

Mesothelioma statistics for Great Britain, 2023



July 2023



Contents

Summary	2
Introduction	4
Overall scale of disease including trends	4
Mesothelioma mortality by age	7
Industrial Injuries Disablement Benefit (IIDB) cases	9
Mortality by region	10
Mortality by occupation	11
Estimation of the future burden of mesothelioma deaths	12
Other statistics on mesothelioma	14
References	15
Annex 1 – Impact of the coronavirus pandemic	16
Assessment of the impact of the coronavirus pandemic on deaths registered during 2020-2023	16
Annex 2 – Cancer registrations	20
Mesothelioma deaths and cancer registrations in England, Wales and Scotland	20

Summary

The information in this document relates to Health and Safety Statistics published by the Health and Safety Executive in 2023.

Mesothelioma is a form of cancer that takes many years to develop following the inhalation of asbestos fibres but is usually rapidly fatal following symptom onset. Annual deaths in Britain increased steeply over the last 50 years, with many deaths attributed to past occupational asbestos exposures because of the widespread industrial use of asbestos during 1950-1980.

- There were 2,268 mesothelioma deaths in Great Britain in 2021. This is a fall of 302 compared with the 2,570 deaths in 2020, and substantially lower than the average of 2520 deaths per year over period 2012 to 2019.
- The substantial reduction in deaths in 2021 remains consistent with earlier projections that annual deaths would fall gradually during the 2020s. Increased variability in the figures for 2020 and 2021 may have been caused by various factors associated with the coronavirus pandemic.
- There were 1,867 male deaths in 2021 compared with 2,103 in 2020 and an average of 2107 deaths per year over the period 2012-2019.
- There were 401 female deaths in 2021 compared with 467 in 2020 and an average of 416 deaths per year over the period 2012-2019. Predictions for females suggest that there will continue to be 400-500 deaths per year during the 2020s.
- Figures for 2020 and 2021 may have been affected by the coronavirus pandemic. This could include direct effects (individuals with mesothelioma dying earlier than otherwise due to also developing COVID-19), indirect effects on health services and effects on systems for recording and certifying deaths.
- Around two thirds of annual deaths for both males and females now occur in those aged over 75 years. Annual deaths in this age group continue to increase while deaths below age 65 are decreasing.
- There were 1,920 new cases of mesothelioma assessed for Industrial Injuries Disablement Benefit (IIDB) in 2021 of which 325 were female. This compares with 1,910 new cases in 2020, of which 280 were female.
- Men who worked in the building industry when asbestos was used extensively in the past continue to be most at risk of mesothelioma.

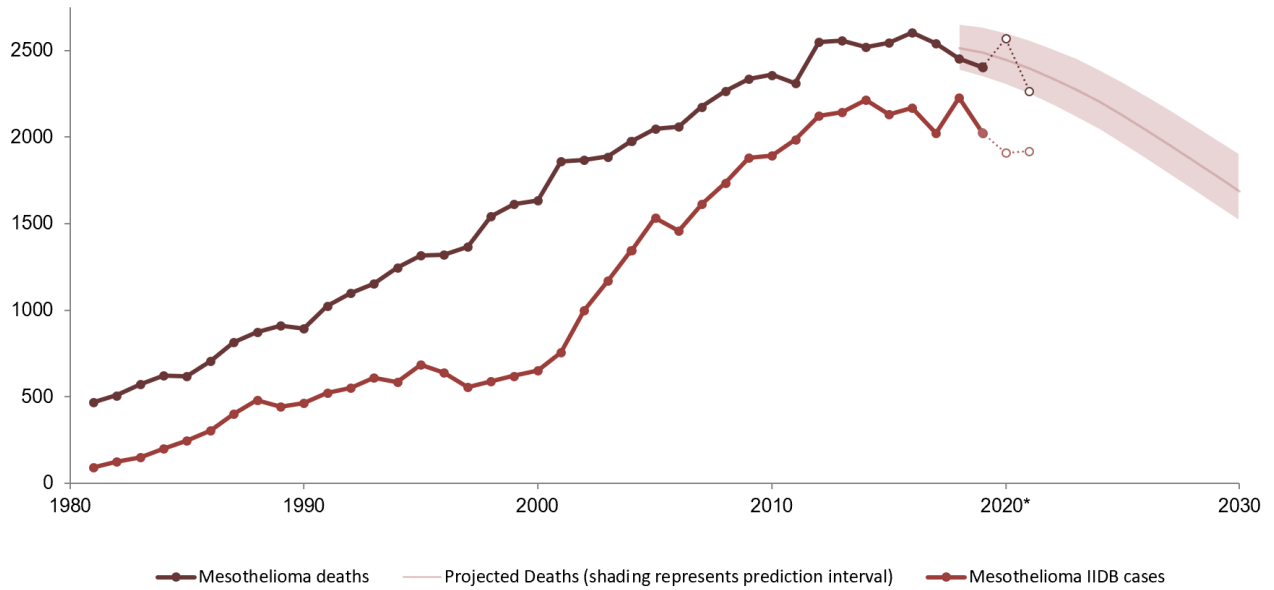


Figure 1 – Mesothelioma annual deaths, IIDB cases and projected future deaths to 2030 in GB

** Note. Figures for deaths occurring in 2020 and 2021 (shown as white circles) may have been affected by the coronavirus pandemic. Assessments of new IIDB cases were substantially reduced in 2020 and may also have been affected during 2021, though this less likely for mesothelioma due to its prioritisation for assessment.*

Introduction

Malignant Mesothelioma is a form of cancer that in most cases affects the pleura (the external lining of the lung) and less frequently the peritoneum (the lining of the lower digestive tract). Many cases are diagnosed at an advanced stage as symptoms are typically non-specific and appear late in the development of the disease. It is almost always fatal, and often within twelve months of symptom onset.

Mesothelioma has a strong association with exposure to asbestos and current evidence suggests that around 85% of all male mesotheliomas are attributable to asbestos exposures that occurred in occupational settings. Most of the remainder of male deaths and a majority of female deaths are likely to have been caused by asbestos exposures but which were not due to the direct handling of asbestos materials. The long latency period (i.e. the time between initial exposure to asbestos and the manifestation of the disease) of typically at least 30 years means that most mesothelioma deaths occurring today are a result of past exposures that occurred because of the widespread industrial use of asbestos during 1950-1980.

Overall scale of disease including trends

Figure 2 shows annual numbers of male and female deaths from mesothelioma in Great Britain from 1968 to 2021. The substantially higher numbers of deaths among men reflects the fact that past asbestos exposures tended to occur in male dominated occupations.

After increasing substantially over a number of decades, annual mesothelioma deaths in Great Britain have remained broadly level since 2012 at around 2,500 death per year – around 10 times the annual number in the early 1970s.

There were 2,268 mesothelioma deaths in Great Britain in 2021, a fall of 302 compared with the 2,570 deaths in 2020, and substantially lower than the average of 2520 deaths per year over period 2012 to 2019. The substantial reduction in deaths in 2021 remains consistent with earlier projections that annual deaths would fall gradually on average during the 2020s. Actual figures for individual years may continue to fluctuate, and figures for 2020 and 2021 may have done so more than usual due to various factors associated with the coronavirus pandemic.

In 2021, there were 1,867 male deaths compared to 2,103 in 2020 and the average of 2107 deaths per year for 2012-2019. Predictions for males suggest that annual numbers will gradually reduce on average during the 2020s.

There were 401 female deaths in 2021 compared to 467 in 2020 and the average of 416 deaths per year over 2012-2019. Predictions for females suggest that there will continue to be 400-500 deaths per year during the 2020s.

The statistics for mesothelioma deaths in 2020 have been revised to include 26 deaths registered after March 2022 (18 male and 8 female deaths).

The potential effects of the coronavirus pandemic on these statistics include direct effects (individuals with mesothelioma dying earlier than otherwise due to also developing COVID-19), and indirect effects on health services and effects on systems for recording and certifying deaths.

- In 2020, 66 of the 2,103 male deaths and 17 of the 467 female deaths mentioned COVID-19 on the death certificate as well as mesothelioma.
- In 2021, 68 of the 1,867 male deaths and 4 of the 401 female deaths mentioned COVID-19 on the death certificate as well as mesothelioma.
- Pressures on the death certification system could have resulted in a small number of 2021 deaths being registered after March 2023, and therefore not being included in these statistics at this stage. However, the effect of any such late registrations is likely to be small in the context of the overall numbers of deaths: figures for 2020 have been revised upwards by 26, whereas in recent years prior to the coronavirus pandemic, such revisions have typically been less than ten.

Further information about the potential impact of the coronavirus pandemic on these statistics is given in Annex 1.

See Table MESO01 www.hse.gov.uk/statistics/tables/meso01.xlsx.

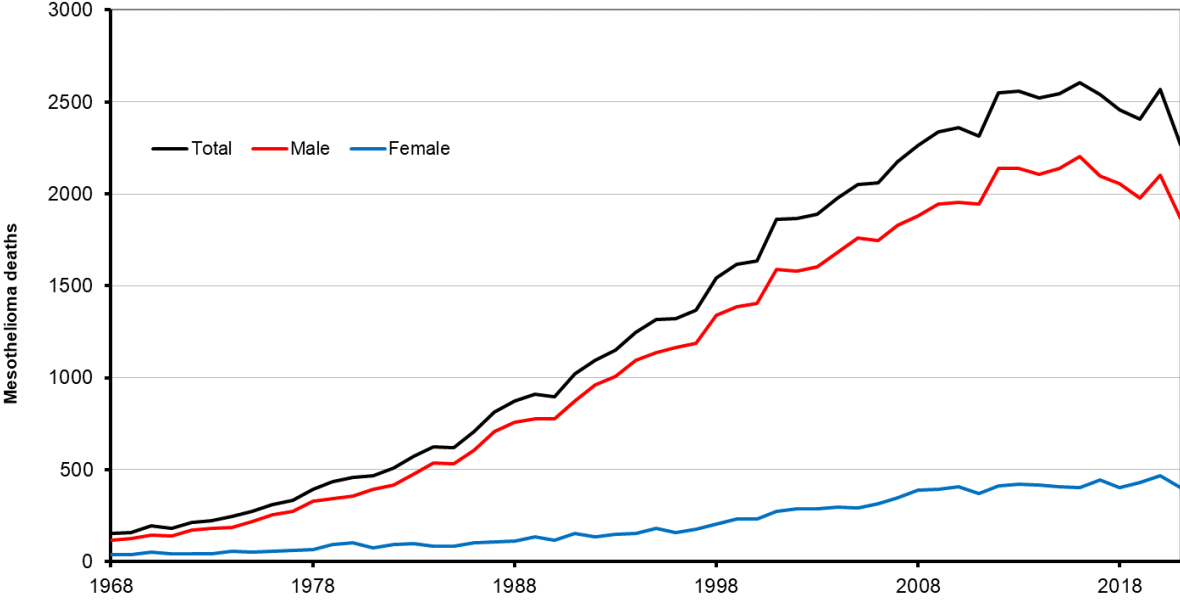


Figure 2 – Male and female mesothelioma deaths 1968-2021

Figures for 2021 are provisional.

Mesothelioma mortality by age

Table MESO02 www.hse.gov.uk/statistics/tables/meso02.xlsx shows the number of mesothelioma deaths in each year in 5-year age groups for males.

Table MESO03 www.hse.gov.uk/statistics/tables/meso03.xlsx shows the equivalent information for females.

Table MESO04 www.hse.gov.uk/statistics/tables/meso04.xlsx shows the number of mesothelioma deaths and death rates by age, sex and three-year time period from 1968-2021.

Age-specific death rates for males are shown in Figure 3(a). The pattern of these rates is a reflection of both disease latency and the timing of past asbestos exposure. Overall, rates are much higher in older age because the disease takes many years to develop following exposure. Current high death rates among males at ages 70 years and above also reflect the fact that this generation of men had the greatest potential for asbestos exposures in younger working life during the period of peak asbestos use in the 1950s, 1960s and 1970s. Mesothelioma death rates below age 65 have now been falling for some time. The most recent deaths in this younger age group are among the generation who started working life during the 1970s or later when asbestos exposures were starting to be much more tightly controlled.

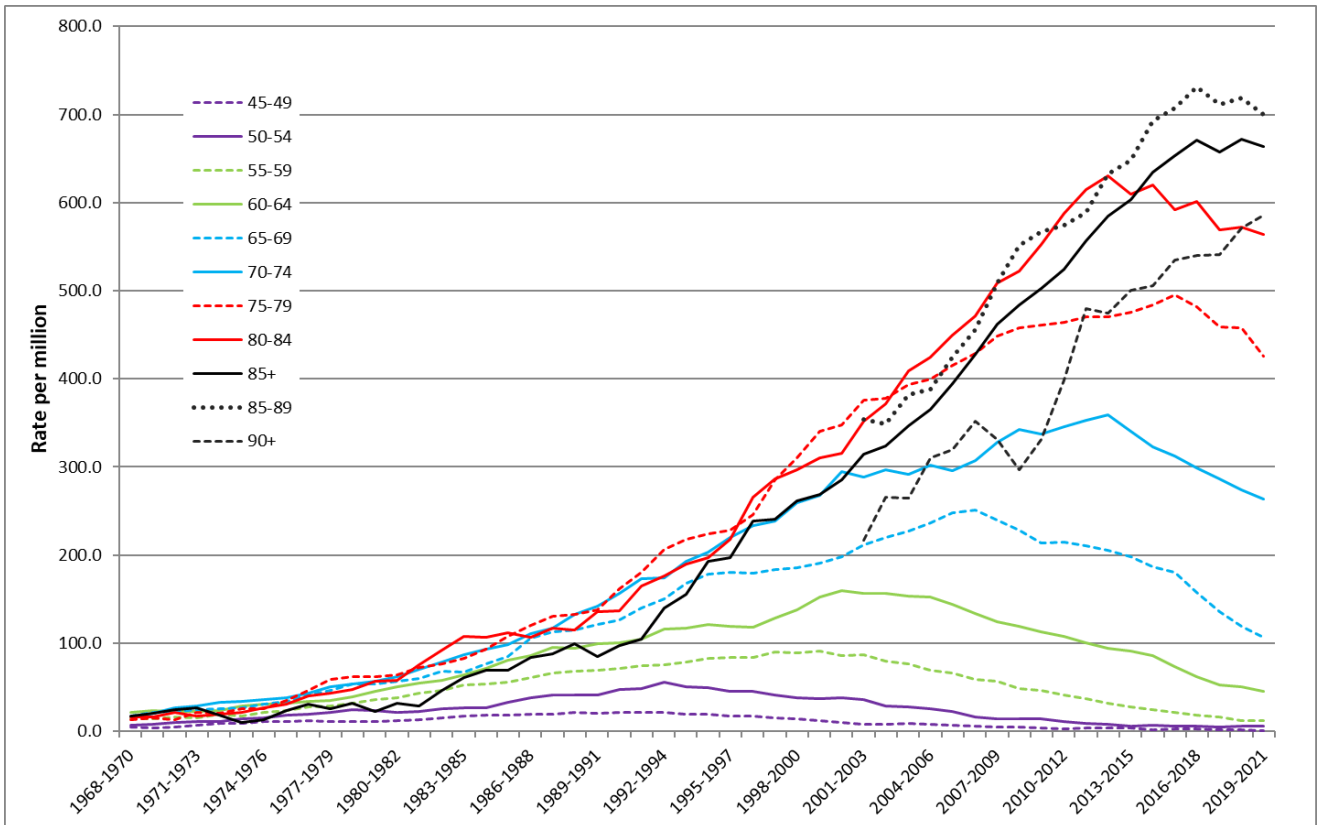


Figure 3(a) – Male mesothelioma death rates by age and time period 1968-2021(p)

Figures for 2021 are provisional.

Age-specific death rates for females are shown in Figure 3(b). Although the age-specific rates for females are generally an order of magnitude lower than for males, similar patterns are evident, though with greater year-on-year fluctuations due to the smaller numbers of deaths.

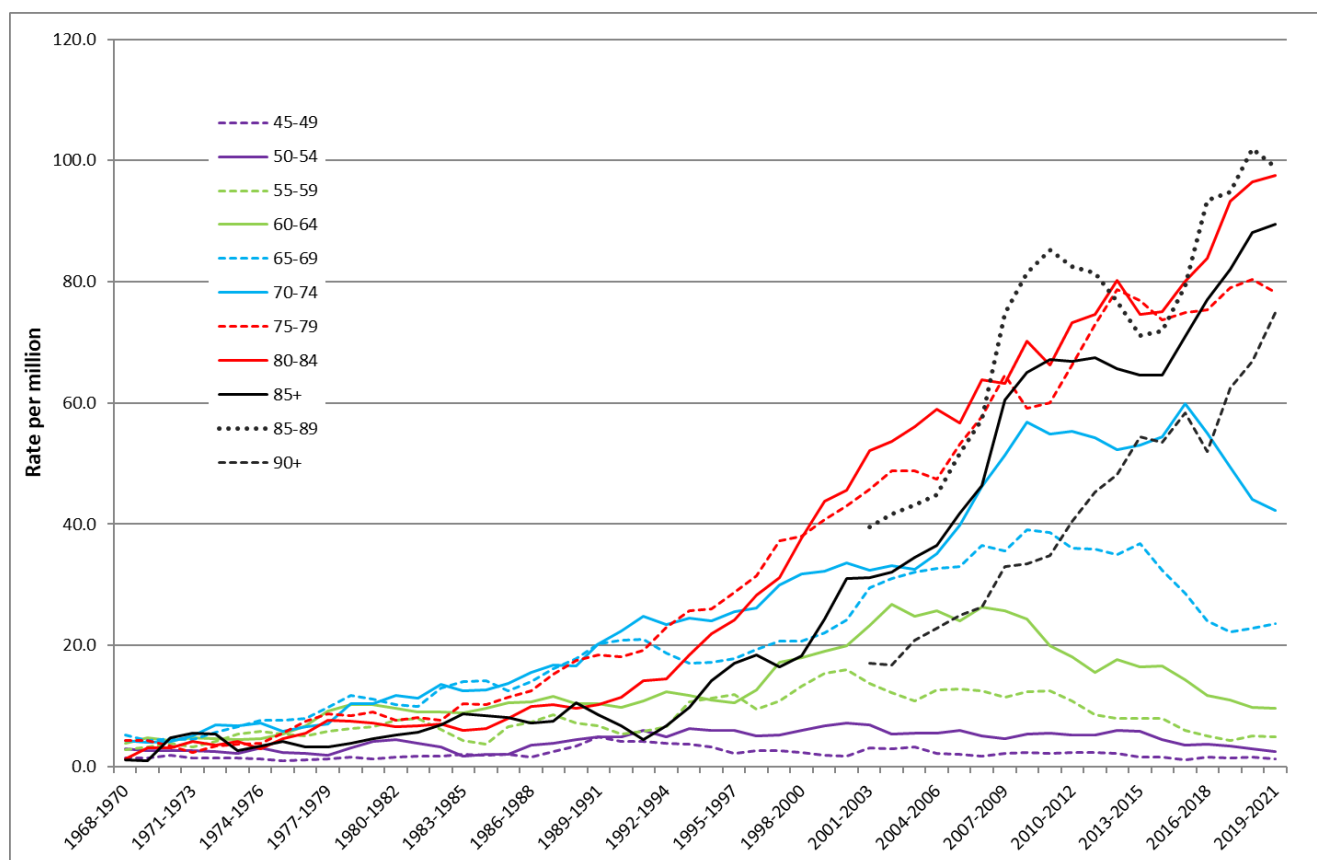


Figure 3(b) – Female mesothelioma death rates by age and time period 1968-2021(p)

Figures for 2021 are provisional.

Industrial Injuries Disablement Benefit (IIDB) cases

Mesothelioma is a prescribed disease within the Industrial Injuries Disablement Benefit (IIDB) scheme which provides no-fault state compensation to employed earners for occupational diseases.

Although the coronavirus pandemic led to a substantial reduction in the number of assessments carried out in 2020 and 2021 for many prescribed diseases, figures for mesothelioma (PD D3) and asbestos-related lung cancer (PDs D8 and D8A) are less likely to have been affected due to these being prioritised within the scheme and automatically assessed at 100% disablement given the severity and poor prognosis of these conditions.

Annual new cases of mesothelioma assessed for IIDB have increased over the last few decades with over 2000 cases per year currently compared with less than 500 per year during the 1980s (Figure 1). There were 1,920 cases in 2021 of which 325 were female, compared with 1,910 in 2020, of which 280 were female.

Annual IIDB cases are lower than annual deaths since not everyone with mesothelioma is eligible and those that are may not claim – for example, due to a lack of awareness of the scheme. Annual IIDB cases increased somewhat more rapidly than deaths during the period 2000-2015 and this may be due to efforts by the Department of Work and Pensions to increase the awareness of the scheme and to fast-track the assessment of cases of disease such as mesothelioma which have a poor prognosis.

Mortality by region

Table MESO05 www.hse.gov.uk/statistics/tables/meso05.xlsx shows age standardised mesothelioma death rates per million by 3-year time-period, government office region and sex.

In Great Britain mesothelioma death rates for both males and females follow an upward trend over time with a levelling-off over recent years. Male and female rates reached 61.8 and 13.1 deaths per million respectively in 2019-2021 compared with 26.6 and 3.5 per million in 1984-1986.

For males, upward trends in death rates for all regions were evident over the long-term until around year 2010. Rates have fallen slightly in more recent years in most regions. Male rates in Wales are now quite similar to those in Scotland, with higher rates in England as a whole.

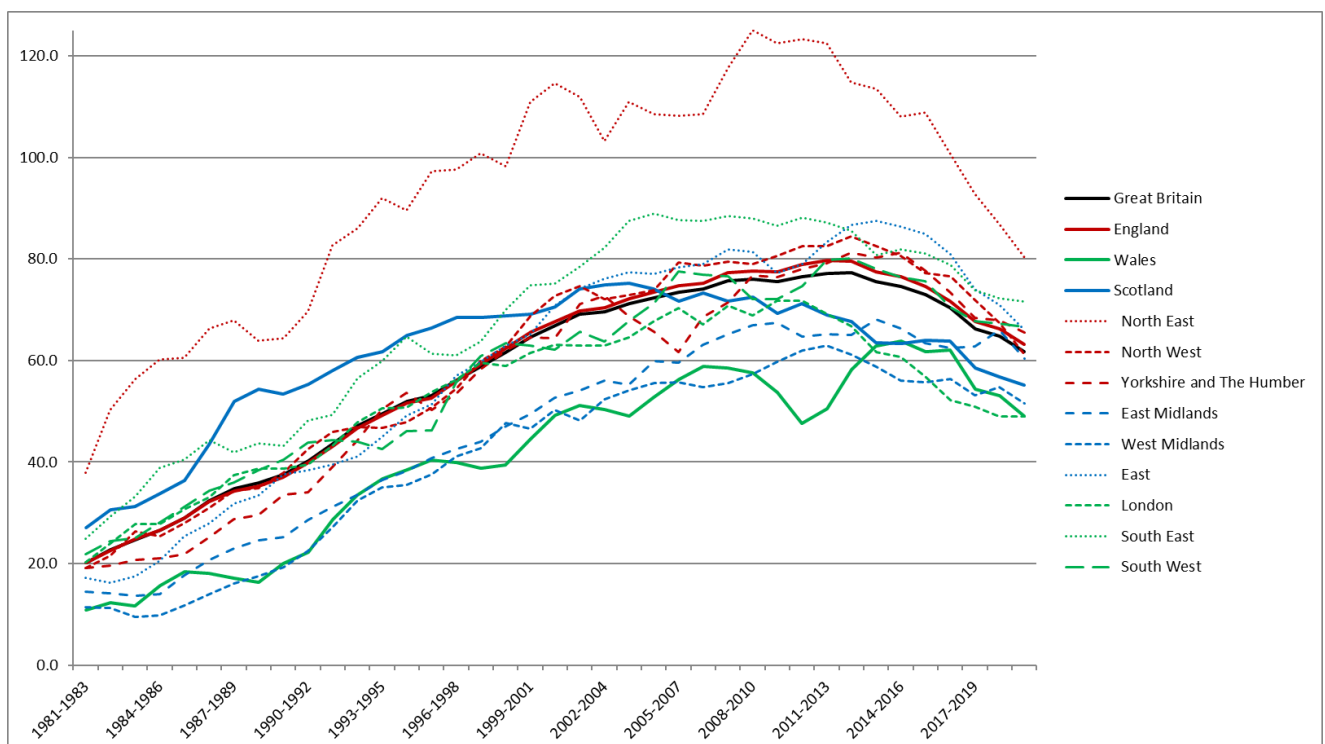


Figure 4 – Male mesothelioma death rates per million by region 1968-2021(p)

Figures for 2021 are provisional.

Rates are standardised according to the age-structure of the Great Britain population in 2019-2021 in order to allow comparison over time and by region.

Although the numbers of cases are much smaller for females – and so the pattern in the rates over time is more erratic – an upward trend is fairly clear in all regions, see Table MESO05 www.hse.gov.uk/statistics/tables/meso05.xlsx.

More detailed analyses of mesothelioma deaths in Great Britain by geographical area can be found under the heading Fact sheets on mesothelioma below.

Mortality by occupation

Mesothelioma death statistics for males and females and comparisons of mortality rates for different occupational groups in 2011-2021 and 2001-2010 are available in a separate document: Mesothelioma Occupation Statistics – male and female deaths aged 16-74 in Great Britain (see below).

This analysis – based on Proportional Mortality Ratios (PMRs) – shows that certain occupations are recorded much more frequently than expected on death certificates of men now dying from mesothelioma. These include jobs particularly associated with the construction industry such as carpenters, plumbers and electricians. Other occupations (notably metal plate workers) which were often associated with the shipbuilding industry are still recorded more frequently than expected even though it is now many years since these exposures took place.

An epidemiological study of mesothelioma in Great Britain [note 1] confirmed the high burden of disease among former building workers. That study suggested that about 46% of the mesotheliomas among men born in the 1940s would be attributed to such exposures, with 17% attributed to carpentry work alone. A key factor in causing the higher risks now seen in these former workers appears to be the extensive use of insulation board containing brown asbestos (amosite) within buildings for fire protection purposes.

Occupational analyses of female mesothelioma deaths are more difficult to interpret because of the lower proportion caused directly by occupational exposures (i.e. exposures relating to the direct handling of asbestos at work). Occupations are recorded on death certificates as a matter of course (for deaths below age 75), and so inevitably there are various occupations that are recorded in appreciable numbers on female mesothelioma death certificates. Not all of these deaths are necessarily attributable to past asbestos exposures during the course of work in those occupations. Deaths occurring in the latest

period (2011-21) still predominantly relate to the cohort of people who were younger during the period of peak asbestos use in the 1960s and 1970s when controls were less stringent than required today, and where opportunities for unwitting exposure are therefore likely to have been relatively common.

The latest occupational analyses of female mesothelioma deaths show that there is some variation in the average risk of mesothelioma among those who worked in jobs not involving the use of asbestos. For example, proportional mortality ratios are somewhat higher for teachers and administrative occupations than those for nurses, sales occupations and process operatives, and this may suggest the potential for asbestos exposure during work time was somewhat higher in these jobs during the period of peak use. However, past exposures in buildings may have contributed to the background risk seen across all of these kinds of jobs to some extent, and other sources of exposure – for example, in housing stock – are also likely to have contributed.

The results of the British mesothelioma case-control study are consistent with the occupational analyses of mesothelioma deaths. The study suggested that only a minority (around a third) of mesotheliomas in women were a result of either occupational or domestic exposures (such as the well documented risk associated with living with an asbestos-exposed worker). This, together with the overall increase in mesothelioma deaths among women, suggests there was an increase in the ‘background’ risk among those who did not directly handle asbestos at work but who lived through the period of peak asbestos use. This background risk – which has since reduced [note 2] – is likely to at least partly account for deaths with occupations not typically associated with asbestos exposure recorded on the death certificate. The background risk will also apply to men of the same generation.

Further details about mesothelioma and occupation are available at:

www.hse.gov.uk/research/rrhtm/rr696.htm

Estimation of the future burden of mesothelioma deaths

Earlier projections (based on deaths up to and including 2017) suggest that total annual numbers of mesothelioma deaths would remain at about 2,500 up to around the year 2020 and then gradually decline on average during the 2020s – see table MESO06

www.hse.gov.uk/statistics/tables/meso06.xlsx.

The projections for the total number of annual deaths are derived from separate analyses of deaths among men and women. While the overall numbers are dominated by the expected pattern in males, these separate predictions suggest that annual deaths among females will not start to decline as soon as in males. However, the female projections are more uncertain due to the smaller number of deaths.

The actual counts of deaths among males for years 2018 to 2021 are consistent statistically with the prediction of a decline in annual deaths on average during the 2020s. Annual female deaths are expected to continue at the current level of 400-500 deaths per year during the 2020s before starting to decline beyond that; the actual figures for females for years 2018 to 2021 are again consistent with this prediction. However, the statistical projection model for both males and females describes the expected future mortality as a smooth curve whereas actual numbers of deaths each year-on-year fluctuate due to random variation.

The statistical model used for these projections provides a reasonable basis for making short to medium term predictions of mesothelioma mortality in Britain, in particular, when the declines in annual deaths were expected to start to be seen [note 3]. However, longer-term predictions comprise additional uncertainty that is not captured within the published uncertainty intervals for the future annual deaths. The long-term projections beyond 2030 are dependent on assumptions about certain model parameters which are not informed by the mortality data itself – and in particular, the extent of population asbestos exposure beyond the 1980s. Other evidence from research into average population lung burdens has confirmed that asbestos exposures continued to reduce during the 1980s and therefore that mesothelioma mortality will continue to reduce after 2030 [note 2]. The research shows reductions in asbestos lung burdens for people born in successive time periods during 1945 to 1965, and these correlate closely with reductions in national mesothelioma rates up to age 50 for those same periods of birth. Importantly, the burdens continued to reduce for even more recent time periods of birth for which mesothelioma data are not yet available. This provides evidence that exposures accrued during the 1980s and 1990s were lower than those accrued in earlier decades.

The methodological basis for the projections are described in detail at:

www.hse.gov.uk/research/rrhtm/rr728.htm

An earlier project to investigate alternative models was published in 2011 and is available at:

www.hse.gov.uk/research/rrhtm/rr876.htm

Other statistics on mesothelioma

- Interactive RShiny dashboard: https://lucydarnton.shinyapps.io/meso_rshiny/
- Mesothelioma Mortality in Great Britain by Geographical area, 1981–2021 www.hse.gov.uk/statistics/causdis/mesothelioma/mesoarea.pdf results are also available as interactive maps available at: <https://arcg.is/1qO0G40>.
- Mesothelioma Occupation Statistics – male and female deaths aged 16-74 in Great Britain 2011-2021 and 2001-2010 www.hse.gov.uk/statistics/causdis/mesothelioma/mesothelioma-mortality-by-occupation.pdf
- Excel tables – male and female – 2011-2021 and 2001-2011 www.hse.gov.uk/statistics/tables/mesooccupation.xlsx.
- Mesothelioma occupation statistics for males and females aged 16-74 in Great Britain, 1980-2000 www.hse.gov.uk/statistics/pdf/occ8000.pdf

References

1. Rake C, Gilham C, Hatch J, et al. Occupational, domestic and environmental mesothelioma risks in the British population: a case control study. *British Journal of Cancer* 2009;100(7):1175-83.
2. Gilham C, Rake C, Hodgson J at al. Past and current asbestos exposure and future mesothelioma risks in Britain: The Inhaled Particles Study (TIPS). *International Journal of Epidemiology* 2018;47(6):1745-1756.
3. Hodgson J, McElvenny D, Darnton A. The expected burden of mesothelioma mortality in Great Britain from 2002 to 2050. *Br J Cancer* 2005;92(3):587-93.

Annex 1 – Impact of the coronavirus pandemic

Assessment of the impact of the coronavirus pandemic on deaths registered during 2020-2023

Statistics for mesothelioma deaths occurring in years 2020 and 2021 may have been affected by the coronavirus pandemic for various reasons. These include direct effects (individuals with mesothelioma dying earlier than otherwise due to also developing COVID-19), and indirect effects due to factors affecting health services, and effects on systems for recording and certifying deaths. Pressures on the death certification system may have delayed the registration of some deaths until after the cut-off for inclusion in the initial release of the statistics, or might have led to some mesothelioma deaths being missed (for example, deaths from COVID-19 in those who were developing mesothelioma but not formally diagnosed). Statistics for 2019 could have also been affected by any impact on late registrations of deaths during 2020 caused by the pandemic, although this affect is likely to be minor.

Deaths occurring in 2020 and 2021 where death certificates mentioned both mesothelioma and COVID-19

Figure A1.1 shows the number of mesothelioma deaths occurring 2020 and 2021 by each month of the year (brown and blues lines) compared with the average annual deaths occurring in each month for deaths in the period 2015-19 (red line repeated for both years). Adjusted figures for 2020 and 2021 are also shown (hashed lines) based on the monthly pattern seen in 2015-19 to allow assessment of any evidence of excess deaths in 2020 and 2021 during months corresponding to the known waves of the pandemic (i.e. particularly April-June 2020 and October-March of 2021). This crude comparison does not strongly suggest any excess of deaths in certain months of 2020 or 2021 that could be attributed to COVID-19.

The chart also shows the 72 deaths in 2021 and 83 in 2020 where the death certificate mentioned both mesothelioma and COVID-19 (black bars). The months in which these deaths occurred coincide with the timing of known waves of the pandemic. It is possible that some of these deaths may have occurred in later months had the pandemic not occurred, thus affecting the overall counts for deaths occurring in 2020 and 2021 to some extent.

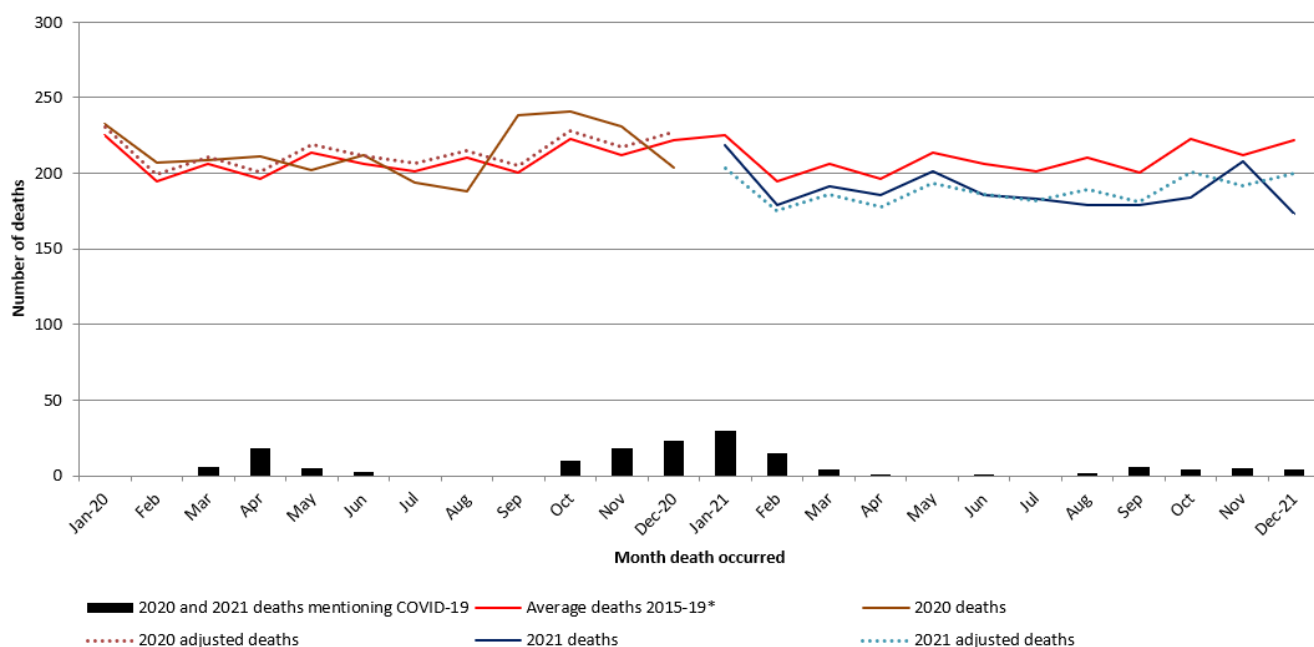


Figure A1.1: Mesothelioma deaths occurring in 2020 and 2021 compared with the average for 2015-19 by month of occurrence

*Figures normalised so the total across the 12 months equates to the total for 2020

Comparison of timing in death registrations for deaths occurring pre- and post-pandemic

Table A1.1 shows a breakdown of deaths occurring in the 5-year period 2014-2018 and deaths occurring in 2019, 2020 and 2021 by month the death was registered. A small number of deaths occurring in 2019 and a majority of those occurring in 2020 and 2021 were registered during the pandemic when there could have been unusual pressures on the death certification system.

Based on data for deaths occurring during the five-year period 2014-18, around 76% of mesothelioma deaths were registered by the end of December of the year in which the death occurred, with 24% registered the following year, and 0.3% registered in the first three months of the year after that (up to the end of March, 15 months after the end of the year in which the death occurred). Very few deaths are usually registered after this point, which is the cut-off for inclusion in the statistics when they are first released.

An analysis of late registrations for mesothelioma deaths occurring in 2019 shows that fewer than expected were registered during April to June 2020, the period coinciding with

the first wave of the coronavirus pandemic. However, in subsequent months more deaths were registered than expected so that by March 2021 (the cut-off for deaths to be included when the 2019 figures were first published in July 2021) the cumulative number of late registrations was similar to the number expected based on 2014-18 figures. These observations led to the judgement that a disproportionate increase in the number of late registrations beyond March 2021 was not likely to have a large impact on the provisional figure for 2019 published in 2021.

Table A1.1 shows that by March 2022 there have been an additional 37 deaths in 2019 registered after March 2021, compared with less than 10 on average based on 2014-18 data, but still relatively small in absolute terms from a statistical perspective.

At the time of publication of the 2020 data (July 2022), there was no obvious suggestion that for deaths occurring in 2020, fewer were registered in the months corresponding to waves of the pandemic (as was the case for deaths occurring in 2019 registered during the first wave of the pandemic). The proportion of deaths occurring in 2020 that were registered in the same year (75.0%) and the year after (23.6%) were very similar to the equivalent figures for years 2014-2018. This provided some reassurance that there was unlikely to be a disproportionate number of deaths occurring in 2020 that were not registered by March 2022 due to the effects of the pandemic. A further 26 mesothelioma deaths that occurred in 2020 have since been registered (by March 2023). While this is again somewhat higher than the usual number of very late registrations, in the context of the overall number of annual deaths it is a relatively small number and tends to confirm the initial assessment that the pandemic did not have a substantial effect on late registrations.

Figures for 2021 are also shown in Table A1.1. In this case a slightly lower proportion were registered in the year in which the death occurred compared with before the pandemic (70% in 2021 vs 75.6% for 2014-2018). The number of registrations in the first three months of 2023 was also more than three times the average for 2014-18 (28 vs 7.8). This suggests there could again be a higher number of late registrations identified by March 2024 than usual. However, in absolute terms these numbers remain low and the overall impact on the figure for deaths occurring in 2021 is likely to be low.

Table A1.1 Deaths occurring in 2014-18, 2019, 2020 and 2021 by month of registration

Deaths registered during:	Year death occurred					Average 2014-2018	2019	2020	2021
	2014	2015	2016	2017	2018				
Year death occurred									
January	44	47	42	60	56	49.8	36	56	42
February	85	78	98	91	72	84.8	64	87	74
March	116	121	133	135	108	122.6	94	105	119
April	141	145	137	128	120	134.2	143	162	132
May	149	172	168	167	146	160.4	130	152	131
June	140	187	156	198	158	167.8	167	167	141
July	205	212	200	164	207	197.6	186	182	173
August	195	167	196	204	190	190.4	205	173	141
September	191	175	215	197	155	186.6	195	188	133
October	210	232	217	211	234	220.8	197	227	165
November	215	231	216	199	206	213.4	188	217	167
December	217	188	196	172	162	187.0	163	211	170
Total	1908	1955	1974	1926	1814	1915.4	1768	1927	1588
<i>Percentage of all deaths</i>	75.7	76.8	75.7	75.8	73.9	75.6	73.5	75.0	70.0
Year of death + 1									
January	155	143	126	153	151	145.6	150	119	134
February	132	117	135	132	124	128.0	126	115	105
March	96	128	106	71	95	99.2	98	119	115
April	66	82	79	96	71	78.8	44	66	69
May	39	42	62	39	58	48.0	40	56	59
June	36	26	45	36	50	38.6	23	37	41
July	20	16	25	28	25	22.8	28	32	38
August	21	9	9	15	25	15.8	19	20	24
September	9	7	10	11	7	8.8	21	14	25
October	11	4	9	10	5	7.8	14	13	19
November	4	5	4	5	5	4.6	17	12	14
December	3	4	3	2	9	4.2	6	4	9
Total	592	583	613	598	625	602.2	586	607	652
<i>Percentage of all deaths</i>	23.5	22.9	23.5	23.5	25.5	23.8	24.4	23.6	28.7
Year of death + 2									
January	5	3	4		3	3.8	5		6
February	4		2	3		3.0	5	5	11
March	6	1	2	2	6	3.4	5	5	11
April		1	2	1		1.3	5	2	
May		1	2	4		2.3	6	1	
June	2	1	3	3		2.3	7	5	
July	1	2	1	1	2	1.4	4	1	
August	1		2	1	1	1.3	3	2	
September							1	3	
October					1	1.0	7	5	
November								3	
December				1		1.0		1	
Total	19	9	18	16	13	15.0	48	33	28
<i>Percentage of all deaths</i>	0.8	0.4	0.7	0.6	0.5	0.6	2.0	1.3	1.2
Later than Year of death + 2									
Total	3	0	1	1	2	1.4	4	3	0
Grand Total	2522	2547	2606	2541	2455	2534.2	2406	2570	2268

Annex 2 – Cancer registrations

Mesothelioma deaths and cancer registrations in England, Wales and Scotland

Figures A2.1 and A2.2 compare mesothelioma mortality with cancer registrations for mesothelioma for the period from 2001 to 2019 for Wales, 2001 to 2020 for England and 2001 to 2021 for Scotland.

During the period 2001 to 2019, there were 38,275 male and 7,789 female registrations in GB where the cancer site was recorded as mesothelioma (C45), compared with 36,342 deaths among males and 6,966 among females (excluding a small number of those resident outside Great Britain).

Annual cancer registrations are typically slightly higher than the number of mesothelioma deaths occurring in each year. A number of factors potentially account for the differences between the two series, including: variation in the time between date of cancer registration and death with some individuals with mesothelioma surviving for substantially longer than is typically the case, misdiagnosis of mesothelioma, and mesothelioma not being mentioned on some deaths certificates where it should have been. However, the close association between the two series suggests that these effects are relatively small, and that mesothelioma continues to be rapidly fatal in most cases.

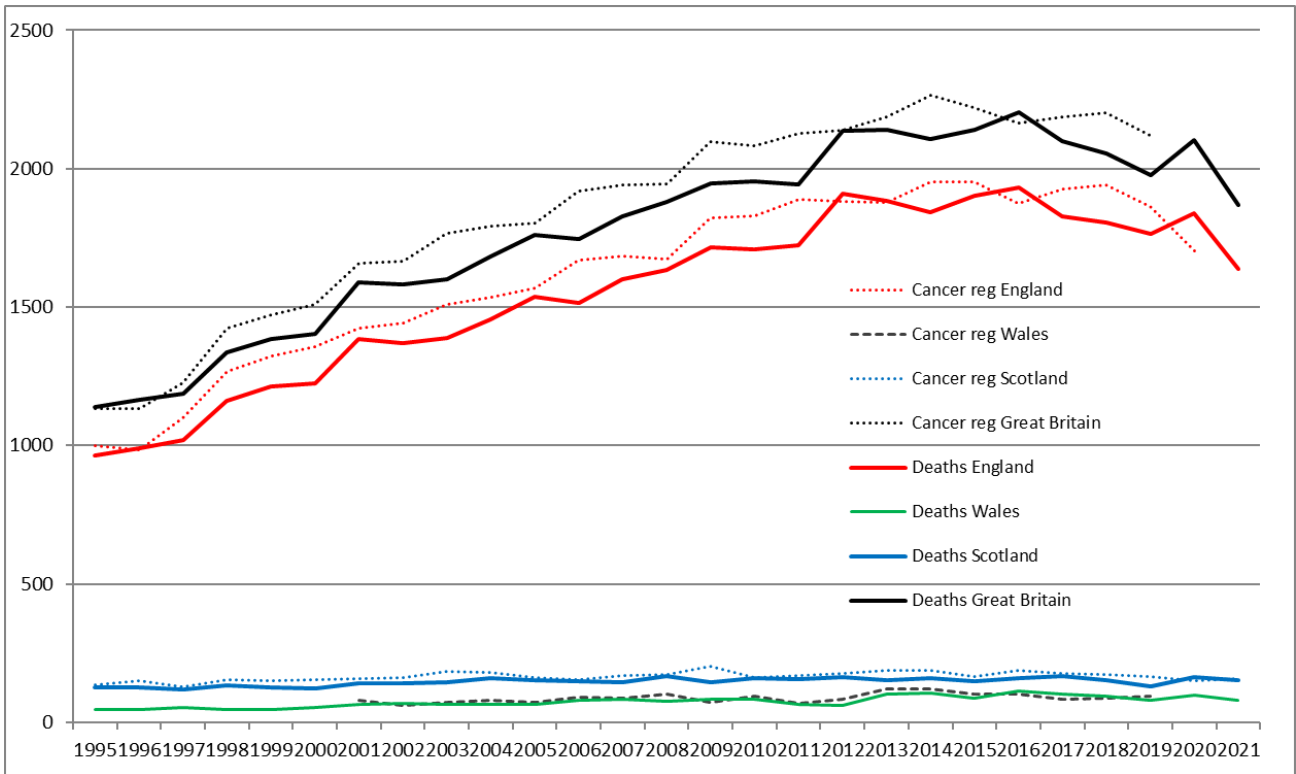


Figure A2.1 – Male mesothelioma cancer registrations and deaths for the time period 2001-2021

Sources: Public Health England, Public Health Wales, and Public Health Scotland (cancer registrations) and HSE Mesothelioma Register (deaths).

Note: cancer registration statistics for Wales in 2020 are not yet available; the GB cancer registrations total for 2020 and 2021 are omitted.

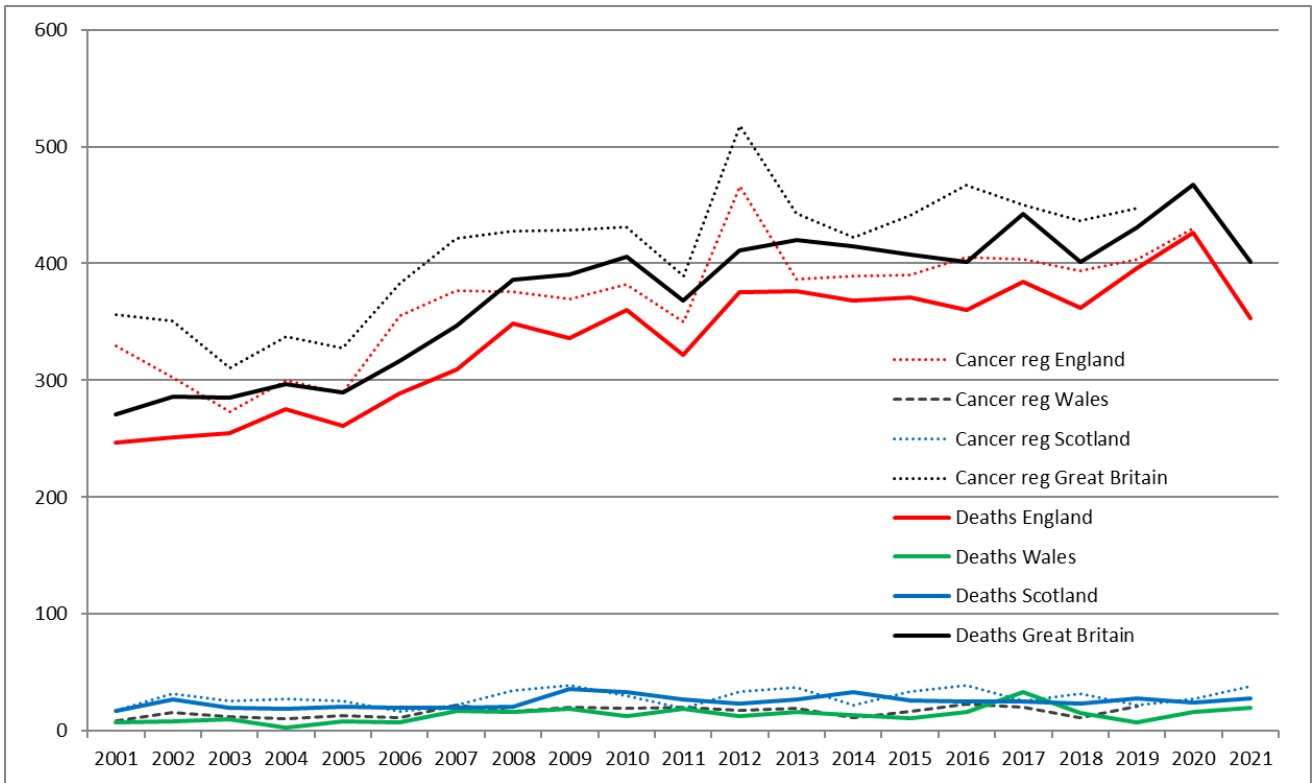


Figure A2.2 – Female mesothelioma cancer registrations and deaths for the time period 2001-2021

Sources: NHS Digital (<https://digital.nhs.uk/data-and-information/publications/statistical/cancer-registration-statistics/england-2020> and [Cancer registrations statistics, England - NHS Digital](#)), Public Health Wales, and Public Health Scotland (cancer registrations [Cancer incidence in Scotland - to December 2021 - Cancer incidence in Scotland - Publications - Public Health Scotland](#)) and HSE Mesothelioma Register (deaths).

National Statistics

National Statistics status means that statistics meet the highest standards of trustworthiness, quality and public value. They are produced in compliance with the Code of Practice for Statistics, and awarded National Statistics status following assessment and compliance checks by the Office for Statistics Regulation (OSR). The last compliance check of these statistics was in 2013.

It is the Health and Safety Executive's responsibility to maintain compliance with the standards expected by National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the OSR promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

Details of OSR reviews undertaken on these statistics, quality improvements, and other information noting revisions, interpretation, user consultation and use of these statistics is available from www.hse.gov.uk/statistics/about.htm

An account of how the figures are used for statistical purposes can be found at www.hse.gov.uk/statistics/sources.htm.

For information regarding the quality guidelines used for statistics within HSE see www.hse.gov.uk/statistics/about/quality-guidelines.htm

A revisions policy and log can be seen at www.hse.gov.uk/statistics/about/revisions/

Additional data tables can be found at www.hse.gov.uk/statistics/tables/.

General enquiries: Statistician: Lucy.Darnton@hse.gov.uk

Journalists/media enquiries only: www.hse.gov.uk/contact/contact.htm





Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit [the HSE website](#).

You can order HSE priced publications at [the HSE books website](#).

HSE priced publications are also available from bookshops.

This publication is available on the HSE website www.hse.gov.uk/statistics/causdis

© Crown copyright If you wish to reuse this information visit [the HSE website](#) for details. First published 07/23.

Published by the Health and Safety Executive 07/23.