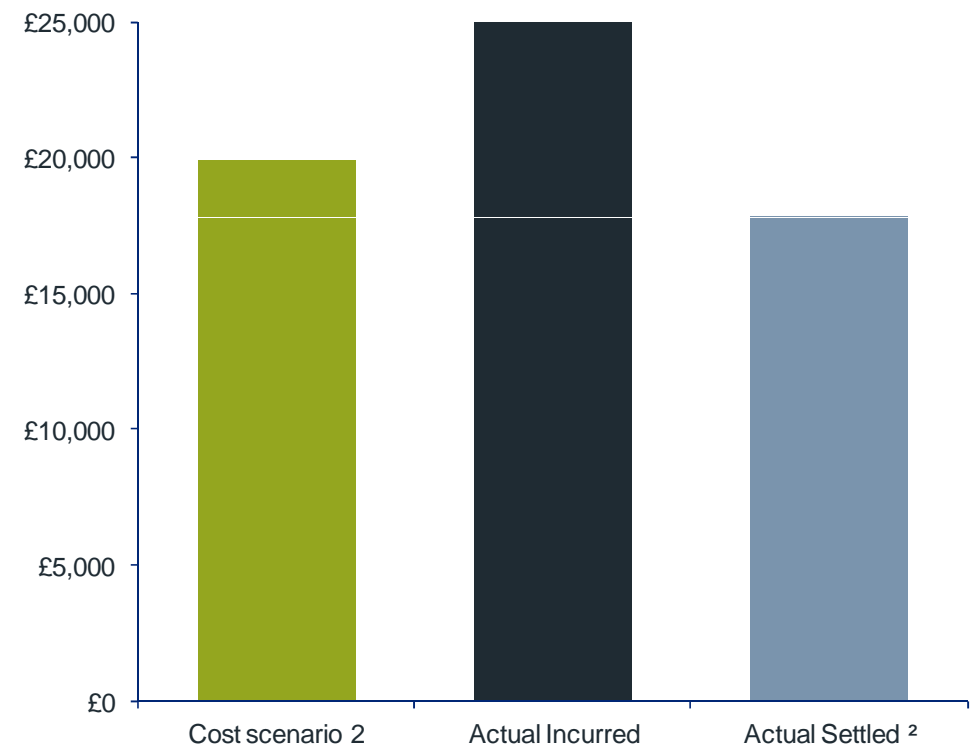
## Asbestosis

### Number of Claims (includes nils)



<sup>1</sup> 1Q 2011 survey data assuming the survey covered 80%

### Average Claim Size (£) (includes nils)

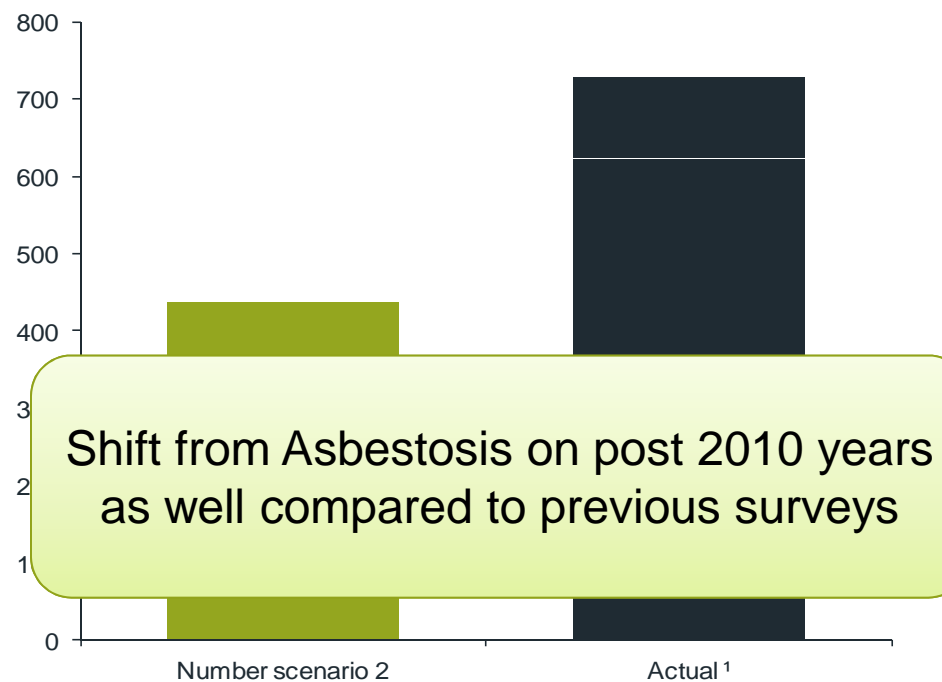


<sup>2</sup> Assuming nil claims rate of 33%

# Actual vs. Projected Experience 2010

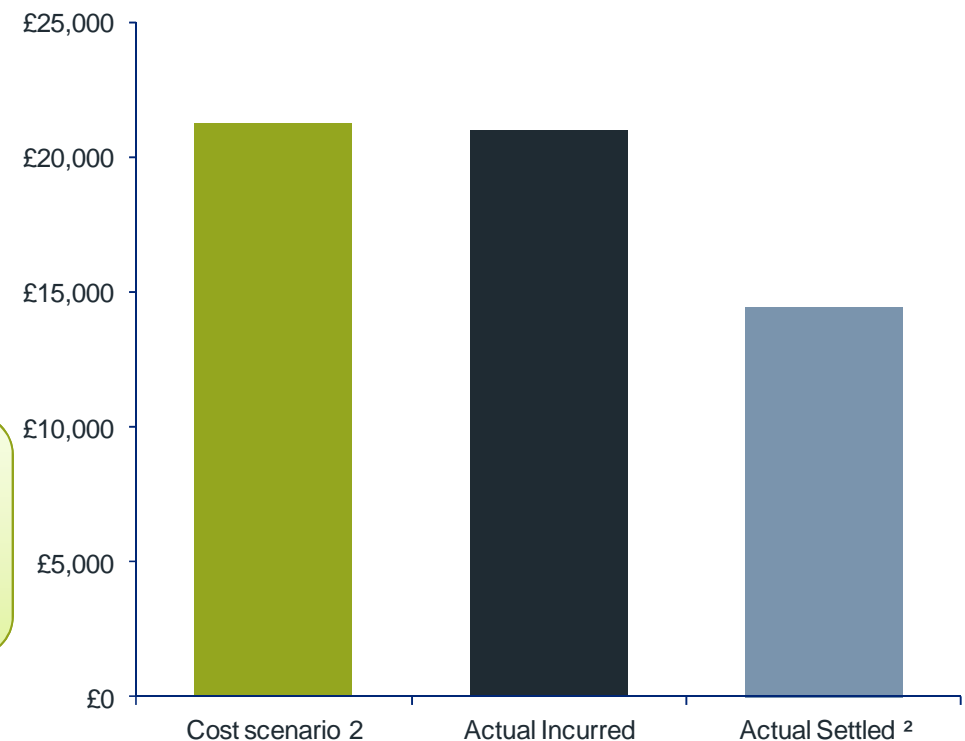
## Pleural Thickening

### Number of Claims (includes nils)



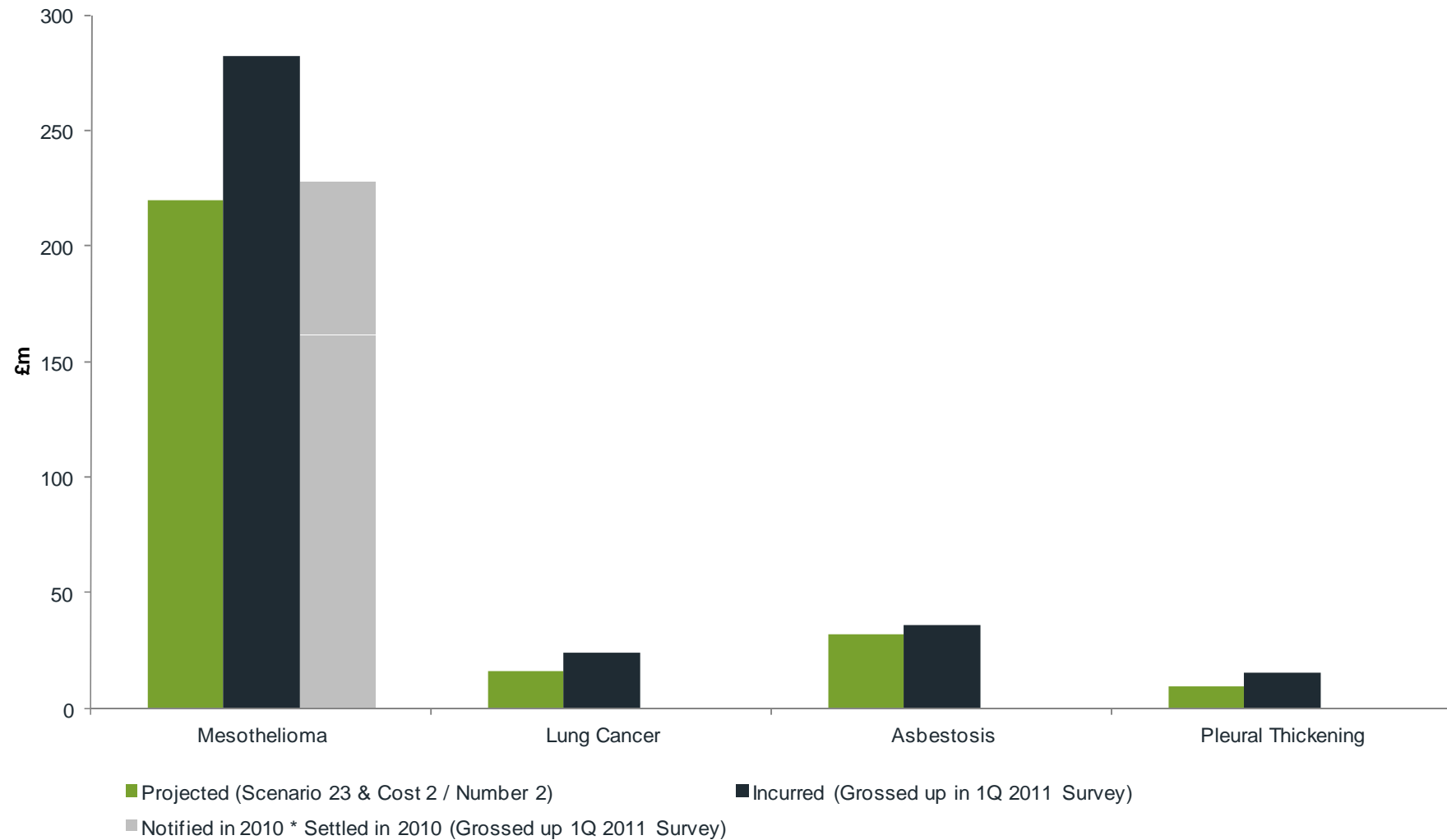
<sup>1</sup> 1Q 2011 survey data assuming the survey covered 80%

### Average Claim Size (£) (includes nils)



<sup>2</sup> Assuming nil claims rate of 35%

# Actual vs. Projected Experience 2010



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# Claimants to Deaths Ratios - Mesothelioma only

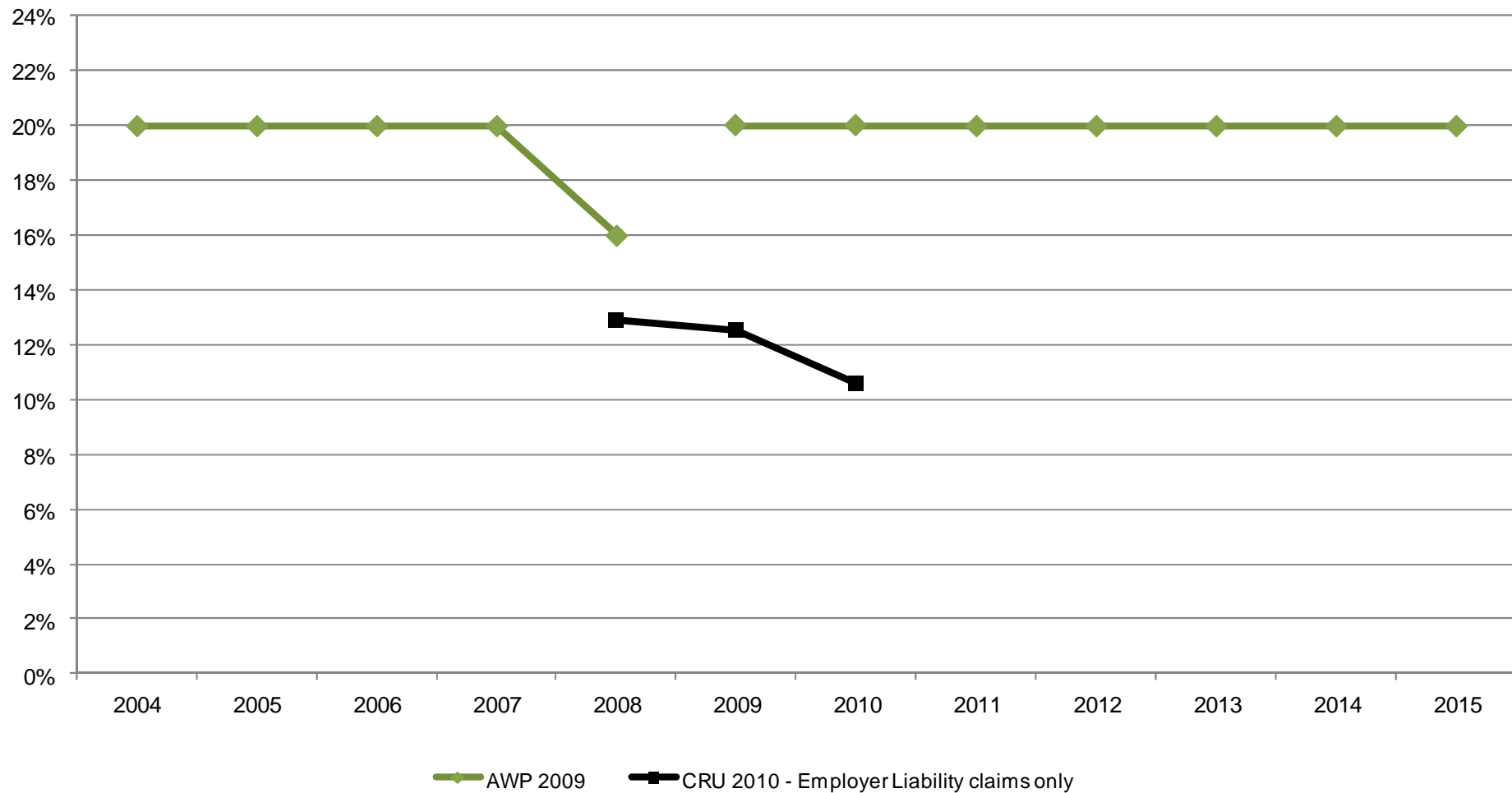
## Grossing up using CRU

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- Survey data for UK EL Insurance Market
- Need to allow for:
  - Female claimants
  - Claims from Northern Ireland
  - Government share of claims
- Female claimants based on detailed survey data
  - Much lower propensity to make a claim than males
- Northern Ireland mesothelioma deaths from HSENI (The Health and Safety Executive for Northern Ireland)

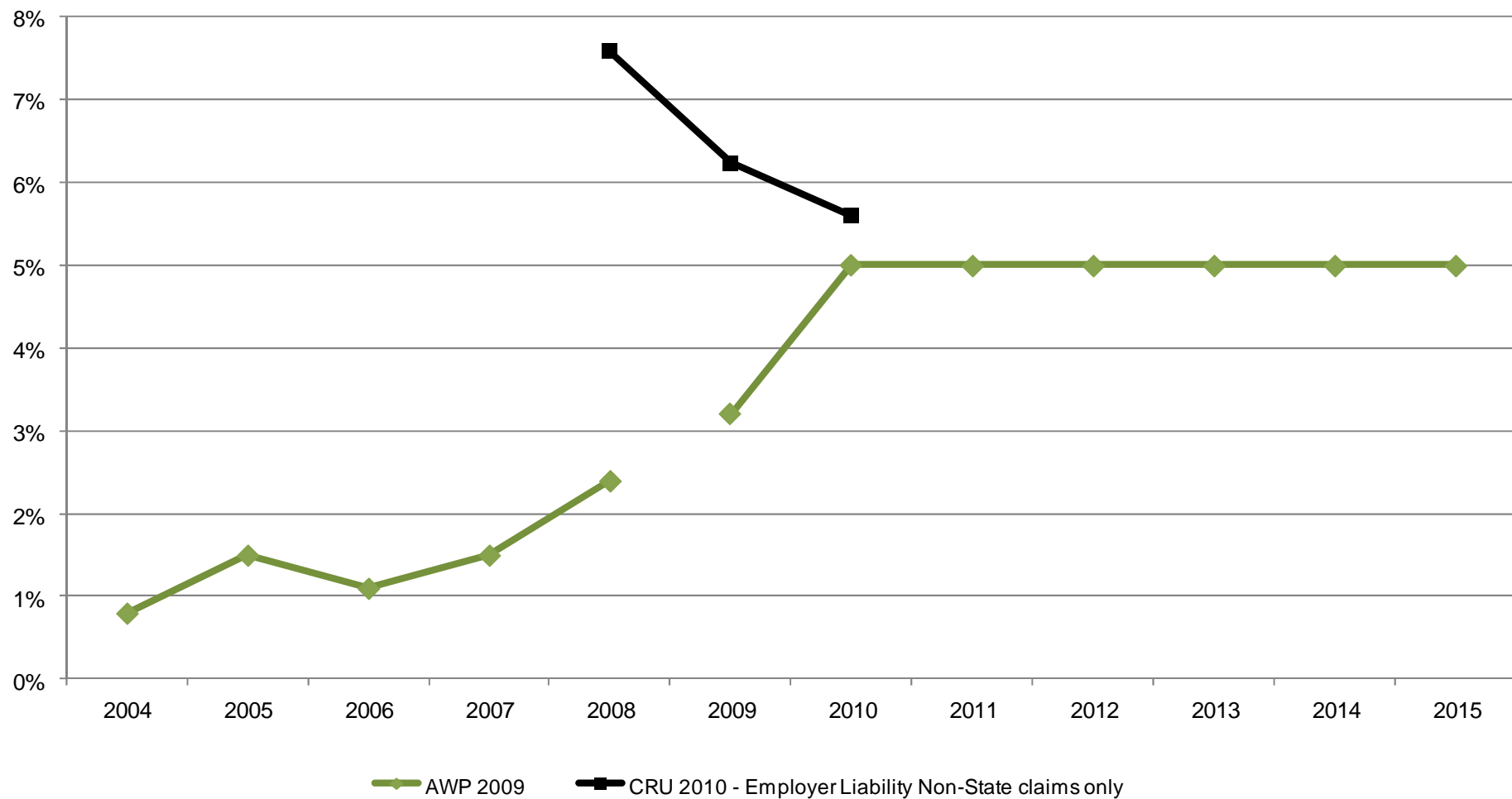
# Claimants to Deaths Ratios - Mesothelioma only

## CRU - Government share



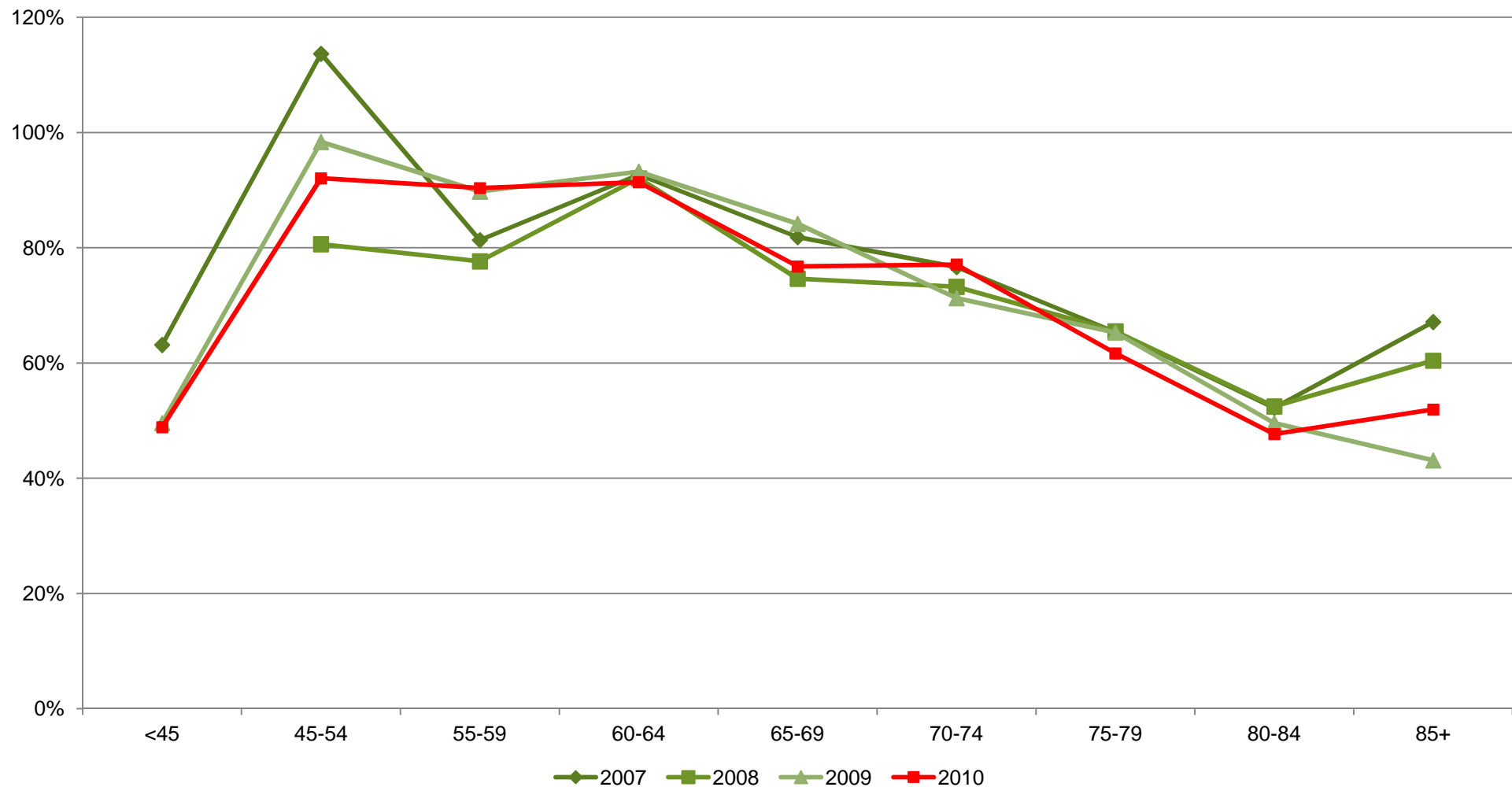
# Claimants to Deaths Ratios - Mesothelioma only

## CRU – Female (to Male) percentage



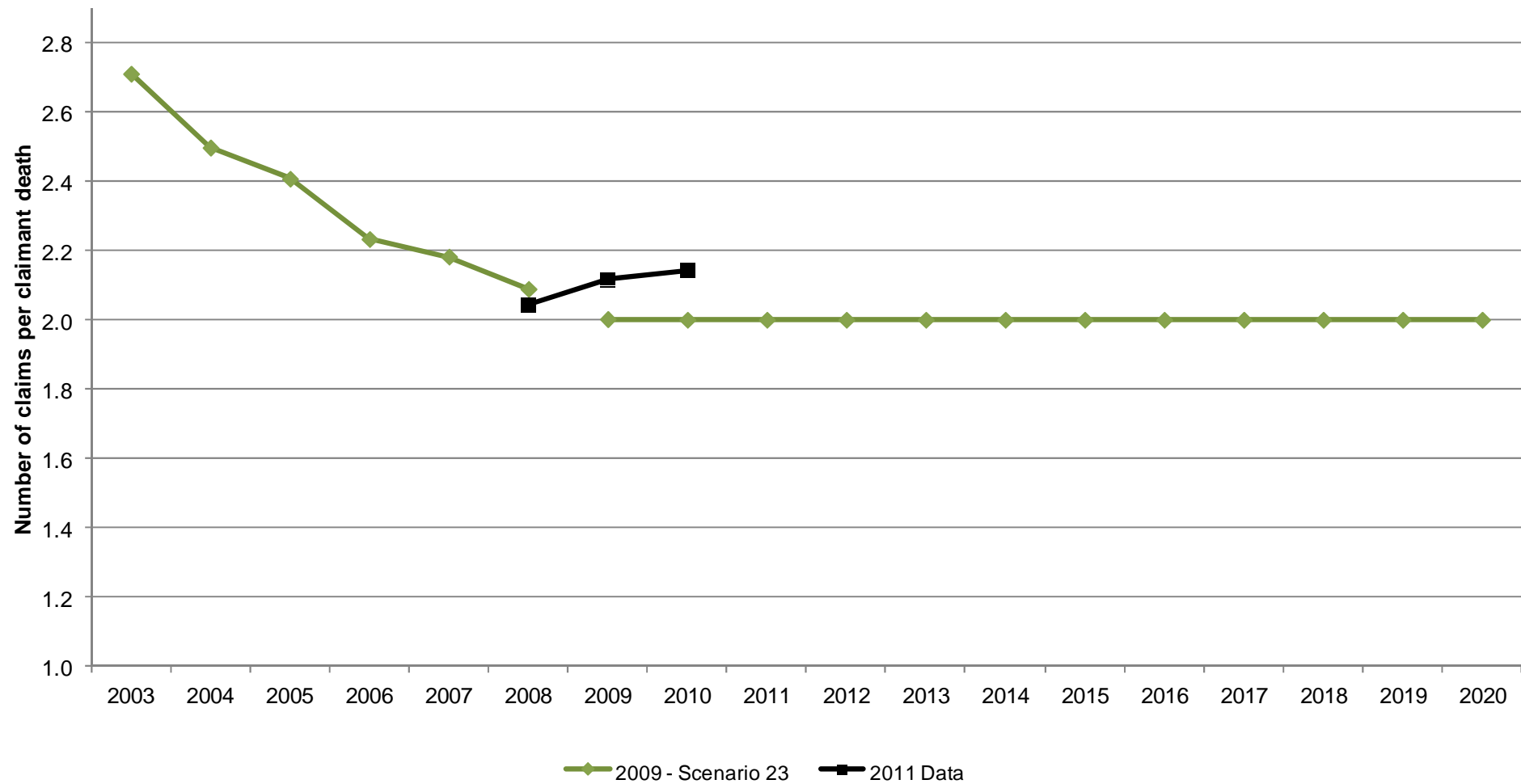
# Claimants to Deaths Ratios - Mesothelioma only

## Claimant Death Ratios - Males only



# Claims per claimant

## Mesothelioma only



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# HSL / HSE latest work

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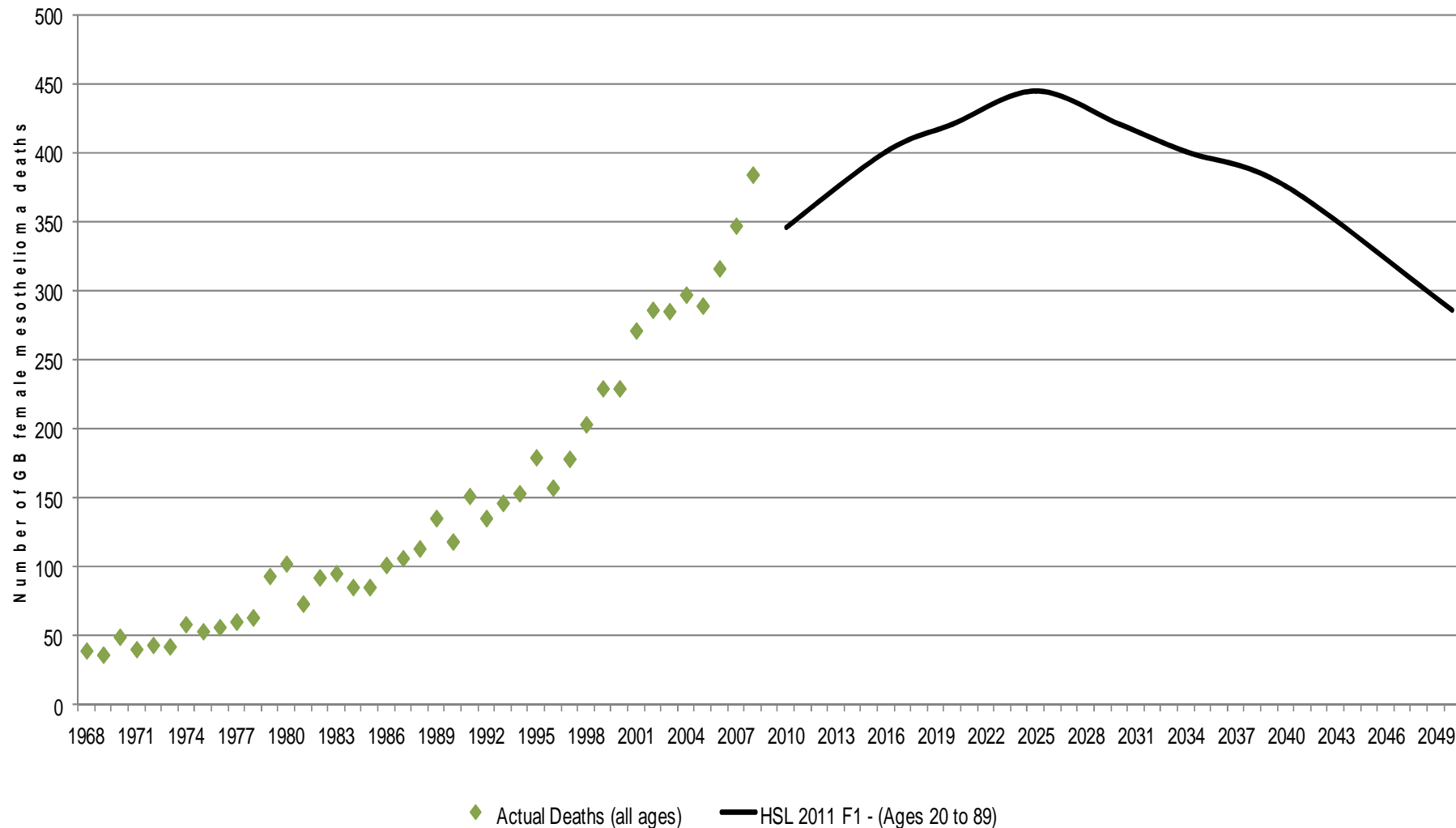
# HSE update

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- New report produced by the HSL published in July 2011
- Contents of the report:
  - Female deaths projections
  - Develop alternative models for male projections:
    - Revised Risk Model
    - Two-Stage Clonal Expansion model

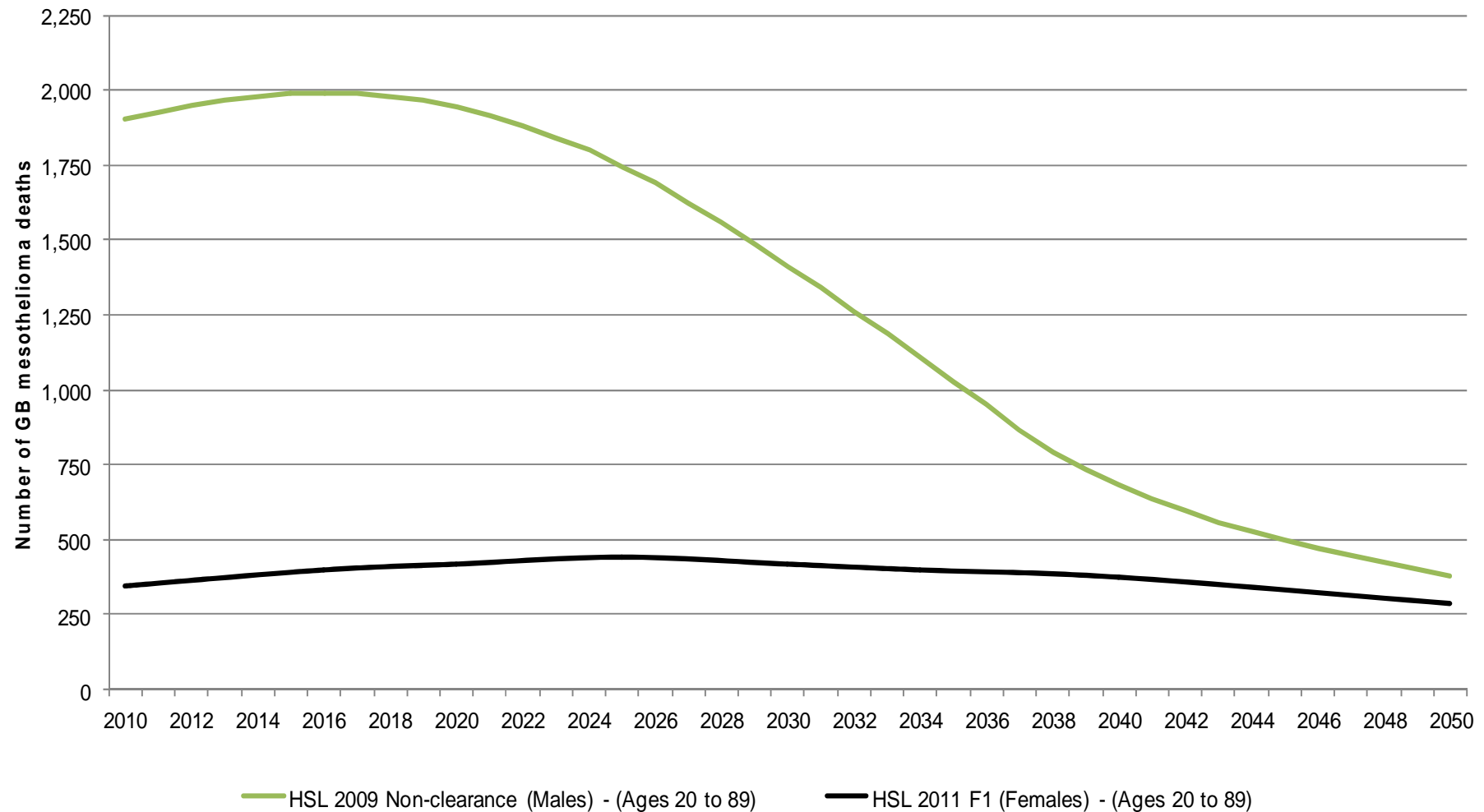
# HSL 2011 projections

## Female projections – based on HSL 2009 model



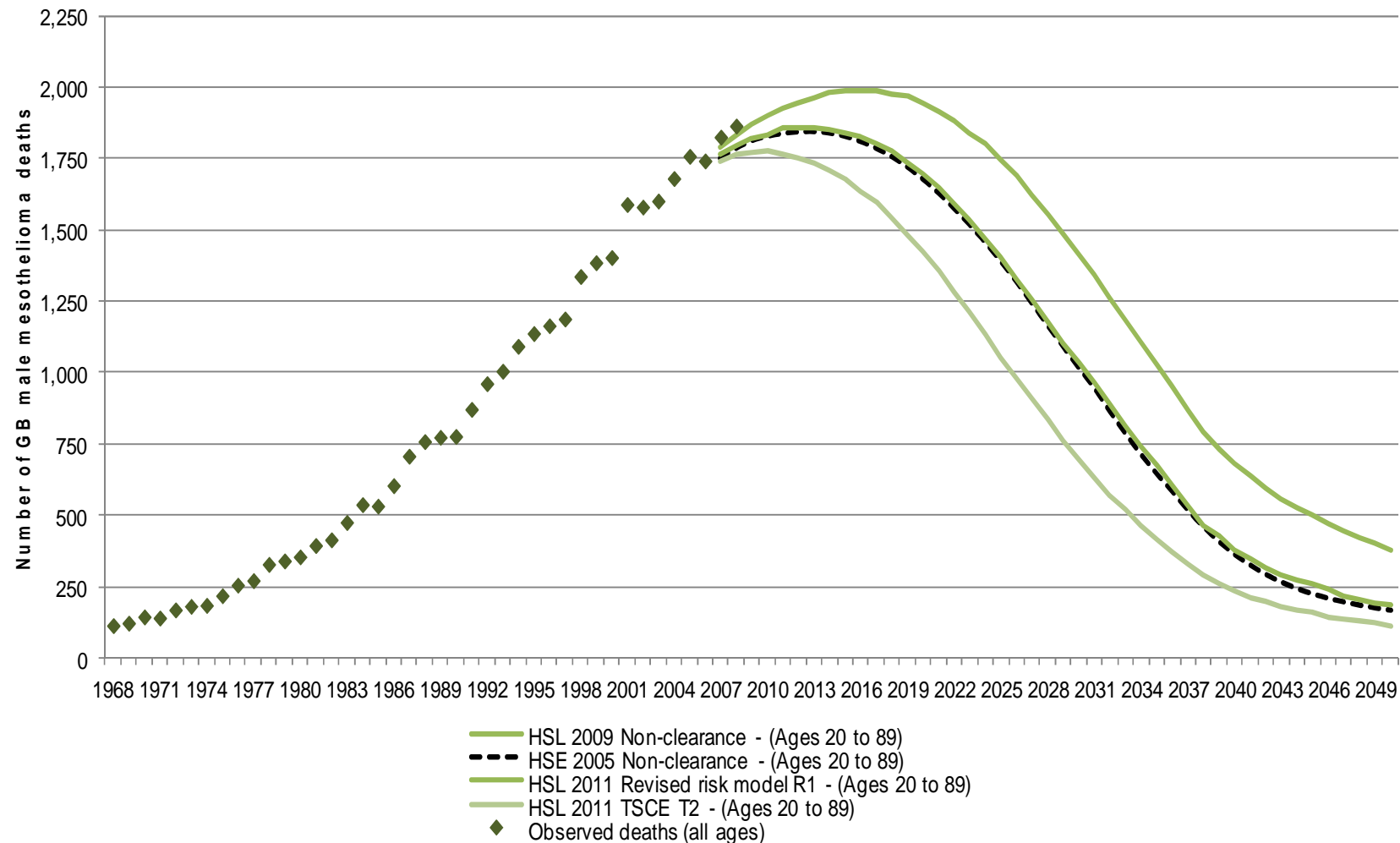
# HSL 2011 projections

## Female vs. Male projections



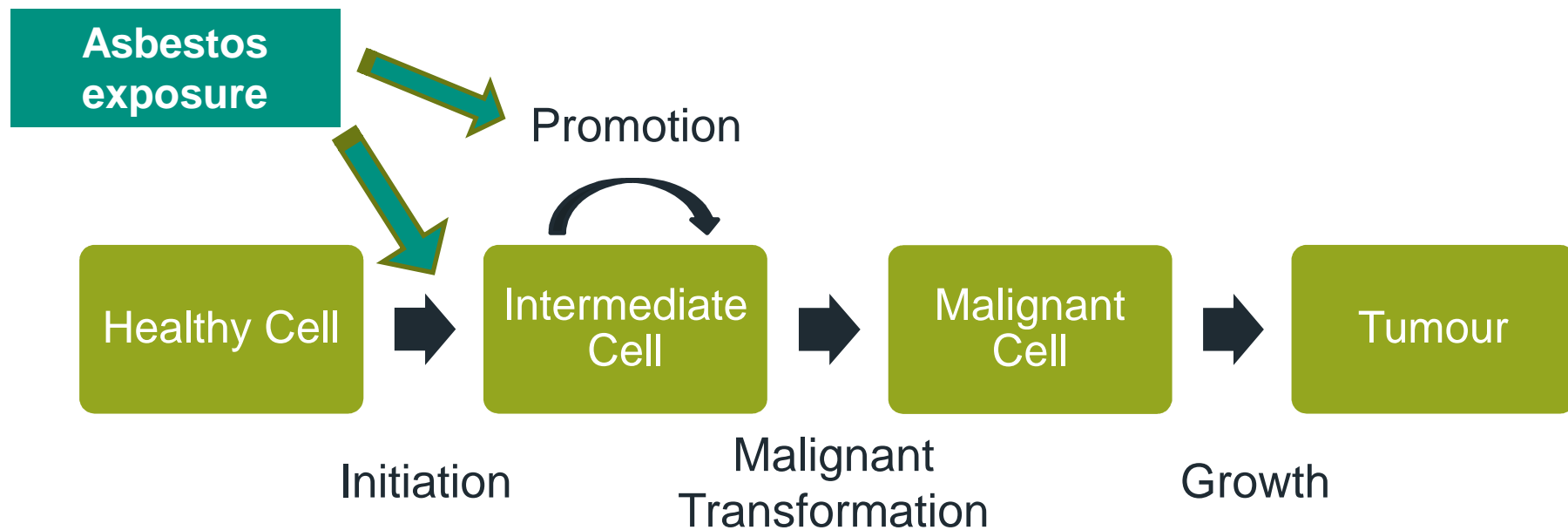
# HSL 2011 projections - Males

## Comparison to prior HSL projections



# Two-Stage Clonal Expansion (TSCE) Model Overview

- First proposed by Moolgavkar and Kudson in 1981
- Motivated by biological considerations
- Model assumes that cell undergoes two mutations prior to development of a tumour:



# Two-Stage Clonal Expansion (TSCE) Model

## Modelling steps

### Classification of the population

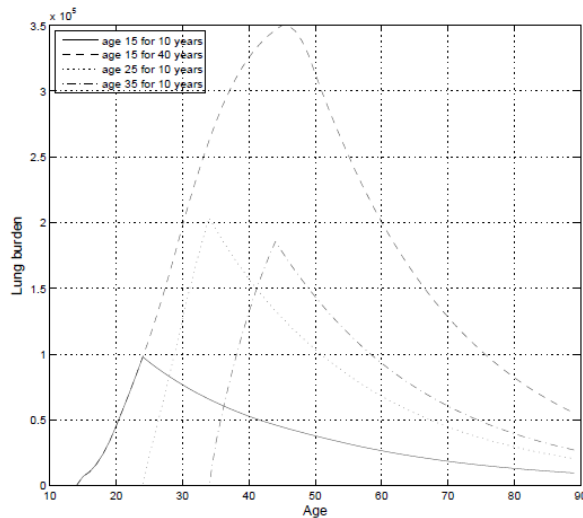
Lung burden



Dose  
response  
equations

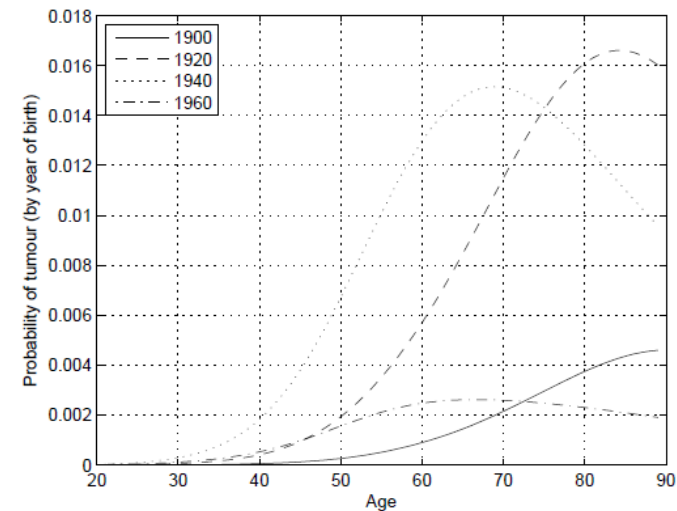


Hazard  
Function



$$\nu(d) = \nu_0 + \nu_1 d^{\nu_2}$$

$$\gamma(d) = \gamma_0 + \gamma_1 d^{\gamma_2}$$



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# Two-Stage Clonal Expansion (TSCE) Model

## Modelling steps - Classification

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- Population is classified between high and low exposed
  - Occupational vs non-occupational exposure
- High exposed are sub-classified based on:
  - Age at which exposure started
  - Duration of the exposure

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# Two-Stage Clonal Expansion (TSCE) Model

## Modelling steps – Lung Burden

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- Lung Burden:
  - Measure of the amount of Asbestos fibres in an individual's lungs
- Use of UK Asbestos imports to estimate the lung burden
  - Main parameters:
    - Clearance of the lungs
    - Stock removed and released
    - Risk factor of one type of fibres relative to another one

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# Two-Stage Clonal Expansion (TSCE) Model

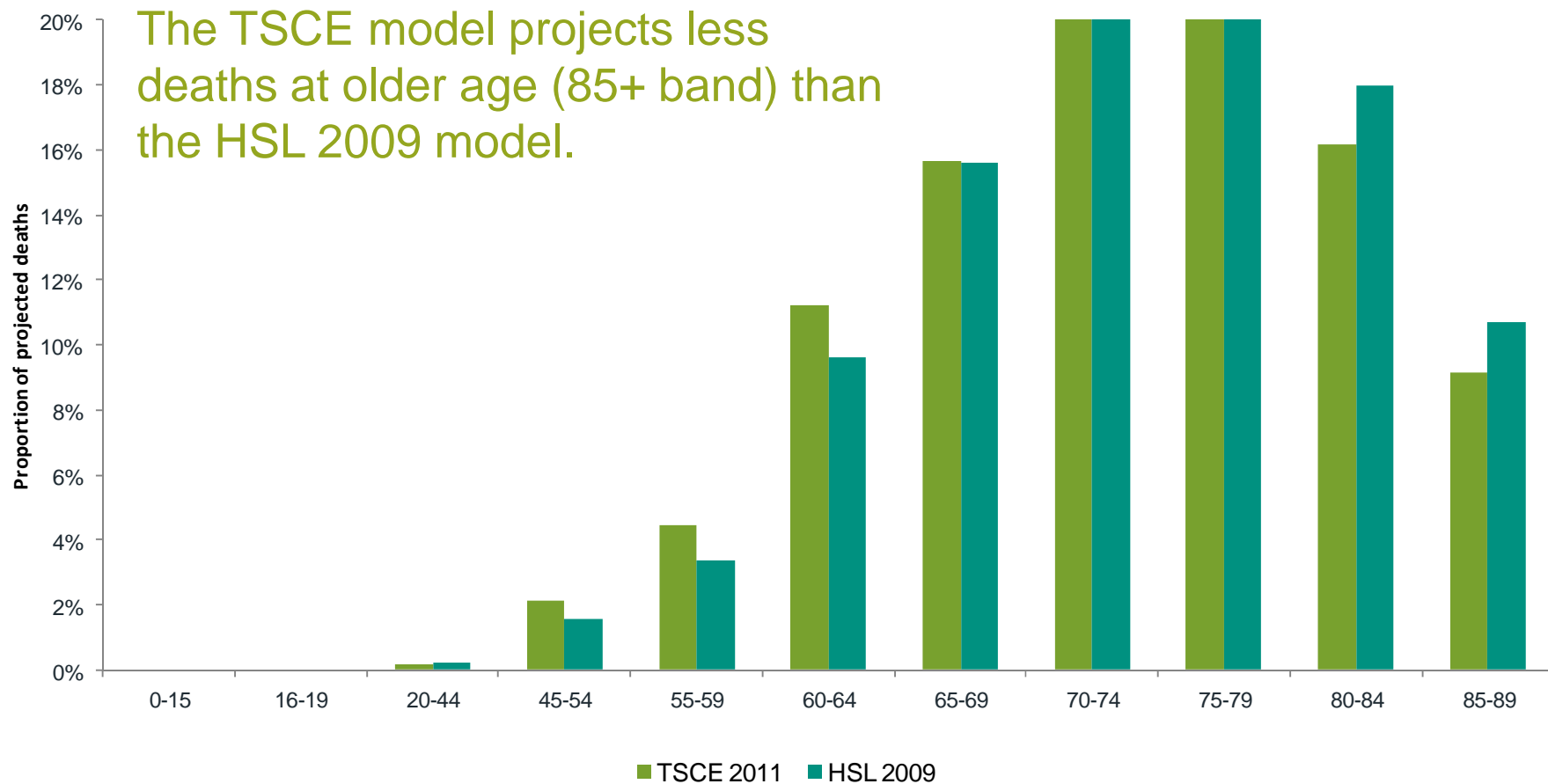
## Modelling steps – Hazard Function

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- Hazard Function
  - Probability of developing a tumour
  - Lag of 10 years assumed between tumour and death
  - Derived from the dose response equations
  - Applied to the GB male population

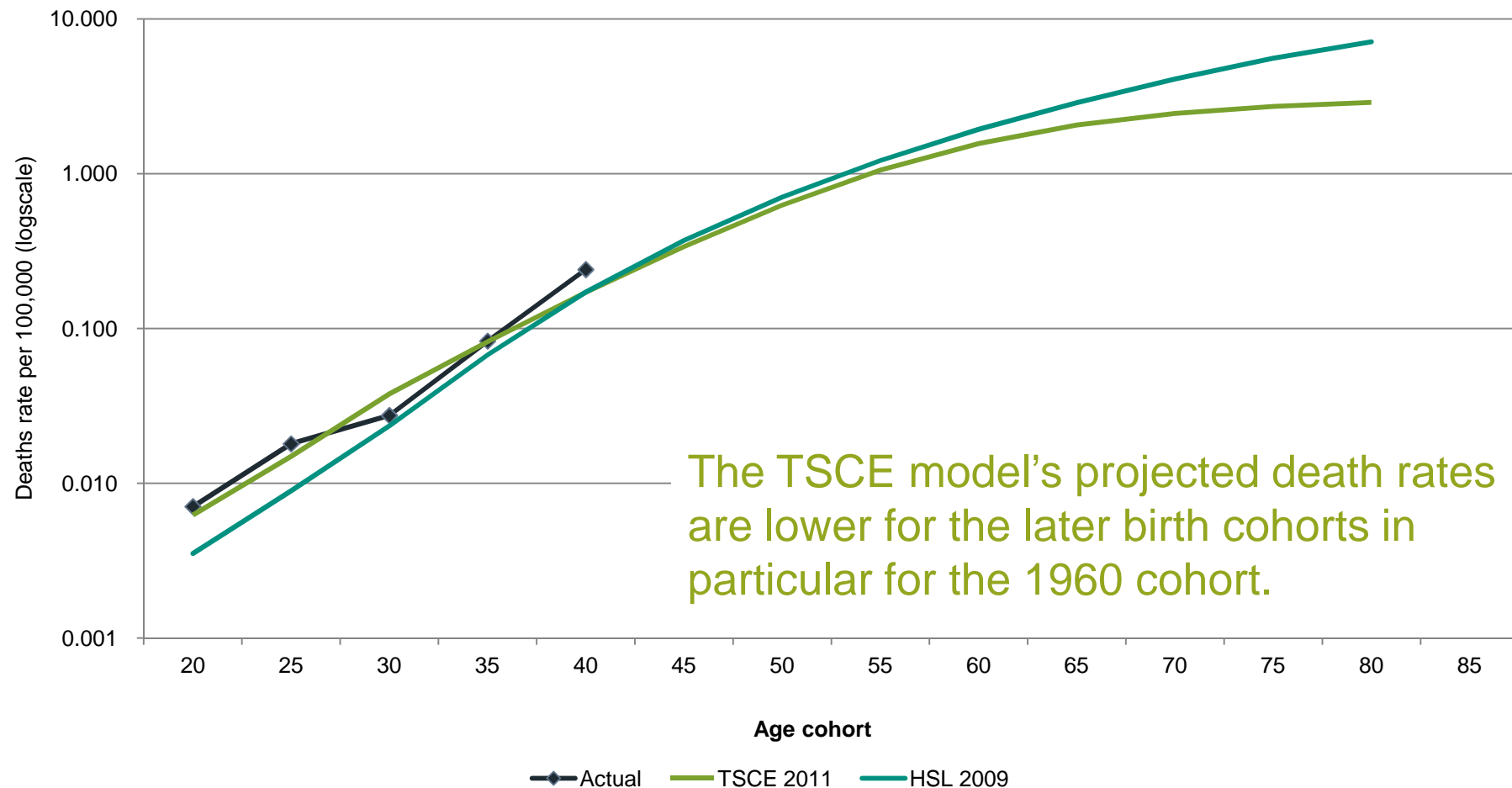
# Two-Stage Clonal Expansion (TSCE) Model Results / Observations

## Modelled deaths by age group



# Two-Stage Clonal Expansion (TSCE) Model Results / Observations

Death rate per 100,000 for the 1960 - 1964 birth cohort



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# Two-Stage Clonal Expansion (TSCE) Model

## Summary

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### Pros:

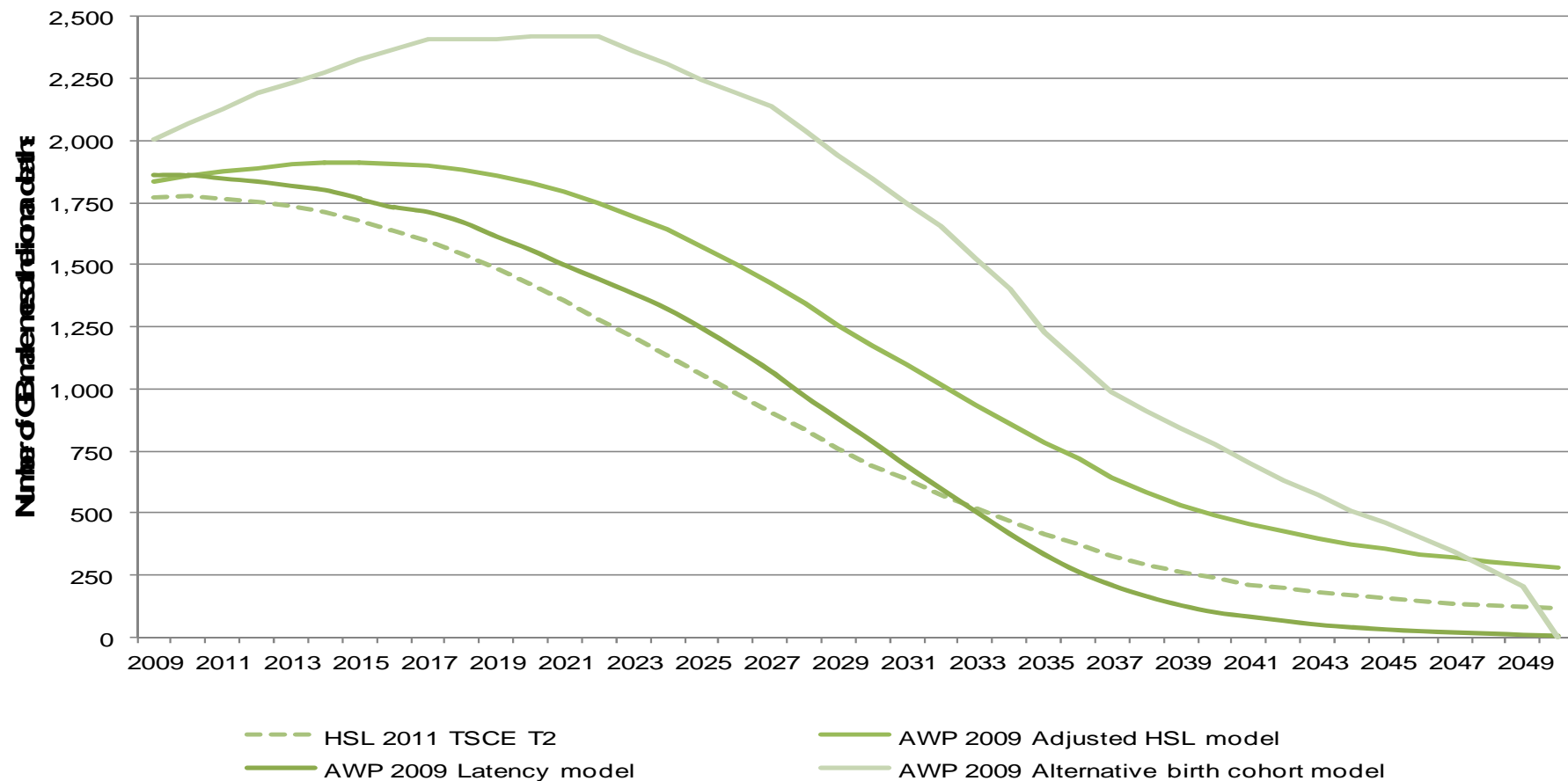
- Good fit to the historical data
- Based on biological considerations
- More flexible as a result of its many parameters
- Allows different death rates
- Takes into account exposure explicitly

### Cons:

- Lots of parameters (more than population model) – difficult to parameterise
- May underestimate the number of deaths from 80+ year olds
- Sensitivity to the post-1980 exposure level

# HSL 2011 projections - Males

## Comparison to AWP 2009 projections



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# Legal and Other Developments

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# Legal and Other Developments

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- EL trigger
  - Does Bolton apply to EL policies?
- Sienkiewicz and Willmore
  - Does Fairchild apply?
- Scottish damages
  - Are claims now more expensive?
- Pleural plaques
  - An update on all UK territories and Supreme Court ruling

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# EL Trigger Litigation

## Bolton and Consequences

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- Bolton v MMI, 2006 (Public Liability Case)
  - Injury Occurring = Mesothelioma victim sustains injury when tumour starts to develop, 10 years before manifestation
- 4 insurers with EL policies worded in a similar way to the PL policy in Bolton
  - Responded if the injury was sustained or contracted during the term of the policy
  - They declined EL claims on the Bolton principle
- Led to 'black holes' in insurance cover

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# EL Trigger Litigation

## Round One

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- Claims against the 4 insurers pursued Trigger Litigation
- Burton J held that “injury sustained or disease contracted” wording = liable when fibres inhaled
- Pragmatic commercial view of EL policies:
  - rejected technical legal arguments
  - acknowledged that the insurance industry had traditionally paid such claims on an exposure basis for over 50 years
- Accepted Injury didn’t occur at point of inhalation
  - Approximately 5 years before symptoms

# EL Trigger Litigation

## Court of Appeal

### Overtaken High Court Judgement

Some principles agreed:

- “Sustained” = Policy in force when starts to develop
- “Contracted” = Policy in force at exposure (“caused”)

#### Rix LJ

- Contracted when caused
- Mesothelioma not sustained on inhalation
- Policies from 1972 respond if caused during policy

#### Burnton LJ

- Insurers entitled to change practices as Mesothelioma better understood
- Bound by Bolton

#### Smith LJ

- Policies should be interpreted on understanding of parties when written
- Not Bound by Bolton

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# EL Trigger Litigation

## What now?

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- If Rix LJ not bound by Bolton:
  - Actionable injury from date of inhalation
  - Liability created when employer materially contributed to the risk
  - Decision led to “an unfortunate conclusion”
- Troubling for the Market:
  - Public Authorities need provision for 1974 & prior
  - Private Sector Businesses will have to meet their own liabilities if pre-1972 sustained policy
  - Insurers and defendants will need to fill ‘black holes’ under joint & several

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# Sienkiewicz & Willmore

## Reminder of Fairchild

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- Special rule for cases brought by persons who contract mesothelioma
- House of Lords Decision (Fairchild v Glenhaven Funeral Services Ltd) in 2002
  - Joint & Several = ‘materially increases the risk’
- Relaxes the usual requirement:
  - More likely than not that harm caused by the defendant
- Medical Science cannot determine which fibre(s) caused the mesothelioma to develop

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# Sienkiewicz & Willmore

## Sienkiewicz v Grief

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- Karen Sienkiewicz daughter of Enid Costello
- Mrs Costello died of Mesothelioma
  - 21 January 2006, Aged 74
- Worked for Grief (UK) Limited
  - Found to have wrongly exposed her to asbestos
  - ‘very light’ exposure - Increased her exposure by 18%
- Initial verdict:
  - Fairchild did not apply
- Reversed by Court of Appeal

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## **Sienkiewicz & Willmore**

### **Knowsley Metropolitan Borough Council v Willmore**

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- Mr Barre Willmore husband of Diane Willmore
- Mrs Willmore died of Mesothelioma
  - 15 October 2009, aged 49
- Found to have been exposed to asbestos at her secondary school
- Judge applied Fairchild
  - Awarded damages of £240,000
- Decision upheld by the Court of Appeal

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# Sienkiewicz & Willmore

## Results and Impact of Sienkiewicz and Willmore

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- Supreme Court - Fairchild still applies when only one defendant as well as environmental exposure
- It may now be easier to establish liability
- Implication for insurers
  - PL / uncompensated claims → compensated occupational claims
  - Potential knock-on effect to lung cancer claims

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# Scottish Damages

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- Damages (Scotland) Act 2011 - Royal Assent in April
  - In force from 7 July 2011
- Consolidation of existing laws
- Replaces the 1976 Act
  - Doesn't affect proceedings brought before it's in force
- Consequences in relation to loss of support claims:
  - Increase in awards for loss of support claims;
  - Higher awards for past loss of support; and
  - Wider category of claimants entitled to claims.

# Pleural plaques

## Before Supreme Court judgement

**House of Lords ruled pleural plaques were not compensable (Oct 2007)**

### Scotland

- Scottish Parliament introduced a bill to reverse the House of Lords ruling in Scotland – Act in force from June 2009
- Insurers' appeal to The Scottish Court of Session rejected
- Supreme Court ruling 12 Oct 2011

### Northern Ireland

- Northern Ireland Parliament introduced a bill to reverse the House of Lords ruling in Northern Ireland
- Received Royal Assent on July 2011
- Attorney General for Northern Ireland referred the NI legislation to the Supreme Court

### England and Wales

- Former Claimants Payment Scheme closed on 31<sup>st</sup> July 2011
- No further court action pending
- Potential for Forum shopping

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# Pleural plaques

## Supreme Court judgement

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- The Supreme Court dismisses the insurers appeal
  - All seven Lords in agreement
  - “judgment of the Scottish Parliament was not without reasonable foundation”
  - Accepts that the 2009 Act pursues a legitimate aim
  - Should respect the judgment of the elected body and not outside the legislative competence of the Scottish Parliament

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# Pleural plaques

## Supreme Court judgement

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- *Reasonably proportionate* to the aims sought to be realised as:
  - 1) Claims can only be brought if asbestos exposure was caused by the employer's negligence;
  - 2) Insurers obligation to indemnify inevitably entailed a risk that unforeseen circumstances would increase the burden of their liability; and
  - 3) Preserving the status quo prior to the Rothwell judgement.
- No verdict on quantum
- Appeal to EU?

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# Key points and Next steps

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## Key points

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- Two years of experience little cause for changes
  - Mesothelioma number of claims and costs in-line with estimate (Claimants to Deaths Ratios are stable)
  - Shift between Asbestosis and Pleural Thickening claims
- Claim to claimant ratio is higher than the 2.0 assumed
- Government share lower than 20% estimated
- TSCE projections close to those using the 2009 latency model
- Pleural plaques & EL trigger - Still uncertain

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# What will the AWP do now?

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- Release a excel copy of the TSCE model
- Continue to collect market data on a yearly basis
  - Next due for March 2012

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# Questions or comments?

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Expressions of individual views by members of The Actuarial Profession and its staff are encouraged.

The views expressed in this presentation are those of the presenter.

