NHS National Services Scotland

Scottish Routes from Diagnosis: The cohort up close

MACMILLAN CANCER SUPPORT
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Acknowledgements

The analysis presented in this report uses data shared by patients and collected by the NHS as part of their care and support.

Thank you to the Macmillan-ISD Steering Group and to the Scottish Routes from Diagnosis Clinical Advisory Group for clinical and research support and advice in relation to the Scottish Routes from Diagnosis project.

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Background

Scottish Routes from Diagnosis (SRfD) is an on-going project between the Information Services Division (ISD) of NHS National Services Scotland and Macmillan. It investigates survivorship outcomes and experiences for people diagnosed with cancer who are resident in Scotland. The project focusses on the four most common types of cancer found in Scotland (breast, prostate, colorectal and lung) using national datasets from 2007 and 2012. The project has developed survivorship Outcome Groups (OGs), which capture survivorship experiences for four different groups of people. These groupings allow comparisons both within a particular type of cancer and across different types. Reporting patient factors, pathways, and outcomes using these outcome groups allows for investigation into the very different experiences people can have following a cancer diagnosis. They also allow for examination of similar experiences.

For a full explanation of the Outcome Groups and methodology of SRfD, please refer to www.macmillan.org.uk/SRFD . Limitations of this work are presented in Appendix C.

Cohort Characteristics

The survivorship experiences of people diagnosed with cancer are dependent on a variety of factors, including patient characteristics and the point in its development that cancer is diagnosed. The first step in understanding patient pathways and experiences is to understand more about the people in each of this study's cohorts and in each survivorship outcome group. This chapter reports on:

- **Patient characteristics (e.g. age, sex, deprivation quintile)**
- **Cancer factors (severity of the cancer, for example cancer grade or stage)**
- **Cancer treatment**

It uses the SRfD framework and focusses on cohorts of people diagnosed with the four most common cancers in Scotland in 2007 and 2012. It is important to establish as complete a picture as possible of the characteristics of the SRfD populations and to explore them in depth.

Technical notes & assumptions

This analysis utilises Scotland-wide administrative datasets and has PBPP approval[1]. As such, it is limited to the information provided as part of these datasets. Anonymised Scottish Cancer Registry data (SMR06) for all breast, colorectal, lung and prostate cancers diagnosed in Scotland in 2007 and 2012 were linked to secondary care data[2] (SMR01 – general/acute inpatient and day case data; SMR00 – outpatient attendance data) and mortality data (National Records Scotland (NRS), Vital

[1] Public Benefit and Privacy Panel for Health and Social Care, https://www.informationgovernance.scot.nhs.uk/pbpphsc/

[2] SMR Datasets, https://www.ndc.scot.nhs.uk/Data-Dictionary/SMR-Datasets/

Events data), at patient and episode level. For the 2012 data, linkage was also made to Community Prescribing (PIS) and Unscheduled Care data (USC).

The definition of the outcome groups (OGs) was made in consultation with a Clinical Advisory Group (CAG) and with the Director of the Scottish Cancer Registry. These definitions meet the twin requirements of (1) being comparable across and within cancer types, and (2) allowing the identification of distinct groups of survivorship experience with sufficiently large numbers to allow meaningful analysis. However, there are limitations associated with these definitions (discussed previously).

Although one of the aims of the project was to assign people living with cancer to outcome groups that are comparable across cancer types, the different aetiologies of these cancers mean there are varying proportions of the different cancer types in each survivorship group. For example, there are relatively small numbers of people from the lung cancer cohorts in OG1 and relatively few of the prostate cancer cohorts in OG4. Therefore, some caution should be applied when interpreting results for these groups.

Classification measures such as the Scottish Index of Multiple Deprivation[3] (SIMD) and Urban-Rural Index[4] (URI) were assigned using each person's postcode of residence at the time of cancer diagnosis. For the 2012 cohorts SIMD2012 and URI2012 were used; for the 2007 cohorts SIMD2009v2 and URI2008 were used. When reporting SIMD, the areas of Scotland are broken down into population-weighted 'quintiles'. Each quintile makes up approximately 20% of the Scottish population and they are referred to in this analysis as SIMD1-SIMD5, where SIMD1 represents the 20% most deprived (population-weighted) areas of Scotland and SIMD5 represents the 20% least deprived areas of Scotland.

Ethnicity was explored as part of this work; however, for the years studied, the majority of cases were classified as either 'white' or 'not known/refused/not disclosed'. As such, the numbers are too small for detailed analysis and this information is presented by cohort only in Appendix D.

Crude incidence rates are presented in this publication per 100,000 population. These provide an indication of the proportion of people per 100,000 population in a particular area who were diagnosed with a particular cohort cancer, in a particular year. These rates were calculated by dividing the total number of cases in a given time period by the total number of persons in the population; they do not include all people living with cancer. However, it may not always be appropriate to compare crude rates for particular areas due to the different age/sex structures of those areas. For example, if an area has a higher proportion of older persons residing there, then the crude cancer rate would be higher than for an area with a younger population.

Age-sex-standardised rates allow for differences in the age/sex structure of populations and allow valid comparisons to be made between geographical areas and through time. They do this by applying the age-specific rates for the area being studied to a theoretical European standard population, usually expressed per 100,000 persons per year. While both crude and standardised rates are presented in Appendix D, only standardised rates are discussed in the main text. The

[3] SIMD, https://www2.gov.scot/Topics/Statistics/SIMD

[4] Urban Rural Classification, https://www2.gov.scot/Topics/Statistics/About/Methodology/UrbanRuralClassification

standardised rates presented are truncated (age 45 and over) European age-sex-standardised rates for colorectal and lung cancer and truncated European age-standardised rates for breast and prostate cancer; as such they differ from national rates published elsewhere.

Due to the large number of statistical tests carried out and the breakdown of data into the many groups presented in this analysis, it is possible that such multiple testing will produce spurious 'significant' results through chance.

The data presented in this report primarily relate to 2012, unless otherwise specified, although all results are available in Appendix D.

In this report a series of terms and abbreviations have been used, for a full list of these please see Appendix A.

For further detail on the methodologies involved in the Routes from Diagnosis project please see www.macmillan.org.uk/SRFD .

Results

Patient Characteristics

- **Women diagnosed with breast cancer were, on average, younger (63) than people with the other cancer types studied (70 for colorectal, 70 for prostate cancer, 72 for lung cancer).**
- **For the 2012 lung, prostate and colorectal cohorts, average age typically increased incrementally between OG1 and OG4. However, the breast cancer cohort presented a slightly different picture, with the youngest groups being those living with a continued presence of cancer (OG3) as well as those living with similar acute healthcare needs (OG1).**
- **For the 2012 prostate cancer cohort, there were higher rates* of incidence in those residing in the least deprived areas. For the lung and colorectal cancer cohorts there appeared to be higher incidence rates in more deprived communities.**
- **In both 2007 and 2012, lung cancer standardised rates* were higher in urban areas compared to rural areas. There was no clear difference for the other cancers studied.**

***Truncated (age 45 and over) and age standardised rates per 100,000 population**

Age:

The average (mean) age of women diagnosed with **breast** cancer in 2012 was 63.6, making this the youngest cohort studied as part of Scottish Routes from Diagnosis (SRfD) project. The national breast screening programme begins at age 50 and this may be a contributing factor to this result. By outcome group, women living with a likely continued presence of cancer (OG3) had the lowest mean age (61.7) and more than a third of this group were aged 54 or under (n=654, 36%). The oldest group was those with limited survival (OG4) with an average age of 76.8; two thirds of these women were aged 75 or over (n=187, 67%).

The average age of people diagnosed with **colorectal** cancer in 2012 was 70.7. By outcome group, people living with similar acute healthcare needs (OG1) were, on average, the youngest (66.5). Average age then broadly increased with increasing outcome group, with PLWC with limited survival (OG4) being the oldest (76.6).

For **lung** cancer, the average age at diagnosis in 2012 was 72.4, making this the oldest cohort of PLWC studied. Average age increased with outcome group number, with people living with similar acute healthcare needs (OG1) being, on average, 67.6 and people with limited survival (OG4) having an average age of 73.5.

The average age of people diagnosed with **prostate** cancer in 2012 (70.9) was similar to those with colorectal cancer, and this increased with outcome group number, from 66.9 for people living with similar acute healthcare needs (OG1) to 80.3 among people with limited survival (OG4).

Sex

There was a higher proportion of men diagnosed with **colorectal** cancer in 2012 than women (Men: 54%, Women: 46%, $p<0.001$), and this was similar to the proportion of people diagnosed with colorectal cancer in 2007. There was a higher proportion of males present in all outcome groups for colorectal cancer, except among people with limited survival (OG4).

In 2007 slightly more than half of **lung** cancer diagnoses were for men (52%, $p=0.001$), however in 2012, diagnoses were more evenly split between the sexes (50%, $p=0.77$).

Deprivation

Deprivation is measured using the Scottish Index of Multiple Deprivation (SIMD), which ranks small areas (called data zones) from most deprived (ranked 1) to least deprived (ranked 6,976). Here it is presented by population-weighted quintile, where SIMD1 represents the 20% most deprived (population-weighted) data zones in Scotland and SIMD5 the least deprived 20%.

To take account of the differing age/sex structures of the different deprivation quintiles, age-sex-standardised rates are shown in the figures below. Crude rates are shown in Appendix D. For more information on crude and standardised rates, please see the technical notes.

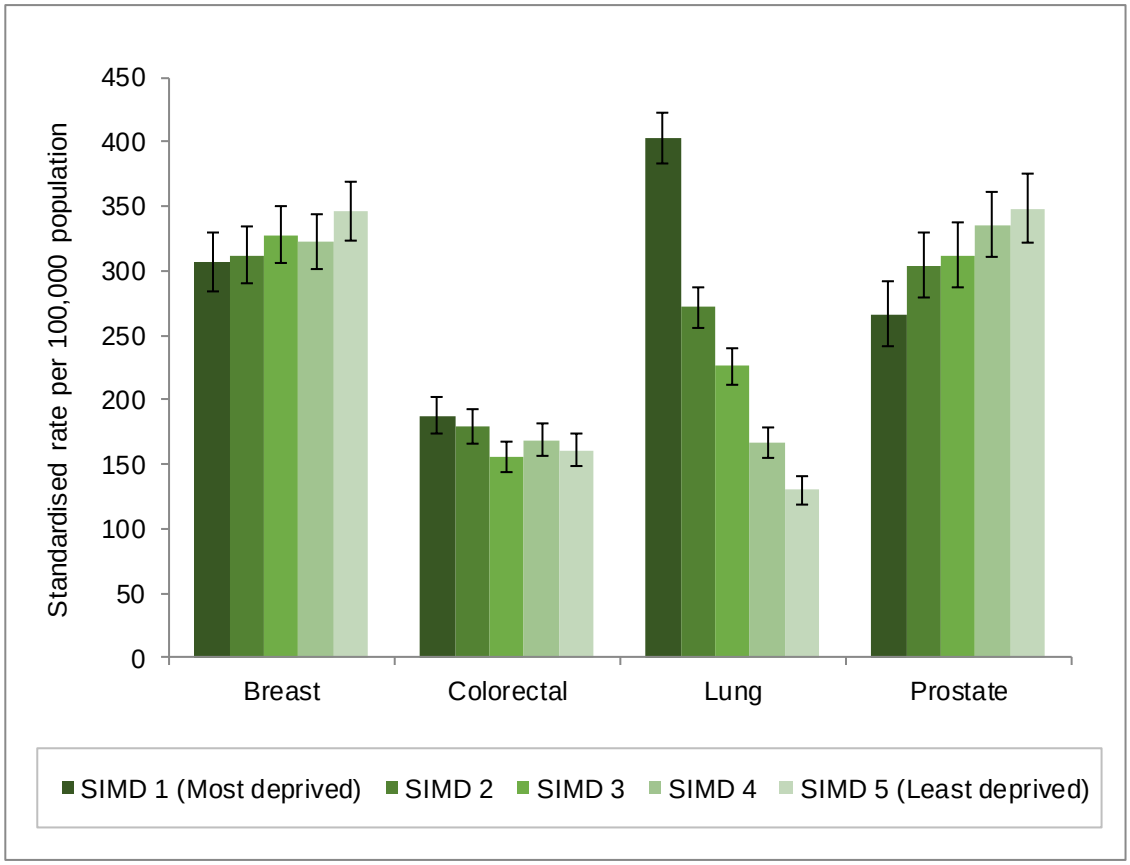

Figure 1.0: Standardised cancer incidence rates by deprivation (age 45 and over): 2012

Across the whole 2012 **breast** cohort, the truncated rates of breast cancer appear to increase as deprivation decreases (Figure 1.0). Rates range from 306 per 100,000 European truncated age standardised rate (EASR) in SIMD1 (most deprived areas), to 346 in SIMD5 (least deprived areas). However, this increase in rates was not found to be statistically significant. This finding corresponds with nationally published trends and other publications that suggest it is related to differences in reproductive history and uptake to screening (and other healthcare seeking behaviours) within different deprivation quintiles (ISD, 2019; Tweed, 2018; NCRAS, 2016).

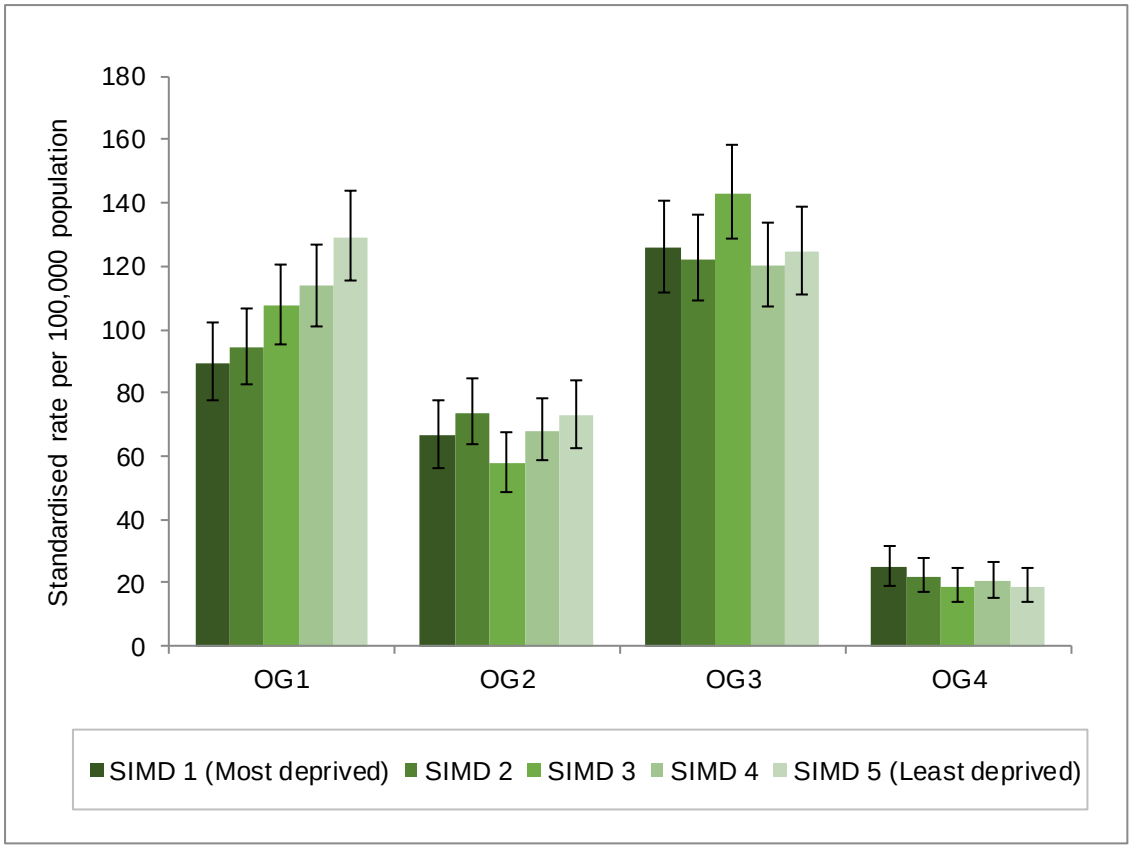

Figure 1.1: Standardised breast cancer incidence rates by deprivation (age 45 and over): 2012

By outcome group, the only statistically significant difference across the deprivation quintiles for breast cancer was for women living with similar acute healthcare needs (OG1); higher rates were observed in the least deprived areas when compared to the most deprived areas (Figure 1.1). This outcome group (OG1) accounts for 32% of the 2012 breast cancer cohort as a whole.

For all people diagnosed with a **colorectal** cancer in 2012, there was no strong evidence of a statistically significant trend in rates by deprivation (Figure 1.0). This differs from nationally published trends which suggest that the incidence of colorectal cancer is significantly higher in the most deprived areas when compared to the least deprived areas (ISD (2019)). This difference in findings may be due to larger numbers being used for the National Statistics publication (5 years combined) which allows for greater sensitivity of testing.

When analysed by outcome group, some indication of deprivation trends appear for colorectal cancer (Figure 1.2). This trend is statistically significant for OG4, where higher rates are observed in the most deprived areas compared to the least deprived areas.

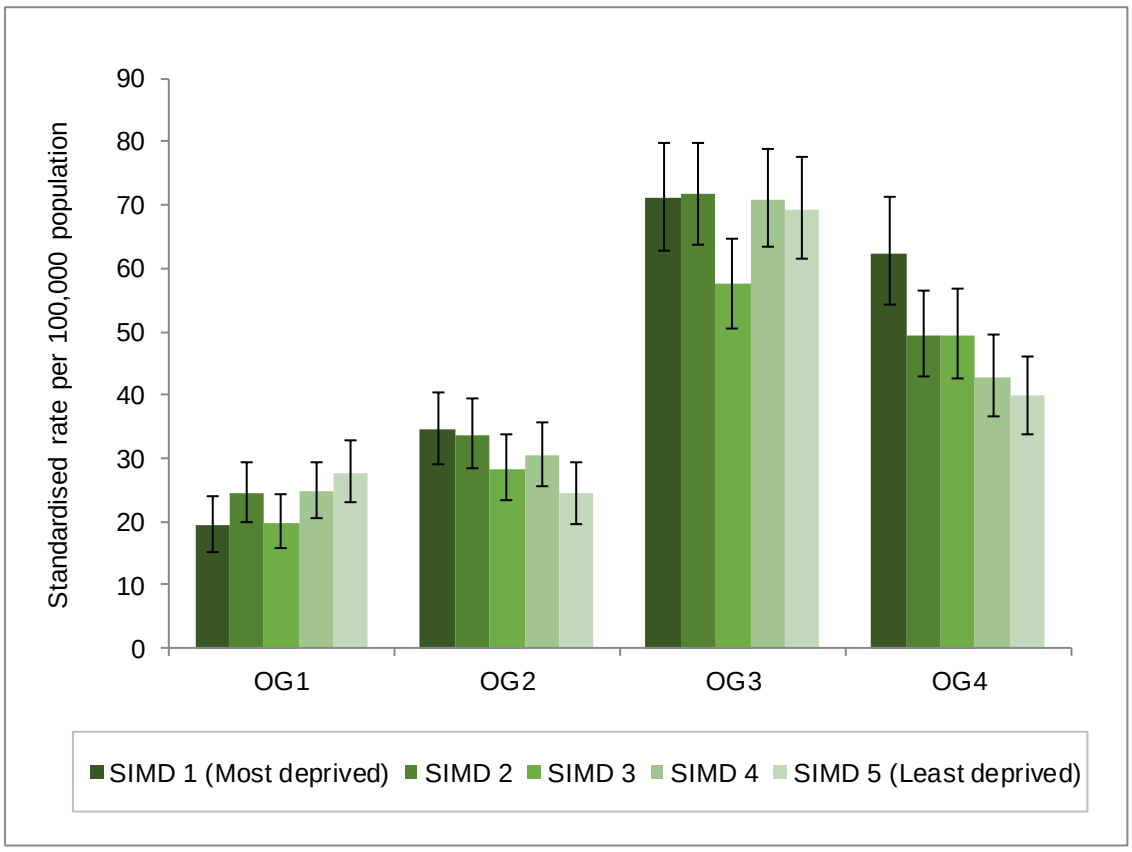

Figure 1.2: Standardised colorectal cancer incidence rates by deprivation (age 45 and over): 2012

There is a clear gradient in the numbers and age standardised rates of **lung** cancer across the deprivation gradient (Figure 1.0). This corresponds to nationally published trends and is likely to be related to socio-economic differences in smoking prevalence (ISD, 2019; Tweed, 2018; NCRAS, 2016). The standardised rate is around three times higher in the most deprived areas compared to the least deprived; this trend is fairly consistent across outcome groups and for the cohort as a whole (Figure 1.3)[5].

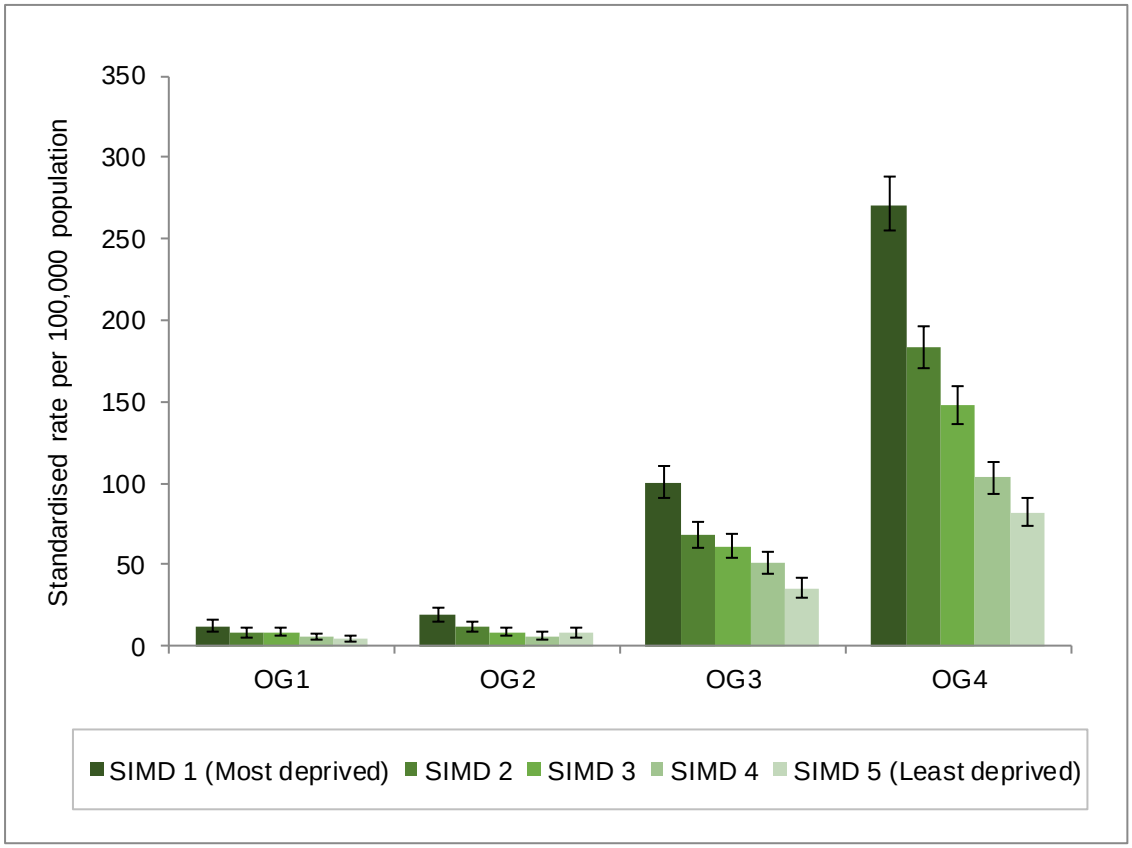

Figure 1.3: Standardised lung cancer incidence rates by deprivation (age 45 and over): 2012

[5] 92% of the 2012 lung cancer cohort were in OG3 or OG4 and therefore caution should be applied when interpreting rates for OG1 and OG2 for this cohort.

The **prostate** cancer cohort show a deprivation gradient in the opposite direction, with the standardised rates of prostate cancer being higher in the least deprived areas compared to the most deprived (1.3 times higher) (Figure 1.0). This corresponds to National Statistics trends for Scotland (ISD, 2019) and is consistent with other publications (Tweed, 2018; NCRAS, 2016). This result may relate to trends in PSA (prostate-specific antigen) testing, despite no national screening programme being in place. The difference between most and least deprived areas is greatest for those living with similar acute healthcare needs (OG1) (Figure 1.4) and this was the only group where the difference appears to be statistically significant.

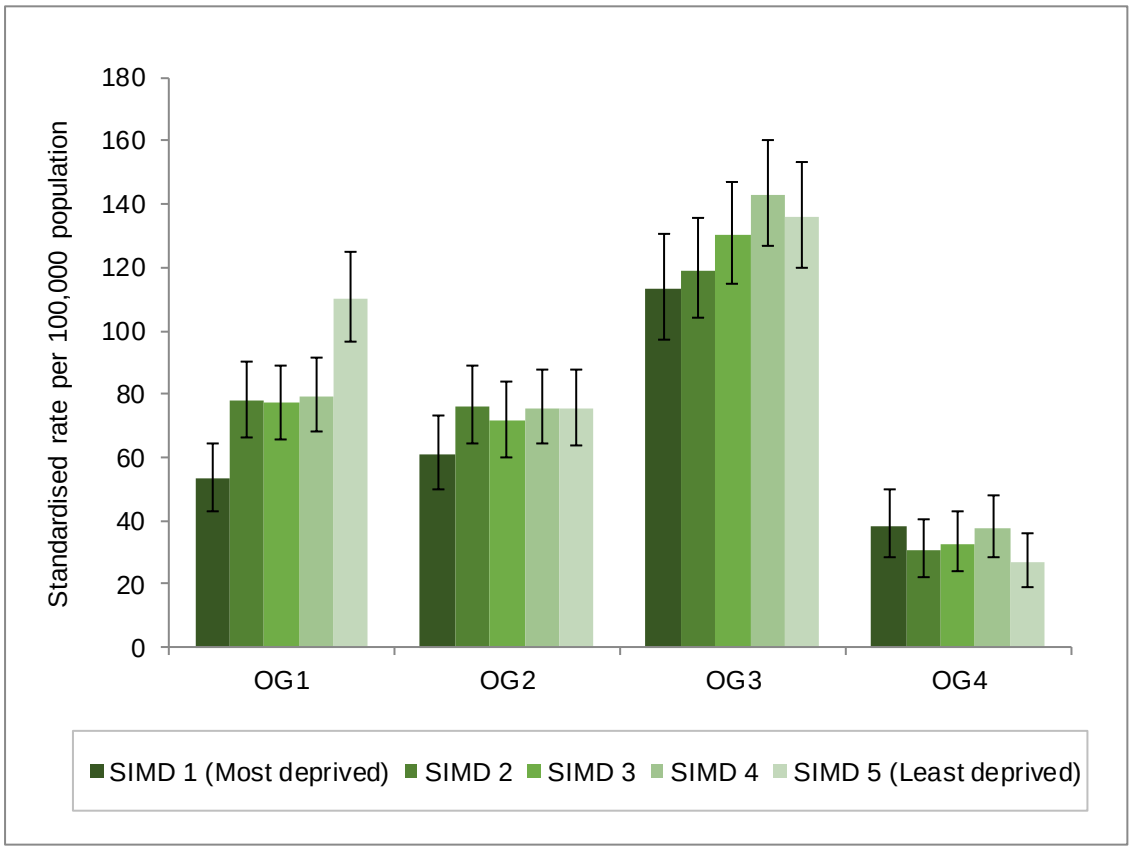

Figure 1.4: Standardised prostate cancer incidence rates by deprivation (age 45 and over): 2012

Further information on deprivation for these cancer types, also produced by this collaboration, can be found here.

Urban Rural Indicator

The Scottish Government Urban Rural Index (URI) Classification provides a standard definition of urban and rural areas in Scotland. More information on the URI can be found in the technical notes and on the Scottish Government website (SG, 2019). The six-fold classification is used in this analysis.

Generally, there are smaller proportions of people aged 16-34 living in rural areas compared to other areas of Scotland. Higher proportions of people aged 45 and over, particularly those aged 65 and over, live in rural areas (SG, 2018). This means standardised rates are particularly important when comparing different types of geographic area.

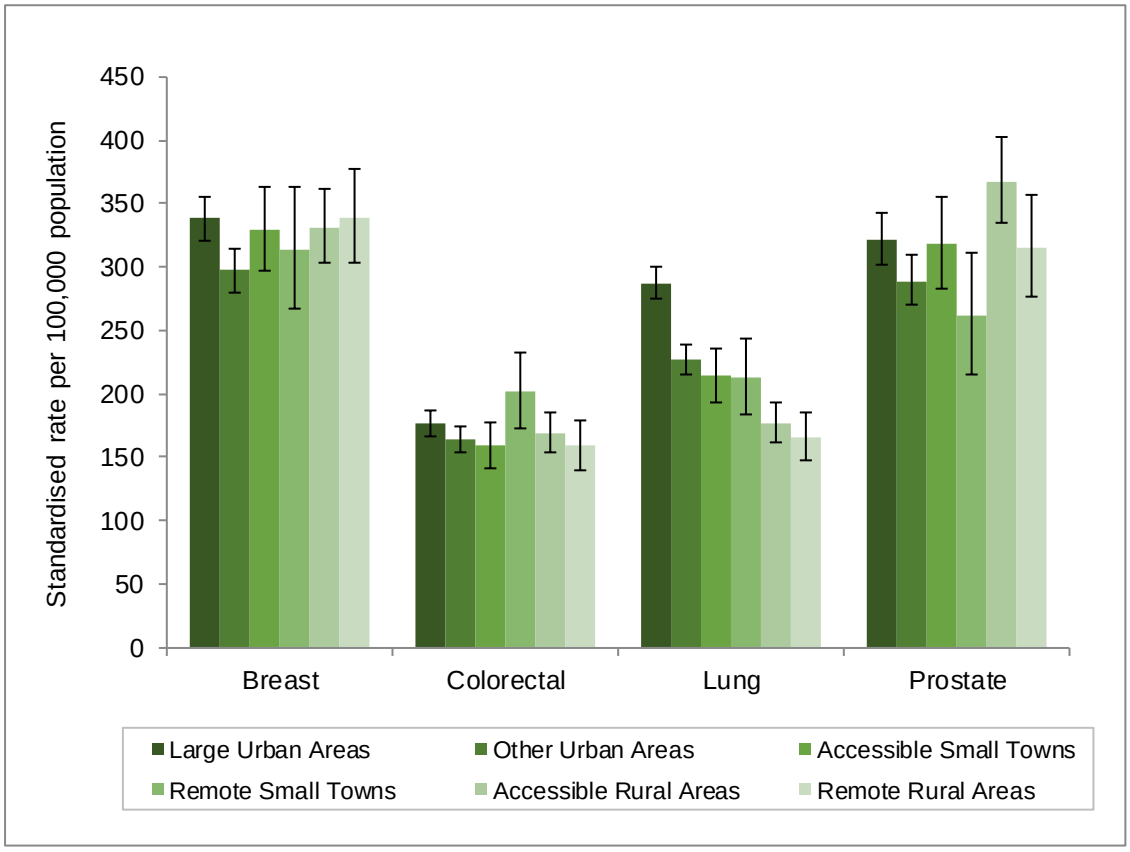

Figure 1.5: Standardised cancer incidence rates by urban-rural index (age 45 and over): 2012

There was no clear difference in rates of **breast, colorectal and prostate** cancer across the urban-rural index (Figure 1.5). When considered by outcome group, there was some variability, but there was no trend for any of these cancer types.

Standardised rates of lung cancer (for those aged 45 and over) show a clear gradient of decreasing incidence rates with increasing rurality (Figure 1.5). This is also broadly true for each outcome group, particularly for people living with a continued presence of cancer and with limited survival (OG3 and OG4) (Figure 1.6)[6].

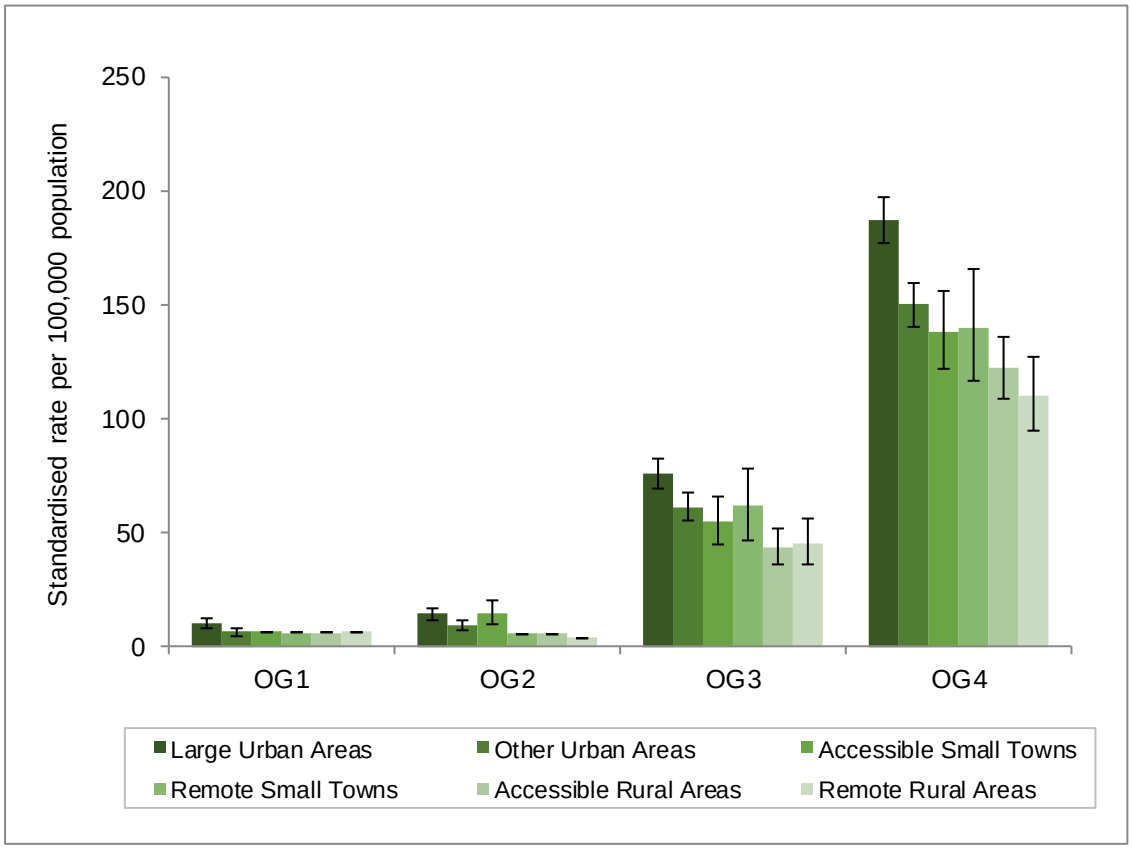

Figure 1.6: Standardised lung cancer incidence rates by urban-rural index (age 45 and over): 2012

Cancer Network

There are three cancer networks across Scotland – SCAN which incorporates areas from the south-east of Scotland, WoSCAN which is the west of Scotland and the North Cancer Alliance (NCA) which makes up the northern areas of Scotland.

The pattern of incidence rates for **breast** cancer across the networks changed between 2007 and 2012, but the only statistically significant change was in WoSCAN (Figure 1.7 and Figure 1.8). WoSCAN saw an increase in breast cancer rates from 300 per 100,000 population in 2007, to 334 per 100,000 population in 2012. This increase in the rate of breast cancer in WoSCAN was not observed across all OGs; only OG3 showing a statistically significant increase from 110 per 100,000 population in 2007, to 133 per 100,000 population.

[6] 92% of the 2012 lung cancer cohort were in OG3 or OG4 and therefore caution should be applied when interpreting rates for OG1 and OG2 for this cohort.

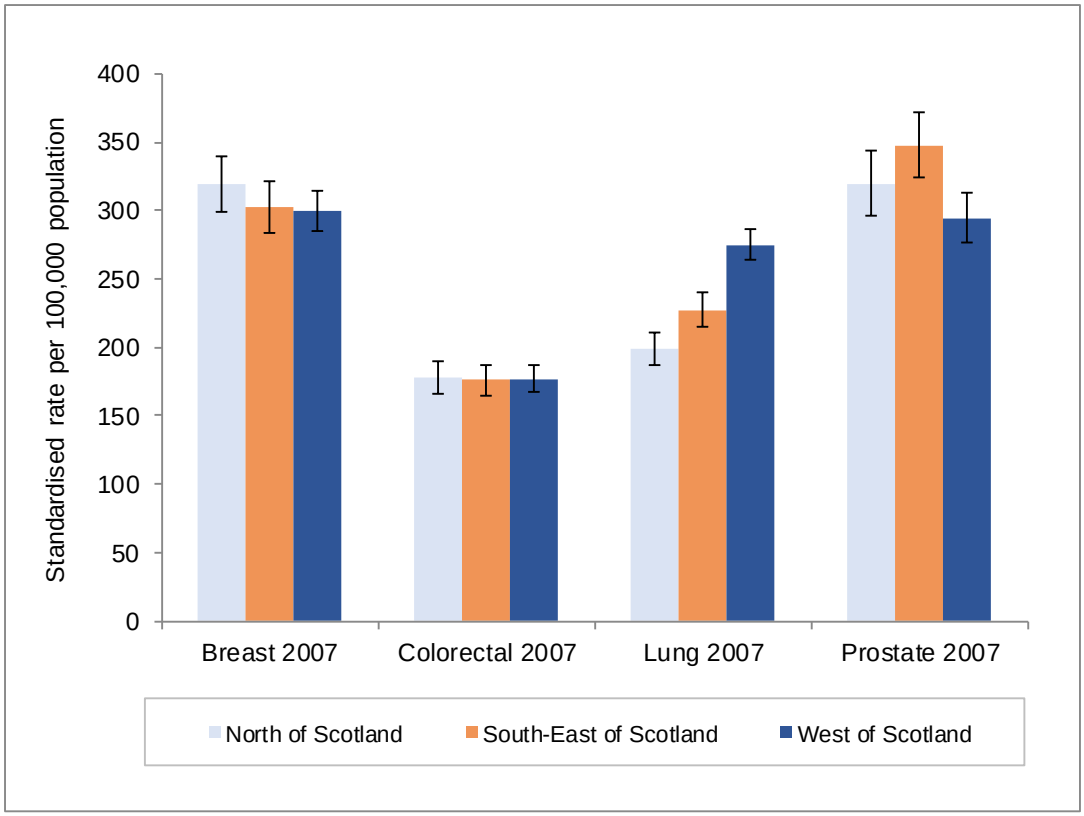

Figure 1.7: Standardised cancer incidence rates by cancer network (age 45 and over): 2007

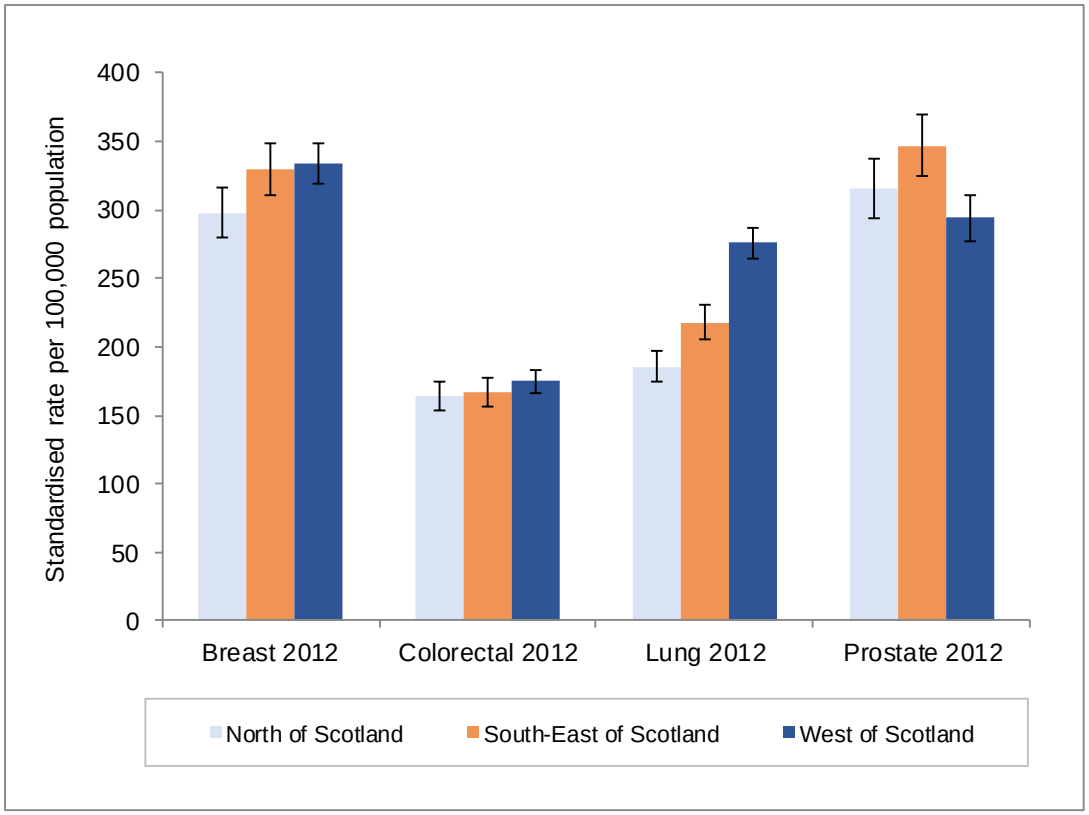

Figure 1.8: Standardised cancer incidence rates by cancer network (age 45 and over): 2012

There was very little difference in rates of **colorectal** cancers across the networks (Figure 1.7 and Figure 1.8). This was relatively consistent across outcome groups.

Standardised rates of **lung** cancer in the cohort were significantly higher in WoSCAN than in the other networks and by outcome group for OG3 and OG4 (Figure 1.9). This is likely to be related to the demographics of some of the areas within WoSCAN. However, ScotPHO (2019) states that "per cigarette smoked, the risk of lung cancer seems to be higher in the west of Scotland than in some other populations, perhaps reflecting the additional effect of past occupational exposures, or other factors such as nutrition".

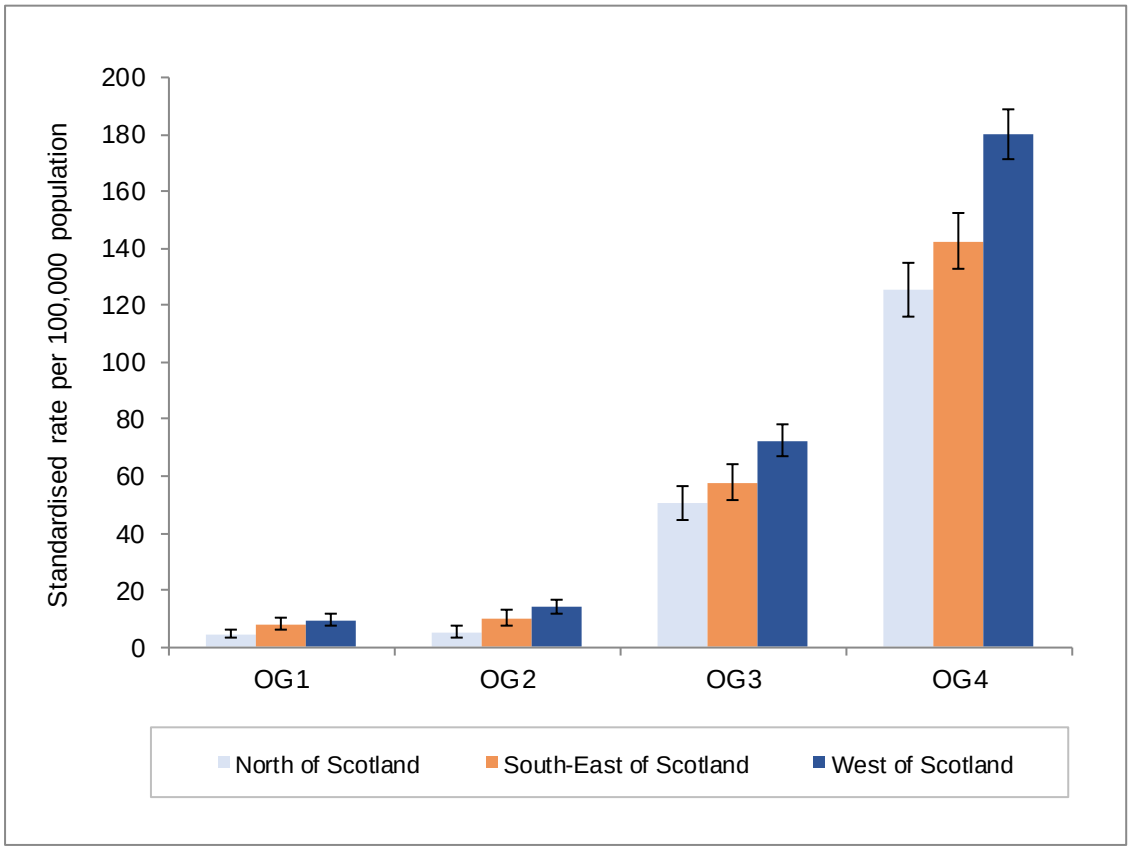

Figure 1.9: Standardised lung cancer incidence rates by cancer network (age 45 and over): 2012

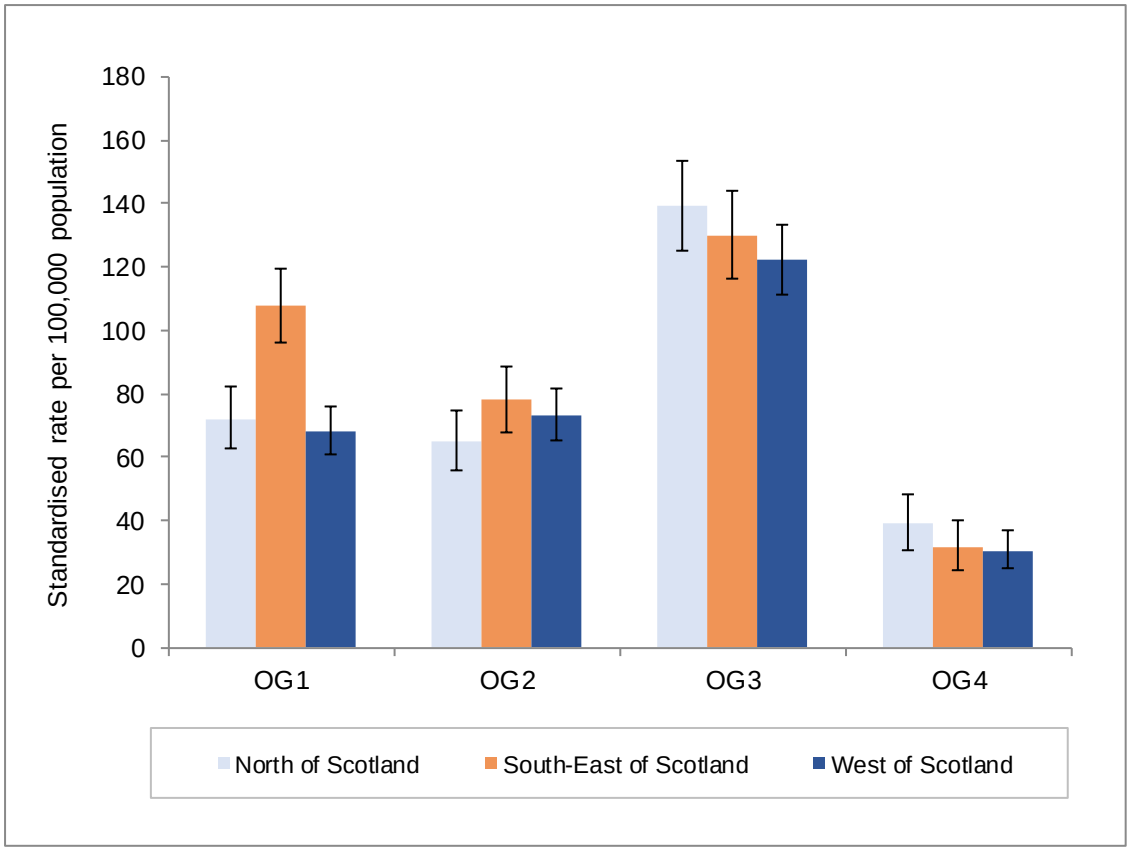

Figure 1.10: Standardised prostate cancer incidence rates by cancer network (age 45 and over): 2012

For **prostate** cancer, the age standardised rates in 2012 were lowest in WoSCAN and highest in SCAN (Figure 1.8). However, this pattern did not remain consistent across all outcome groups (Figure 1.10). The only statistically significant difference within an outcome group was among people living with similar acute healthcare needs (OG1), where rates in SCAN were higher than rates observed in other network areas.

Cancer Factors

- **For cancers with established national screening programmes (breast and colorectal), screen-detected cancer accounted for a substantial proportion (32% and 18% respectively) of all cancers detected.**
- **A high proportion of breast cancers were detected at an early stage (73% at stage 1 or 2), compared to lung cancer where almost half (45%) were diagnosed at stage 4.**

Method of Detection

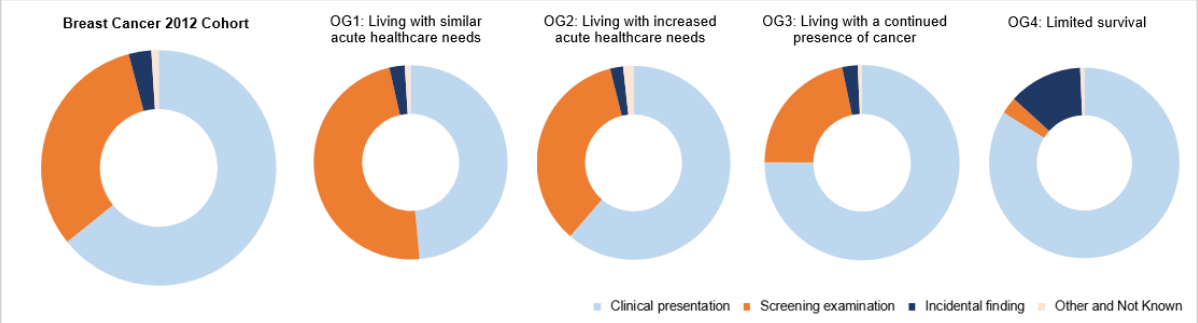

Figure 2.0: Breast cancer 2012: Method of Detection by outcome group

In 2012 approximately a third (32%) of **breast** cancer diagnoses were made as a result of screening and almost two thirds (64%) from clinical presentation (Figure 2.0). However, methods of breast cancer detection vary by outcome group. Among people living with similar acute healthcare needs (OG1), around half (48%) were diagnosed as a result of screening and the other half (49%) through clinical presentation. With each increasing outcome group number, the proportion of people diagnosed through screening decreases and clinical presentation becomes more common.

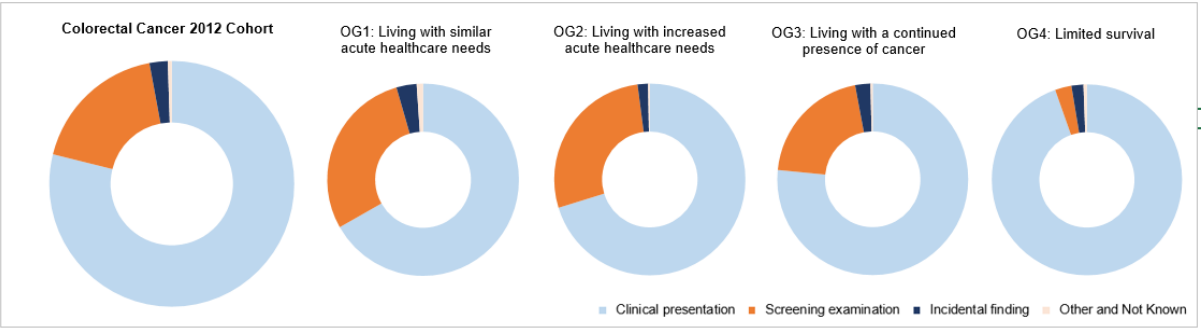

Figure 2.1: Colorectal cancer 2012: Method of Detection by outcome group

Just under a fifth (18%) of all **colorectal** cancers in 2012 were detected through screening (Figure 2.1), but this varied by outcome group. Just under a third of people living with similar or increased acute healthcare needs (OG1 29%; OG2 28%) were diagnosed through screening. Among people living with a continued presence of cancer (OG3), one in five (20%) had their cancer detected in this way. Only a very small proportion (3%) of people with limited survival (OG4) were diagnosed as a result of screening.

In 2007, the pilot phase of the bowel screening programme[7] came to an end and the roll-out of the national screening programme began. As a result, the vast majority (94%) of cases diagnosed in 2007 were picked up through clinical presentation and relatively few colorectal cancers (3%) were

[7] More information on the Scottish Bowel Screening Programme can be found at https://www.nsd.scot.nhs.uk/services/screening/bowelscreening/

detected through screening. In 2007, people diagnosed with colorectal cancer detected through screening were primarily living in NHS boards included in the bowel screening pilot programme (Fife, Grampian and Tayside) and in NHS Ayrshire & Arran, who joined the screening programme in September 2007.

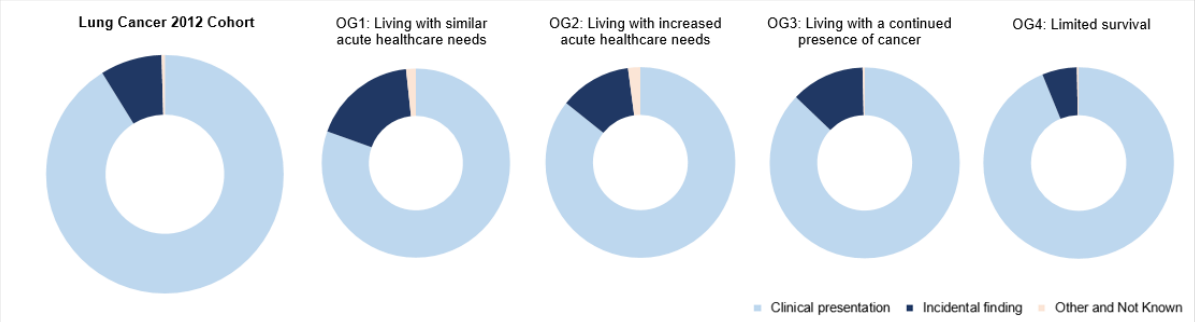

Figure 2.2: Lung cancer 2012: Method of Detection by outcome group

The vast majority (91%) of people diagnosed with **lung** cancer in 2012 were detected through clinical presentation (Figure 2.2), and this was also the case in 2007 (93%). The proportion of people diagnosed based on incidental findings decreases from 18% among those living with similar acute healthcare needs (OG1), to 6% of people with limited survival (OG4).

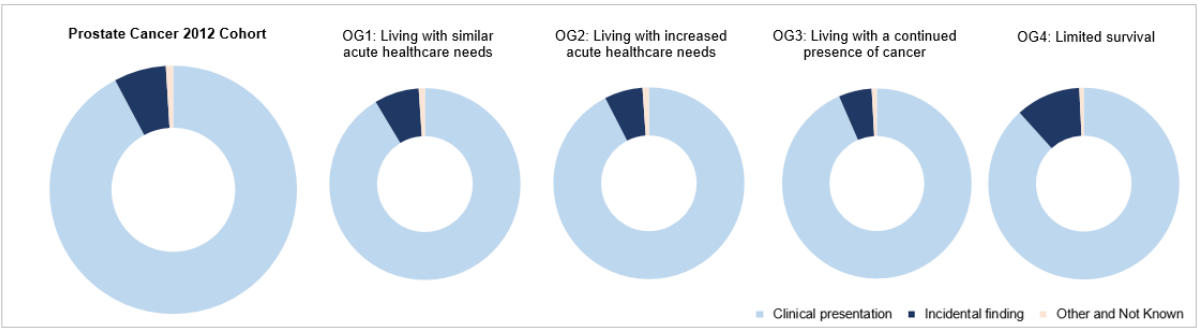

Figure 2.3: Prostate cancer 2012: Method of Detection by outcome group

Prostate cancers detected through PSA testing are not identifiable using Scottish Cancer Registry (SMR06) information. This means it was not possible to determine how many people received a prostate cancer diagnosis as a result of clinical investigation following a PSA test; these cases were registered as clinical presentation. Of prostate cancers diagnosed in 2012, 92% were recorded as being identified through clinical presentation (Figure 2.3). This is fairly consistent across outcome groups, although among people with limited survival (OG4) clinical presentation was recorded in 88% of cases and diagnosis through incidental findings appeared higher (11%) than for other outcome groups.

Tumour stage at diagnosis

The stage of a cancer describes its size and whether it has spread from where it started (Macmillan, 2018).

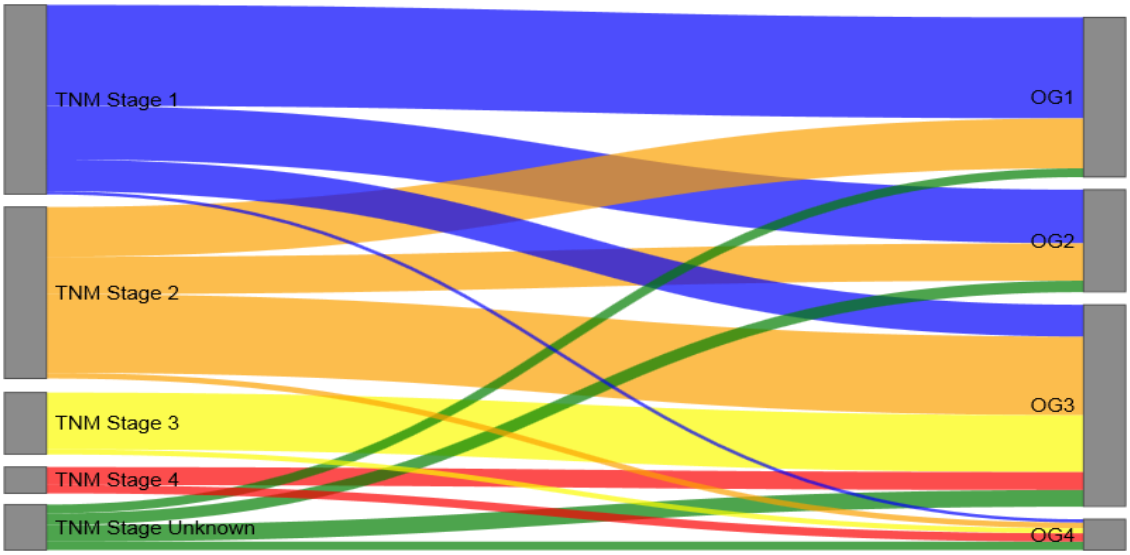

Figure 2.4: TNM stage at diagnosis and Outcome group: Breast Cancer 2012

Almost three-quarters (73%) of all **breast** cancers detected in 2012 were stage 1 or 2 (Figure 2.4); this varied from 94% of people living with similar acute healthcare needs (OG1), to 29% of people with limited survival (OG4). By definition, there were no stage 4 cancers among people living with similar or increased acute healthcare needs (OG1 or OG2), but in 2012, more than a quarter of people (27%) with limited survival (OG4) were stage 4 and a similar proportion (28%) had an unknown stage at diagnosis.

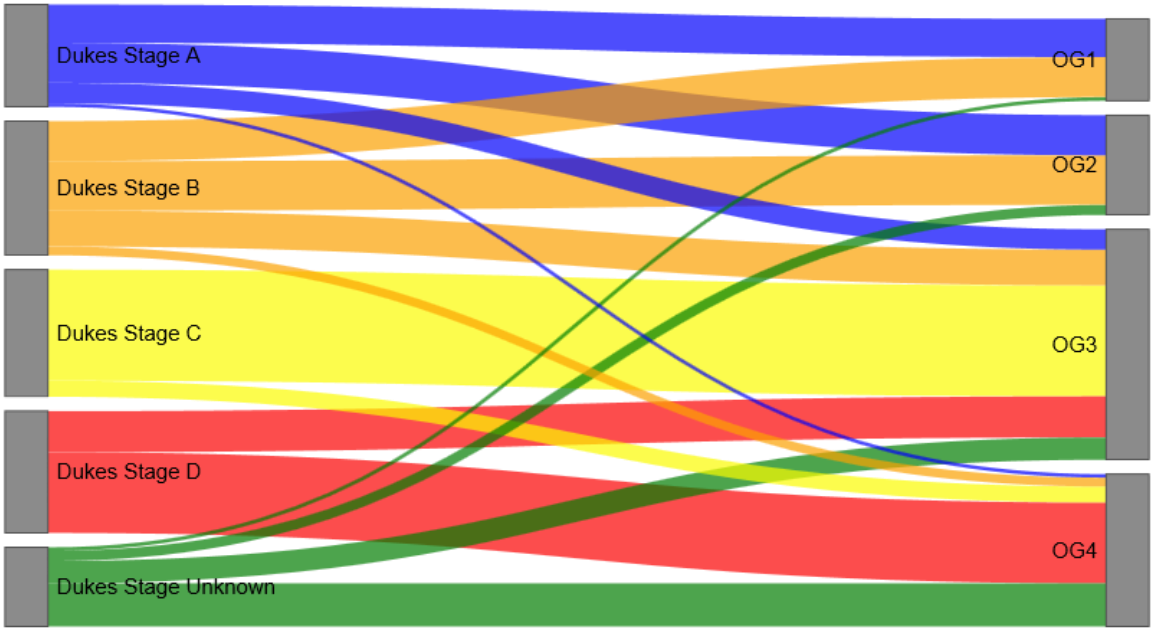

Figure 2.5: Dukes' stage at diagnosis and Outcome group: Colorectal Cancer 2012

In the 2012 **colorectal** cohort as a whole, similar proportions of people were diagnosed with the different Dukes' stages (Figure 2.5). However, the proportion of people with each stage varied by outcome group. By definition, people with Dukes' C or D tumours are categorised as OG3 (if not already in OG4). Consequently, almost all people living with similar or increased acute healthcare needs were detected at early stage (96% of OG1 and 90% of OG2 were either Dukes' A or Dukes' B). However, almost half (48%) of people living with a continued presence of cancer (OG3) were classified as Dukes' C, and 53% of those with limited survival (OG4) were Dukes' D. Within the 2012 colorectal cohort as a whole, 14% had an unknown cancer stage recorded at diagnosis; this varied from 4% in OG1 to 28% in OG4.

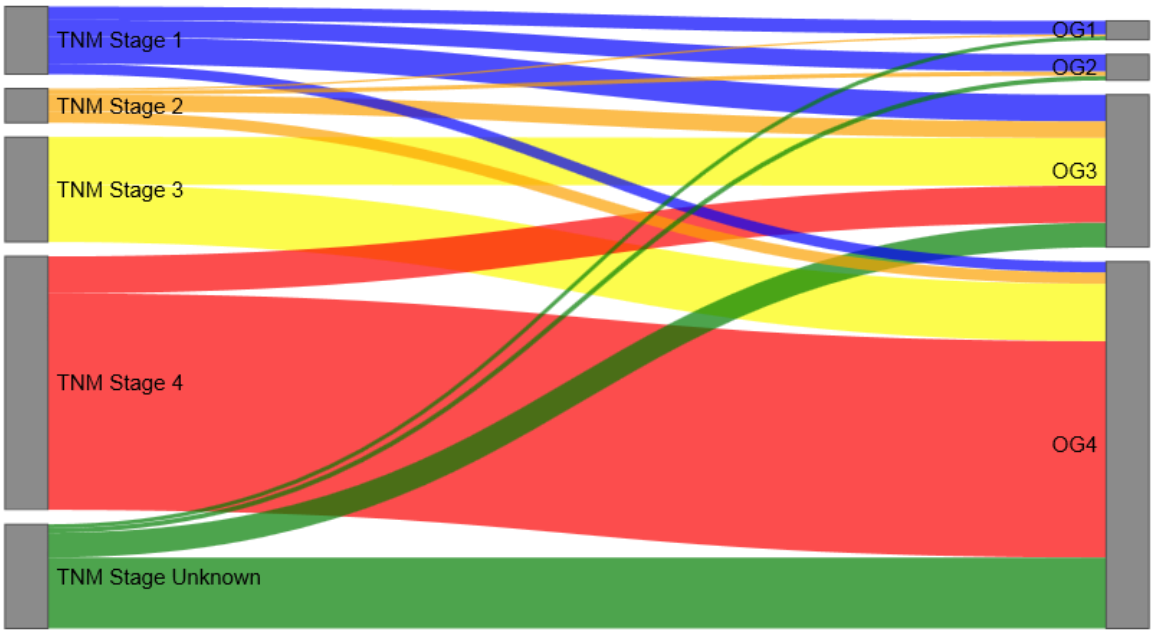

Figure 2.6: TNM stage at diagnosis and Outcome group: Lung Cancer 2012

Almost half (45%) of the 2012 **lung** cancer cohort as a whole were diagnosed with stage 4 cancer (Figure 2.6). The majority of people with lung cancer were in OG4 (65%), and 59% of this group were diagnosed at stage 4. Of the people living with lung cancer in OG1 and OG2, the majority were diagnosed at stage 1 (70% and 66% respectively). By definition, no people living with lung cancer who were diagnosed at stage 3 or 4 were in OG1 or OG2. Around half (56%) of people living with a continued presence of cancer (OG3) and three quarters (75%) of people with limited survival (OG4) were diagnosed at either stage 3 or 4. In the 2012 lung cohort as a whole, 18% had unknown staging at diagnosis, and this was similar for all outcome groups.

Cancer stage information for prostate cancer was only collected nationally in Scotland from 2013 onwards; therefore, this information is not available for the cohort years investigated in this analysis.

Tumour Grade

The grade of a tumour indicates what the cells look like when compared with normal cell tissue and gives an idea of how quickly the cancer may grow and spread.

In 2012, of the **breast** cancer diagnoses made 12% were grade I cancer (these cancer cells are well differentiated, meaning they tend to grow and spread more slowly). The proportion of grade I cancers decreases with increasing outcome group number, from 18% for people living with similar acute healthcare needs (OG1) to 4% for people with limited survival (OG4). Approximately half of all people living with similar or increased acute healthcare needs (OG1 49%; OG2 48%) were diagnosed with grade II cancers (moderately well differentiated), whereas a relatively high proportion (42%) of those living with a continued presence of cancer (OG3) were diagnosed with grade III (poorly

differentiated). The most common grade recorded for those with limited survival (OG4) was 'grade not determined', with 45% of this group falling into this category.

Of the **colorectal** cancer cohort as a whole, only 3% were diagnosed with grade I cancer, and 61% were diagnosed with grade II. The pattern of tumour grades was similar for OG1 – 3, where the majority of people were diagnosed with grade II cancer (OG1 74%; OG2 77%; OG3 69%). Among those with limited survival (OG4), only 33% were diagnosed with grade II tumours, while 47% had no grade recorded.

In the majority (70%) of the **lung** cancer diagnoses made in 2012, no grade was reported. The proportion of tumours where the grade was not determined increased from 44%, among those with similar acute healthcare needs (OG1), to 77% among those with limited survival (OG4). Where a grade was reported, most were defined as grade II (moderately well differentiated) or grade III (poorly differentiated).

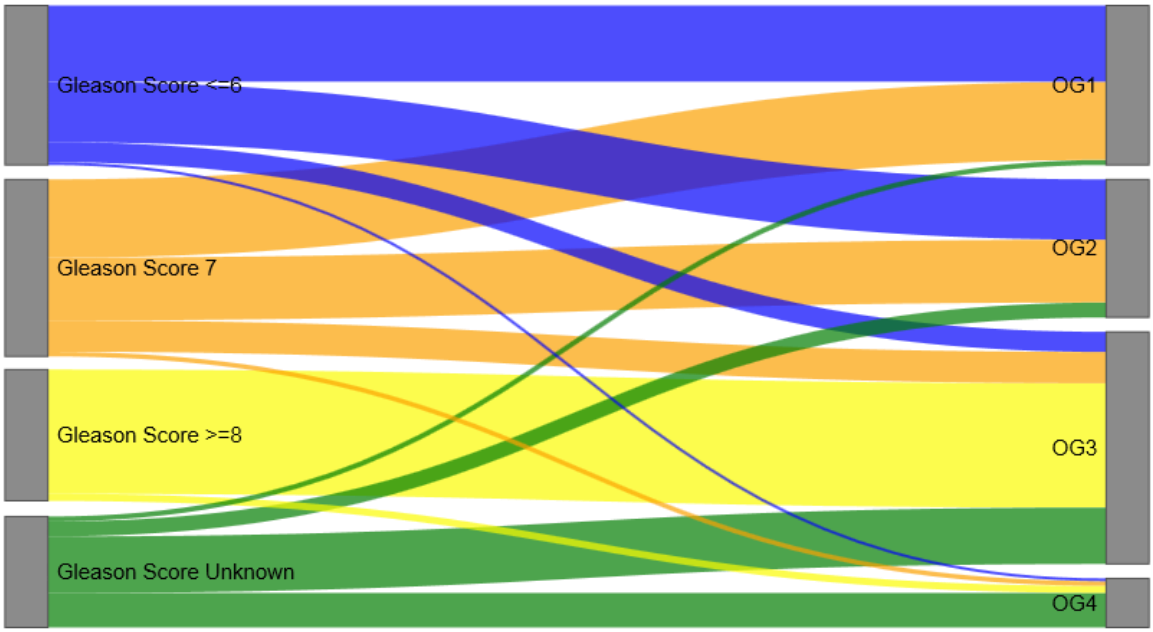

Figure 2.7: Gleason score and Outcome group: Prostate Cancer 2012

Across the 2012 **prostate** cancer cohort there was a mix of Gleason Scores, however the pattern varied by outcome group (Figure 2.7). Low or intermediate risk tumours (Gleason score 1-6 or 7) were most commonly recorded for people living with similar or increased acute healthcare needs (OG1 97%; OG2 89%). Those people living with a continued presence of cancer (OG3) were most commonly assigned Gleason scores of 8-10 (high risk) (54%) whilst the majority of people (70%) with limited survival (OG4) had no Gleason score recorded.

Morphology

The morphology of a cancer refers to the histological (microscopic cellular anatomy) classification of the cancer tissue and a description of the course of development that a tumour is likely to take: benign or malignant (behaviour)[8]. Details of the methods used to identify and classify morphology are listed in Appendix B.

Overall, 77% of the 2012 **breast** cancer cohort were defined as intermediate morphology, with 18% being of 'very good' or 'good' morphology classification. Similarly, 76-78% of people living beyond 12 months of a cancer diagnosis (OG1 to OG3) were of 'intermediate' morphology, whereas only 64% of the limited survival group (OG4) were defined in this way. Of people with limited survival (OG4), 12% were defined as 'poor' or 'very poor' and 10% had unknown morphology.

Of those diagnosed with **colorectal** cancer in 2012, 10% were classified with 'polyp-related' morphology and 8% with 'poor' morphology, however 82% had no morphology recorded. These proportions varied across the outcome groups with 20% of people living with similar healthcare needs (OG1) having polyp-related morphology compared to 3% of people with limited survival (OG4).

Within the 2012 **lung** cancer cohort, 12% were small cell and 88% were non-small cell cancers. The proportion of small-cell cancers increased from 2%, among people living with similar or increased acute healthcare needs (OG1 and OG2), to 14% of people with limited survival (OG4). This was broadly similar to the 2007 lung cancer cohort, where 15% were small cell tumours.

As the vast majority of **prostate** cancers are adenocarcinoma, we have not presented morphology information in this analysis.

Treatment

This analysis does not look at the order of any treatments, details of the specific modes of treatments, or the length or number of treatments. SRfD only identifies if a certain type of treatment has been undertaken at any point in the pathway, and it is important to note that these treatments may sometimes be palliative rather than curative in their intent. Treatments include surgery, chemotherapy, radiotherapy and hormonal therapy. Treatment details are recorded for any related cancer treatment at time of cancer registration. As such this will include treatment recorded within at least the first 6 months after diagnosis and is limited to no more than 2 years after diagnosis. Other treatments for the consequences of cancer or its treatment (for example pain relief, anti-nausea or treating lymphedema) are not included.

[8] Adapted from https://meteor.aihw.gov.au/content/index.phtml/itemId/269647 {accessed 10/04/19]

- **The proportion of people who had no treatment recorded differs among cancer types, from 2% of women diagnosed with breast cancer to 43% of people diagnosed with lung cancer.**
- **Across breast, colorectal and lung cancer types, people with limited survival (OG4) were more commonly found to have no treatment recorded.**
- **The most common treatment types were dependent on cancer type, but tended to be similar for those living with similar or increased acute healthcare needs (OG1 and OG2). Where recorded, treatment was more mixed for those living with a continued presence of cancer or with limited survival (OG3 and OG4).**

Of all **breast** cancer diagnoses in 2012, the most common combination of treatments associated with cancer registration was surgery, radiotherapy and hormonal therapy (35%). Relatively few people diagnosed with breast cancer had no treatment (2%).

Surgery, radiotherapy and hormonal therapy was also the most common treatment combination for people living with similar or increased acute healthcare needs (OG1 54%; OG2 42%). For people living with a continued presence of cancer (OG3), the most common treatment combinations were surgery, radiotherapy, systemic anti-cancer therapy (SACT) and hormonal therapy (32%), and surgery, radiotherapy and hormonal therapy (20%). For people with limited survival (OG4), the most common treatment was hormonal therapy only (41%) or no treatment recorded (23%, n=64).

Of people diagnosed with a **colorectal** cancer in 2012, the most common treatment was surgery only (46%). The majority of those living with similar or increased healthcare needs after cancer had surgery only (OG1 81%; OG2 75%). For people living with a continued presence of cancer, 37% had surgery alone, while the same percentage had surgery and SACT. Over half (54%) of people with limited survival (OG4) had no treatment recorded and a quarter (24%) had surgery only.

Of everyone diagnosed with a **lung** cancer in 2012, just under half (43%) had no recorded treatment. This varied from 9% among people living with similar acute healthcare needs (OG1) to 57% of people with limited survival (OG4). For the small proportion of people diagnosed with lung cancer who were living with similar or increased acute healthcare needs, the majority underwent surgery only (OG1 64% and OG2 52%) or radiotherapy only (OG1 16% and OG2 21%). People living with a continued presence of cancer (OG3) had a more mixed set of treatment combinations, with 26% having radiotherapy and SACT and 22% having radiotherapy only. For people with limited survival (OG4), the majority had no recorded treatment (57%). Where present, the most common treatment for this group was radiotherapy only (20%). However, as described in Chapter 1, many people with limited survival died quickly following a lung cancer diagnosis (survival at six months in OG4 was 25%). This is related to the balance of patient and tumour characteristics, as well as the ethical consideration of harm of treatment versus possible benefits and impact on quality of life.

Of people diagnosed with **prostate** cancer in 2012, 23% had no recorded treatment; this varied from 10% of people living with a continued presence of cancer (OG3), to 33% of people with limited survival (OG4) and 35% of people living with increased acute healthcare needs (OG2). The most common treatments overall were radiotherapy and hormonal therapy (25%) and hormonal therapy only (23%). For people living with similar or increased acute healthcare needs after this cancer diagnosis, the most common treatments were radiotherapy and hormonal therapy (OG1 27%; OG2 23%) and surgery only (OG1 25%; OG2 21%). Among people who were living with a continued presence of cancer (OG3) the most common treatments were hormonal therapy only (38%) and radiotherapy and hormonal therapy (29%). Of people with limited survival (OG4) who had treatment recorded, the most commonly recorded treatment was hormonal therapy only (45%).

Details of the most common treatments for each cancer cohort are shown in Appendix D.

Discussion on the results from Chapters 1 & 2 can be found www.macmillan.org.uk/SRFD .

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Appendix: A: Terms and Abbreviations

Term	Definition
95% CI	95% confidence interval.
Aetiology	The factors which cause or predispose the development of a particular condition.
Acute healthcare	Healthcare for a specific time-defined illness or condition.
Breast cancer	Female only invasive breast cancer (ICD-10 C50).
Cancer type	The site/type of the (primary) cancer, regardless of year.
CAG	Clinical Advisory Group.
Charlson Score	A method of assessing comorbidity through prior hospital records, scoring these based on the reason for the hospital admission. The Charlson score is a validated tool used by healthcare professionals to predict risk of death and the burden of a disease. Starting at zero, a patient's score can increase because of the severity of their illness or illnesses, or because the number of conditions they have increases.
Cohort	When referring to the year of index cancer diagnosis and cancer type combination (e.g. breast cancer 2007 cohort).
Clinical Presentation	One categorisation of how a cancer was first detected. Unless there is evidence to the contrary (e.g. screening or incidental finding), or there is real doubt (not known), it can be implied to be clinical presentation.
Colorectal Cancer	Colorectal cancer (ICD-10 C18-C20).
Confidence Interval (CI)	An estimated range of possible outcomes of a measurement, which gives an idea of uncertainty around that measurement. Here a 95% confidence interval is used which means that if the same measurement was repeated many times, 95% of values would fall within the defined range. This means there is a 5% chance that the true value will fall outside the defined range.
Crude rate	Calculated by dividing the total number of events in a given time period by the total number of persons in the population and then multiplying by 100,000. This allows for comparison between areas by providing a rate per 100,000 population. Crude rates do not take into account any differences in demographics between areas.
DCE	Detect Cancer Early Programme
Diagnosis year	Year in which the index cancer was diagnosed (either 2007 or 2012 here).
Dukes' Stage	Staging of colorectal cancer from A (tumour limited to muscularis propria (muscle coat), regional lymph nodes negative) to D (distant metastases).
EASR	European age standardised rate (see 'standardised rate' for more detail).
Episode	A measure of hospital activity encompassing the time a person spends within a particular hospital speciality. This may be as an inpatient, daycase or outpatient. Each episode is

	initiated by a referral (including re-referral) or admission and is ended by a discharge.
Gleason Score	Prostate cancer grading system, used to ascertain the aggressiveness of a cancer. Higher scores suggest a cancer which will grow or spread more rapidly.
Grade	A measure of how quickly a cancer may grow or spread, determined through examination of cancer cells.
ICD-10	World Health Organisation's International Statistical Classification of Diseases and Related Health Problems.
Incidental Finding	One categorisation of how a cancer was first detected. If a patient presents with a minor/major issue and is found to have a tumour/neoplasm which is not linked in any way to this issue, the tumour/neoplasm is recorded as an incidental finding.
Index cancer	The cancer/tumour which has been included in one of the cohorts for this study using the detailed selection criteria. A person may have experienced other cancers before or after this one (of the same or a different type), but this is the tumour which is included in the analysis.
ISD	Information Services Division, part of NHS National Services Scotland.
Kaplan-Meier	Kaplan-Meier is a method of estimating survival over time, measuring the proportions of time people live following a diagnosis.
Lung cancer	Trachea, bronchus & lung cancer (ICD-10 C33-34).
Metastasis	When cancer cells spread from the primary site (where the cancer started) to other parts of the body through the blood or lymphatic system. These cancers cells may grow into a tumour in another part of the body, this is referred to as a metastasis (or secondary cancer).
Morphology	This is the morphological type of the tumour as determined by a pathologist either on the basis of histology or cytology. The Scottish Cancer Registry currently records tumour type according to the International Classification of Diseases for Oncology or ICDO.
NCA	North Cancer Alliance (NHS Grampian, NHS Highland, NHS Tayside, NHS Orkney, NHS Shetland and NHS Western Isles).
OG(s)	Survivorship Outcome Group(s).
OG1	People living with similar acute healthcare needs compared to the time before their cancer diagnosis.
OG2	People living with increased acute healthcare needs compared to the time before their cancer diagnosis.
OG3	People likely to be living with a continued presence of cancer after their cancer diagnosis.
OG4	People with limited survival (<12 months) following their cancer diagnosis.
PLWC	People living with cancer.
Prostate Cancer	Male prostate cancer (ICD-10 C34).
PSA Test	The prostate specific antigen (PSA) test is a blood test which can contribute towards a diagnosis of prostate cancer.

Recurrence	When the same cancer returns after treatment. This can be local (in the same area of the body as the original cancer) or distant (in a different area of the body).
SACT	Systemic anti-cancer therapy.
SCAN	South-East Cancer Network (NHS Fife, NHS Lothian, NHS Borders, NHS Dumfries & Galloway).
Screen-detected	One categorisation of how a cancer was first detected. Screen-detected is where a person has been directed from a routine cervical smear/mammogram/bowel screening test in the absence of symptoms.
SIMD	Scottish Index of Multiple Deprivation (SIMD1=most deprived quintile, SIMD5=least deprived quintile).
SMR00	Scottish Outpatient dataset.
SMR01	Scottish Inpatient and daycase dataset.
SMR06	Scottish Cancer Registry dataset.
SRfD	Scottish Routes from Diagnosis.
Standardised rate	Truncated age-sex-standardised rates (EASRs) are used here. These are calculated by taking the crude rate for each age and sex group and multiplying this by the population in each age (and sex) group in the European Standard Population. It is a theoretical measure which allows for comparison across areas where the age or sex breakdown of the populations may differ (so for example when comparing an area with a higher proportion of older people to one with a younger population). This allows valid comparisons to be made between geographical areas and through time. The rates here are truncated to include only the ages of interest (for example excluding younger populations).
Stage	Stage is an assessment of how far a tumour has spread and typically involves an assessment of local size of the tumour, how far it has grown through local tissues and distant spread of disease with metastases to lymph nodes or other organs.
Statistically significant	Statistical testing suggests the result is not just due to random variation.
TNM	TNM is the international staging classification recommended by International Agency for Research on Cancer (IARC) and used for staging at most tumour sites. The TNM system is separated into 3 parts: T (Tumour) - The extent of and the size of the primary tumour, N (Node) - Whether or not the tumour has spread to the regional lymph nodes (the group of lymph glands to which tissue fluid in the area of the tumour first “drains”) and M (Metastasis) - The presence or otherwise of distant metastasis.
WoSCAN	West of Scotland Cancer Network (NHS Ayrshire & Arran, NHS Forth Valley, NHS Greater Glasgow & Clyde, NHS Lanarkshire).

Appendix: B: Morphology definitions:

Breast Cancer:

Divide tumour morphology into categories reflecting prognosis, based on US SEER data (Berg JW, Hutter RVP. Breast Cancer. *Cancer* 1995; 75(Suppl 1): 257-269).

Morphology categories		**Morphology codes (ICD-O(3))****
1. Very good prognosis (5-year RS ≥ 90%)	Medullary carcinoma with lymphoid stroma, Mucinous (colloid) carcinoma, Papillary carcinoma, Tubular carcinoma, Adenoid cystic carcinoma, Cribriform carcinoma	8050, 8200-8201, 8211, 8260, 8480-8481, 8503, 8512,
2. Good prognosis (5-year RS 80-89%)	Lobular carcinoma, Medullary carcinoma NOS, Duct and lobular carcinoma, Comedocarcinoma, Scirrhous carcinoma	8141, 8501, 8510-8511, 8520-8521, 8522
3. Intermediate prognosis (5-year RS 70-79%)	Ductal carcinoma NOS, Paget's disease	8500, 8540-8543
4. Poor prognosis (5-year RS 60-69%)	Adenocarcinoma NOS, Carcinoma NOS	8010-8011, 8012-8022, 8140
5. Very poor prognosis	Inflammatory carcinoma	8530
6. Other or not known		All other M-codes

**All behaviour code 3 (i.e., invasive).

Colorectal Cancer:

Morphology categories	**Morphology codes (ICD-O(3))**
polyp-related	8210/3, 8221/3, 8261/3, 8263/3
poor prognosis	8020/3, 8480/3, 8481/3, 8490/3

Lung Cancer:

Morphology categories	**Morphology codes (ICD-O(3))**
Small cell	8041/3-8045/3
other	all other morphology codes ending in /3

Appendix C: Limitations

While these definitions meet the criteria of being both comparable across cancers and allowing the identification of distinct groups of survivorship experience with sufficiently large numbers across cancer types, there are some limitations of these definitions. One of the most important to acknowledge is that this project is based entirely on nationally available administrative systems and as such is based on secondary care information only. There will be co-morbidities and healthcare needs which will be managed entirely through other routes (e.g. primary care) which are not included as part of this grouping. Additionally, we are using bed days as a proxy for need but this may not always be accurate.

By using national data in this way we may be making broad assumptions about the types of people categorised within each group which may not always be accurate. For example, we hypothesise that many in OG1 and 2 will have had successful treatment but this may not always be the case. OG3 in particular is a diverse group, intended to reflect the many different ways cancer can be an ongoing part in a person's life beyond the cohort year. The broad intention of this group is to identify any direct cancer related activity in the following 5 years which can be picked up using national datasets. Consequently, OG3 is a heterogeneous group, a mixture of cancers treated with a curative intent and non-curable cancers – for example although stage 3 cancers are included here these may be treated with curative intent, also included here are second cancers although there is no delineation regarding what the cancer type or the severity of impact the second cancer will have on the person's life. As a result, this does not mean that everyone in OG3 will have had a continuous presence of cancer for the whole period; many will have periods which are apparently cancer free before a further cancer is diagnosed or further cancer treatment activity recorded. This definition is a series of indicators of further cancer activity but this may be incomplete – as a result this group should be viewed as being likely to have a continued, *but not necessarily continuous*, presence of cancer (in some form) in the following five years.

There are a number of further limitations with the general SRfD approach and methodological decisions made. These are detailed more fully in the Introduction and Methods chapter.

While there are versions of the Charlson measure which exclude the impact of cancer, the approach used in this analysis did not specifically exclude cancer as it was intended to be a measure of general health.

Truncated rates are intended to provide a rate of cancer per 100,000 population in a particular age group. For the purposes of this analysis and based on the age distribution of the cancers studied, these rates are presented for those aged 45 and over. This means that the rates presented here will not be comparable to national rates for all ages and will be higher.

When considering treatment, current nationally available data provides information on if a particular treatment type was started (and the date) but, with the exception of surgery, is unable to provide further detail. As a result we are unable to measure dosage or length of treatment. Development work as part of the SCRIS programme (https://www.isdscotland.org/SCRIS/) will hopefully help address these gaps in future analysis.

Considering treatment use in those with limited survival is difficult, much of this may have been palliative in nature. Where no treatment was recorded we are unable to comment on the rationale behind this.

For more information on the Scottish Routes from Diagnosis project please see www.macmillan.org.uk/SRFD or for more information on the Macmillan – ISD Scottish Cancer Pathways collaboration generally please see the Macmillan website or ISD website.

Appendix D: Tables of Characteristics Analysis: 2012 & 2007: By Cancer Type

2012: Breast Cancer

Characteristic	Breast cancer cases diagnosed in 2012		Outcome Group 1 (Living with similar acute healthcare needs)		Outcome Group 2 (Living with increased acute healthcare needs)		Outcome Group 3 (Living with a continued presence of cancer)		Outcome Group 4 (Limited survival)		CHI^2 Test
	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	
Total Cases	**4,468**		**1,444**	*32*	**926**	*21*	**1,819**	*41*	**279**	*6*	
Age Band											p < 0.001
15 - 44	**385**	***9***	100	*7*	66	*7*	211	*12*	8	*3*	
45 - 54	**941**	***21***	304	*21*	179	*19*	443	*24*	15	*5*	
55 - 64	**1,099**	***25***	441	*31*	213	*23*	419	*23*	26	*9*	
65 - 74	**1,005**	***22***	374	*26*	216	*23*	372	*20*	43	*15*	
75 - 84	**733**	***16***	178	*12*	168	*18*	277	*15*	110	*39*	
85 - 99	**305**	***7***	47	*3*	84	*9*	97	*5*	77	*28*	
	p < 0.001										
Average Age (mean)	**63.6**	***(63.2-64.0)***	62.4	*(61.8-63.0)*	65.3	*(64.4-66.2)*	61.7	*(61.0-62.3)*	76.8	*(75.2-78.4)*	
Ethnicity											
White	**2,657**	***59***									
Other ethnicity	**26**	***1***									
Not Known or refused/not disclosed	**1,785**	***40***									
	p < 0.001										
Deprivation (SIMD at diagnosis): Crude rate of cases per 100,000 population[1]											
1 (Most deprived)	**169**	***(158-181)***	48	*(42-55)*	37	*(32-43)*	70	*(62-78)*	14	*(11-18)*	
2	**181**	***(169-193)***	53	*(46-60)*	42	*(36-48)*	73	*(66-82)*	13	*(10-17)*	
3	**196**	***(184-209)***	64	*(57-72)*	34	*(29-39)*	88	*(79-96)*	11	*(8-14)*	
4	**200**	***(188-214)***	69	*(61-77)*	42	*(36-48)*	78	*(70-86)*	12	*(9-15)*	
5 (Least deprived)	**218**	***(204-232)***	78	*(70-86)*	45	*(39-52)*	83	*(75-92)*	11	*(8-14)*	
Deprivation (SIMD at diagnosis): Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
1 (Most deprived)	**306**	***(284-329)***	89	*(78-102)*	67	*(57-77)*	126	*(112-141)*	25	*(19-31)*	
2	**312**	***(291-335)***	94	*(83-107)*	74	*(64-85)*	122	*(109-136)*	22	*(17-28)*	
3	**327**	***(306-350)***	107	*(95-121)*	58	*(49-68)*	143	*(129-158)*	19	*(14-25)*	
4	**323**	***(301-345)***	114	*(101-127)*	68	*(58-78)*	120	*(107-134)*	21	*(15-26)*	
5 (Least deprived)	**346**	***(323-369)***	129	*(116-144)*	73	*(63-84)*	125	*(111-139)*	19	*(14-24)*	
Urban Rural Indicator: Crude rate of cases per 100,000 population[1]											
Large Urban Areas	**184**	***(175-193)***	57	*(52-62)*	39	*(35-43)*	77	*(71-83)*	12	*(9-14)*	
Other Urban Areas	**181**	***(172-192)***	56	*(51-62)*	40	*(35-45)*	74	*(68-81)*	11	*(9-14)*	
Accessible Small Towns	**207**	***(188-228)***	77	*(65-90)*	40	*(32-50)*	78	*(66-91)*	12	*(8-18)*	
Remote Small Towns	**209**	***(180-242)***	48	*(35-65)*	47	*(34-64)*	94	*(75-117)*	20		
Accessible Rural Areas	**210**	***(193-228)***	77	*(67-88)*	37	*(30-45)*	84	*(73-95)*	12	*(8-17)*	
Remote Rural Areas	**237**	***(213-264)***	87	*(73-104)*	48	*(38-61)*	88	*(73-104)*	14	*(9-22)*	
Urban Rural Indicator: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
Large Urban Areas	**338**	***(321-356)***	109	*(99-119)*	73	*(65-81)*	135	*(125-146)*	21	*(17-26)*	
Other Urban Areas	**297**	***(280-315)***	95	*(86-105)*	66	*(58-74)*	117	*(107-128)*	20	*(15-24)*	
Accessible Small Towns	**330**	***(298-364)***	120	*(101-141)*	63	*(49-78)*	127	*(107-149)*	20	*(12-28)*	
Remote Small Towns	**313**	***(267-363)***	68	*(47-93)*	74	*(53-99)*	142	*(112-176)*	28		
Accessible Rural Areas	**332**	***(304-361)***	123	*(106-141)*	60	*(48-72)*	127	*(110-145)*	22	*(15-31)*	
Remote Rural Areas	**339**	***(303-377)***	126	*(105-150)*	70	*(54-87)*	123	*(101-146)*	21	*(13-31)*	
Cancer Networks: Crude rate of cases per 100,000 population[1]											
North of Scotland	**184**	***(174-196)***	65	*(59-72)*	36	*(31-41)*	73	*(66-80)*	10	*(8-13)*	
South-East of Scotland	**194**	***(183-205)***	64	*(58-70)*	37	*(33-42)*	79	*(72-86)*	14	*(11-17)*	
West of Scotland	**196**	***(188-205)***	60	*(55-64)*	44	*(40-48)*	81	*(76-87)*	12	*(10-14)*	
Cancer Networks: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
North of Scotland	**298**	***(279-316)***	107	*(97-119)*	59	*(51-67)*	114	*(103-125)*	18	*(14-22)*	
South-East of Scotland	**330**	***(311-349)***	110	*(100-122)*	64	*(55-72)*	131	*(119-143)*	25	*(20-31)*	
West of Scotland	**334**	***(320-349)***	105	*(97-114)*	76	*(69-83)*	133	*(124-142)*	20	*(17-24)*	
Method of Detection[2],[3]											p < 0.001
Clinical presentation	**2,868**	***64***	701	*49*	568	*61*	1365	*75*	234	*84*	
Screening examination	**1,416**	***32***	692	*48*	322	*35*	394	*22*	8	*3*	
Incidental finding	**139**	***3***	37	*3*	20	*2*	47	*3*	35	*13*	
Other and Not Known	**45**	***1***	14	*1*	16	*2*	13	*1*	2	*1*	
	p < 0.001										
Stage											p < 0.001
1	**1,711**	***38***	913	*63*	485	*52*	284	*16*	29	*10*	
2	**1,548**	***35***	450	*31*	337	*36*	710	*39*	51	*18*	
3	**559**	***13***	0	*0*	0	*0*	513	*28*	46	*16*	
4	**238**	***5***	0	*0*	0	*0*	162	*9*	76	*27*	
Not Known	**412**	***9***	81	*6*	104	*11*	150	*8*	77	*28*	
	p < 0.001										
Grade											p < 0.001
I (Well differentiated)	**533**	***12***	267	*18*	134	*14*	121	*7*	11	*4*	
II (Moderately well differentiated)	**1,957**	***44***	713	*49*	445	*48*	742	*41*	57	*20*	
III (Poorly differentiated)	**1,483**	***33***	387	*27*	249	*27*	761	*42*	86	*31*	
Grade not determined	**495**	***11***	77	*5*	98	*11*	195	*11*	125	*45*	
	p < 0.001										
Morphology											p < 0.001
Very Good	**206**	***5***	99	*7*	48	*5*	54	*3*	5	*2*	
Good	**579**	***13***	178	*12*	124	*13*	244	*13*	33	*12*	
Intermediate	**3,430**	***77***	1124	*78*	706	*76*	1421	*78*	179	*64*	
Poor or Very poor	**105**	***2***	7	*0*	20	*2*	44	*2*	34	*12*	
Not Known	**148**	***3***	36	*2*	28	*3*	56	*3*	28	*10*	
	p < 0.001										
Treatments[4]											p < 0.001
Surgery only	**152**	***3***	46	*3*	48	*5*	41	*2*	17	*6*	p < 0.001
Hormonal therapy only	**467**	***10***	58	*4*	126	*14*	170	*9*	113	*41*	p < 0.001
Surgery & Radiotherapy	**162**	***4***	84	*6*	30	*3*	43	*2*	5	*2*	p < 0.001
Surgery & SACT	**123**	***3***	22	*2*	16	*2*	79	*4*	6	*2*	p < 0.001
Surgery & Hormonal therapy	**511**	***11***	191	*13*	150	*16*	151	*8*	19	*7*	p < 0.001
Surgery & Radiotherapy & SACT	**341**	***8***	96	*7*	40	*4*	202	*11*	3	*1*	p < 0.001
Surgery & SACT & Hormonal therapy	**144**	***3***	30	*2*	26	*3*	87	*5*	1	*0*	p < 0.001
Surgery & Radiotherapy & Hormonal	**1,543**	***35***	784	*54*	393	*42*	361	*20*	5	*2*	p < 0.001
Surgery & Radiotherapy & SACT & Hormonal	**799**	***18***	127	*9*	89	*10*	577	*32*	6	*2*	p < 0.001
Other Treatment	**142**	***3***	2	*0*	2	*0*	98	*5*	40	*14*	p < 0.001
No Treatment	**84**	***2***	4	*0*	6	*1*	10	*1*	64	*23*	p < 0.001
	p < 0.001										

[1] Confidence intervals (CI) are only calculated for rates where there are more than 20 cases (as CI estimates are unreliable otherwise).

[2] Age groups shown here do not reflect those in the Breast Screening programme (all women aged between 50 and 70 plus self-referrals for those aged over 70).

[3] Due to low numbers in some categories, 'Other and Not Known' include Interval cancer, Other and Not Known.

[4] Treatments are reported separately if number receiving that treatment/combination is greater than 100 in either 2007 or 2012. SACT (Systemic Anti-Cancer Therapy) is chemotherapy and/or biological therapy.

2012: Colorectal Cancer

Characteristic	Colorectal cancer cases diagnosed in 2012		Outcome Group 1 (Living with similar acute healthcare needs)		Outcome Group 2 (Living with increased acute healthcare needs)		Outcome Group 3 (Living with a continued presence of cancer)		Outcome Group 4 (Limited survival)		CHI^2 Test
	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	
Total Cases	**3,825**		**557**	*15*	**682**	*18*	**1,553**	*41*	**1,033**	*27*	
Age Band											p < 0.001
15 - 44	**129**	***3***	34	*6*	19	*3*	56	*4*	20	*2*	
45 - 54	**304**	***8***	54	*10*	58	*9*	160	*10*	32	*3*	
55 - 64	**711**	***19***	141	*25*	129	*19*	344	*22*	97	*9*	
65 - 74	**1,144**	***30***	181	*32*	240	*35*	494	*32*	229	*22*	
75 - 84	**1,084**	***28***	117	*21*	191	*28*	366	*24*	410	*40*	
85 - 99	**453**	***12***	30	*5*	45	*7*	133	*9*	245	*24*	
	p < 0.001										
Average Age (mean)	**70.7**	***(70.3-71.1)***	66.5	*(65.5-67.6)*	69.5	*(68.7-70.4)*	68.7	*(68.1-69.3)*	76.6	*(75.9-77.3)*	
Sex											p = 0.003
Male	2,078	*54*	288	*52*	383	*56*	887	*57*	520	*50*	
Female	1,747	*46*	269	*48*	299	*44*	666	*43*	513	*50*	
	p < 0.001										
Ethnicity											
White	2,469	*65*									
Other ethnicity	16	*0*									
Not Known or refused/not disclosed	1,340	*35*									
	p < 0.001										
Deprivation (SIMD at diagnosis): Crude rate of cases per 100,000 population[1]											
1 (Most deprived)	**86**	***(80-93)***	10	*(8-12)*	17	*(14-20)*	33	*(29-37)*	27	*(24-30)*	
2	**90**	***(84-97)***	13	*(11-16)*	17	*(14-20)*	36	*(32-40)*	24	*(21-28)*	
3	**78**	***(72-84)***	10	*(8-13)*	14	*(12-17)*	30	*(27-34)*	24	*(20-27)*	
4	**91**	***(85-97)***	14	*(12-17)*	17	*(14-20)*	39	*(35-43)*	21	*(18-24)*	
5 (Least deprived)	**83**	***(77-89)***	15	*(13-18)*	12	*(10-14)*	36	*(32-40)*	20	*(17-23)*	
Deprivation (SIMD at diagnosis): Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
1 (Most deprived)	**187**	***(173-201)***	19	*(15-24)*	34	*(29-40)*	71	*(63-80)*	62	*(54-71)*	
2	**179**	***(167-192)***	24	*(20-29)*	34	*(28-39)*	72	*(64-80)*	49	*(43-57)*	
3	**155**	***(143-167)***	20	*(16-24)*	28	*(23-34)*	57	*(51-65)*	49	*(43-57)*	
4	**169**	***(157-181)***	25	*(20-29)*	31	*(26-36)*	71	*(63-79)*	43	*(37-49)*	
5 (Least deprived)	**161**	***(149-173)***	28	*(23-33)*	24	*(20-30)*	69	*(61-77)*	40	*(34-46)*	
Urban Rural Indicator: Crude rate of cases per 100,000 population[1]											
Large Urban Areas	**80**	***(76-84)***	11	*(9-12)*	16	*(14-18)*	32	*(29-35)*	22	*(19-24)*	
Other Urban Areas	**84**	***(79-89)***	13	*(11-15)*	13	*(11-15)*	34	*(31-38)*	22	*(20-25)*	
Accessible Small Towns	**90**	***(81-100)***	12	*(9-16)*	15	*(12-20)*	35	*(29-41)*	28	*(23-33)*	
Remote Small Towns	**118**	***(102-136)***	15	*(9-22)*	23	*(16-31)*	50	*(40-62)*	31	*(23-41)*	
Accessible Rural Areas	**91**	***(83-99)***	16	*(13-20)*	14	*(11-17)*	39	*(34-44)*	23	*(19-27)*	
Remote Rural Areas	**99**	***(88-111)***	13	*(9-18)*	20	*(15-26)*	39	*(32-47)*	27	*(22-34)*	
Urban Rural Indicator: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
Large Urban Areas	**177**	***(167-186)***	22	*(19-25)*	35	*(31-39)*	69	*(63-76)*	50	*(45-56)*	
Other Urban Areas	**163**	***(154-174)***	24	*(21-28)*	26	*(22-30)*	67	*(61-73)*	47	*(41-52)*	
Accessible Small Towns	**159**	***(142-177)***	20	*(15-27)*	27	*(21-35)*	62	*(51-73)*	49	*(40-60)*	
Remote Small Towns	**202**	***(173-232)***	24	*(16-35)*	40	*(27-54)*	83	*(65-102)*	55	*(40-72)*	
Accessible Rural Areas	**169**	***(153-185)***	28	*(22-34)*	26	*(20-33)*	70	*(60-80)*	45	*(37-54)*	
Remote Rural Areas	**159**	***(140-178)***	20	*(14-28)*	31	*(24-40)*	60	*(49-72)*	47	*(37-59)*	
Cancer Networks: Crude rate of cases per 100,000 population[1]											
North of Scotland	**87**	***(81-92)***	12	*(10-15)*	14	*(12-16)*	38	*(35-42)*	22	*(20-25)*	
South-East of Scotland	**84**	***(79-89)***	14	*(12-17)*	13	*(11-15)*	34	*(31-38)*	22	*(19-25)*	
West of Scotland	**86**	***(83-91)***	11	*(10-13)*	17	*(16-19)*	33	*(31-36)*	25	*(22-27)*	
Cancer Networks: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
North of Scotland	**164**	***(153-174)***	22	*(19-26)*	26	*(22-30)*	71	*(65-78)*	44	*(39-50)*	
South-East of Scotland	**167**	***(157-178)***	28	*(24-32)*	27	*(23-32)*	67	*(60-74)*	46	*(40-51)*	
West of Scotland	**175**	***(167-184)***	21	*(18-24)*	34	*(31-38)*	67	*(62-72)*	53	*(48-57)*	
Method of Detection[2]											p < 0.001
Clinical presentation	**3,017**	***79***	372	*67*	479	*70*	1,189	*77*	977	*95*	
Screening	**696**	***18***	160	*29*	189	*28*	318	*20*	29	*3*	
Incidental finding	**92**	***2***	19	*3*	12	*2*	40	*3*	21	*2*	
Other and Not Known	**20**	***1***	6	*1*	2	*0*	6	*0*	6	*1*	
	p < 0.001										
Dukes' stage											p < 0.001
A	**693**	***18***	260	*47*	276	*40*	133	*9*	24	*2*	
B	**909**	***24***	272	*49*	338	*50*	239	*15*	60	*6*	
C	**861**	***23***	0	*0*	0	*0*	752	*48*	109	*11*	
D	**825**	***22***	0	*0*	0	*0*	278	*18*	547	*53*	
Not Known	**537**	***14***	25	*4*	68	*10*	151	*10*	293	*28*	
	p < 0.001										
Grade[3]											p < 0.001
I (Well differentiated)	**125**	***3***	36	*6*	36	*5*	44	*3*	9	*1*	
II (Moderately well differentiated)	**2,343**	***61***	410	*74*	527	*77*	1,064	*69*	342	*33*	
III (Poorly differentiated)	**630**	***16***	78	*14*	70	*10*	284	*18*	198	*19*	
Grade not determined	**727**	***19***	33	*6*	49	*7*	161	*10*	484	*47*	
	p < 0.001										
Morphology											p < 0.001
Polyp-related	**376**	***10***	112	*20*	115	*17*	117	*8*	32	*3*	
Poor	**321**	***8***	42	*8*	52	*8*	151	*10*	76	*7*	
Not Known	**3,128**	***82***	403	*72*	515	*76*	1,285	*83*	925	*90*	
	p < 0.001										
Treatments[4]											p < 0.001
Surgery only	**1,774**	***46***	450	*81*	512	*75*	569	*37*	243	*24*	p < 0.001
SACT only	**171**	***4***	1	*0*	2	*0*	73	*5*	95	*9*	p < 0.001
Surgery & SACT	**746**	***20***	54	*10*	52	*8*	579	*37*	61	*6*	p < 0.001
Surgery & Radiotherapy & SACT	**230**	***6***	25	*4*	58	*9*	134	*9*	13	*1*	p < 0.001
Other Treatment	**206**	***5***	21	*4*	32	*5*	92	*6*	61	*6*	p = 0.177
No treatment	**698**	***18***	6	*1*	26	*4*	106	*7*	560	*54*	p < 0.001
	p < 0.001										

[1] Confidence intervals (CI) are only calculated for rates where there are more than 20 cases (as CI estimates are unreliable otherwise).

[2] Due to low numbers in some categories, 'Other and Not Known' include Interval cancer, Other and Not Known

[3] Four cases were recorded as grade IV (these cases have been recoded to Grade not determined).

[4] Treatments are reported separately if number receiving that treatment/combination is greater than 100 in 2007 or 2012. SACT (Systemic Anti-Cancer Therapy) is chemotherapy and/or biological therapy.

2012: Lung Cancer

Characteristic	Lung cancer cases diagnosed in 2012		Outcome Group 1 (Living with similar acute healthcare needs)		Outcome Group 2 (Living with increased acute healthcare needs)		Outcome Group 3 (Living with a continued presence of cancer)		Outcome Group 4 (Limited survival)		CHI^2 Test
	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	
Total Cases	**5,182**		**179**	*3*	**238**	*5*	**1,398**	*27*	**3,367**	*65*	
Age Band											p < 0.001
15 - 44	**38**	***1***	3	*2*	4	*2*	12	*1*	19	*1*	
45 - 54	**237**	***5***	16	*9*	11	*5*	90	*6*	120	*4*	
55 - 64	**937**	***18***	48	*27*	46	*19*	290	*21*	553	*16*	
65 - 74	**1,755**	***34***	67	*37*	93	*39*	521	*37*	1,074	*32*	
75 - 84	**1,681**	***32***	38	*21*	65	*27*	387	*28*	1,191	*35*	
85 - 99	**534**	***10***	7	*4*	19	*8*	98	*7*	410	*12*	
	p < 0.001										
Average Age (mean)	**72.4**	***(72.1-72.7)***	67.6	*(66.0-69.1)*	70.7	*(69.4-72.0)*	70.6	*(70.1-71.1)*	73.5	*(73.2-73.9)*	
Sex											p = 0.044
Male	2,602	*50*	91	*51*	112	*47*	662	*47*	1,737	*52*	
Female	2,580	*50*	88	*49*	126	*53*	736	*53*	1,630	*48*	
	p = 0.770										
Ethnicity											
White	3,437	*66*									
Other ethnicity	20	*0*									
Not Known or refused/not disclosed	1,725	*33*									
	p < 0.001										
Deprivation (SIMD at diagnosis): Crude rate of cases per 100,000 population[1]											
1 (Most deprived)	**183**	***(174-192)***	6	*(4-7)*	9	*(7-11)*	46	*(42-51)*	122	*(115-130)*	
2	**136**	***(129-144)***	4	*(3-6)*	6	*(5-8)*	35	*(31-39)*	91	*(85-97)*	
3	**112**	***(105-119)***	4	*(3-6)*	4	*(3-6)*	31	*(27-35)*	72	*(67-78)*	
4	**85**	***(79-91)***	3	*(2-5)*	3	*(2-5)*	27	*(24-31)*	52	*(47-57)*	
5 (Least deprived)	**64**	***(59-70)***	3	*(2-4)*	4	*(3-5)*	18	*(15-21)*	40	*(36-45)*	
Deprivation (SIMD at diagnosis): Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
1 (Most deprived)	**403**	***(383-423)***	12	*(9-16)*	19	*(15-24)*	101	*(91-111)*	271	*(255-288)*	
2	**272**	***(257-288)***	8	*(6-11)*	12	*(9-15)*	68	*(61-76)*	184	*(171-197)*	
3	**226**	***(212-241)***	8	*(6-11)*	9	*(6-12)*	61	*(54-68)*	148	*(137-160)*	
4	**167**	***(155-179)***	6	*(4-8)*	6	*(4-8)*	51	*(45-58)*	104	*(94-114)*	
5 (Least deprived)	**130**	***(119-141)***	5	*(3-7)*	8	*(5-11)*	35	*(30-41)*	82	*(73-91)*	
Urban Rural Indicator: Crude rate of cases per 100,000 population[1]											
Large Urban Areas	**126**	***(121-131)***	5	*(4-6)*	6	*(5-8)*	34	*(31-37)*	81	*(77-85)*	
Other Urban Areas	**115**	***(109-120)***	3	*(2-5)*	5	*(4-6)*	31	*(29-35)*	75	*(70-80)*	
Accessible Small Towns	**115**	***(104-126)***	4		8	*(5-11)*	30	*(25-37)*	73	*(64-82)*	
Remote Small Towns	**126**	***(109-144)***	4		4		36	*(28-47)*	82	*(69-97)*	
Accessible Rural Areas	**94**	***(86-102)***	3		3		24	*(20-28)*	64	*(57-71)*	
Remote Rural Areas	**101**	***(90-113)***	4		2		29	*(23-36)*	66	*(57-76)*	
Urban Rural Indicator: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
Large Urban Areas	**287**	***(275-300)***	10	*(8-13)*	14	*(12-17)*	76	*(70-82)*	187	*(177-197)*	
Other Urban Areas	**227**	***(215-238)***	6	*(5-8)*	9	*(7-12)*	61	*(55-67)*	150	*(141-159)*	
Accessible Small Towns	**214**	***(194-235)***	6		14	*(9-20)*	55	*(45-65)*	138	*(122-156)*	
Remote Small Towns	**213**	***(184-244)***	6		6		61	*(47-78)*	140	*(116-165)*	
Accessible Rural Areas	**177**	***(162-193)***	6		5		44	*(36-52)*	122	*(109-136)*	
Remote Rural Areas	**166**	***(147-186)***	6		4		46	*(36-56)*	110	*(94-127)*	
Cancer Networks: Crude rate of cases per 100,000 population[1]											
North of Scotland	**97**	***(91-102)***	2	*(2-3)*	3	*(2-4)*	27	*(24-30)*	65	*(60-69)*	
South-East of Scotland	**107**	***(102-113)***	4	*(3-6)*	5	*(4-6)*	28	*(25-31)*	70	*(65-75)*	
West of Scotland	**133**	***(128-138)***	5	*(4-6)*	7	*(6-8)*	36	*(33-38)*	85	*(81-89)*	
Cancer Networks: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
North of Scotland	**185**	***(174-197)***	4	*(3-6)*	5	*(3-7)*	50	*(45-56)*	125	*(116-135)*	
South-East of Scotland	**218**	***(206-230)***	8	*(6-10)*	10	*(8-13)*	58	*(52-64)*	142	*(133-152)*	
West of Scotland	**276**	***(265-286)***	9	*(8-11)*	14	*(12-16)*	72	*(67-78)*	180	*(171-189)*	
Method of Detection											p < 0.001
Clinical presentation	**4,724**	***91***	144	*80*	204	*86*	1,218	*87*	3,158	*94*	
Incidental finding	**435**	***8***	32	*18*	29	*12*	175	*13*	199	*6*	
Other and Not Known	**23**	***0***	3	*2*	5	*2*	5	*0*	10	*0*	
	p < 0.001										
Stage[2]											p < 0.001
1	**622**	***12***	126	*70*	156	*66*	242	*17*	98	*3*	
2	**313**	***6***	17	*9*	39	*16*	152	*11*	105	*3*	
3	**963**	***19***	0	*0*	0	*0*	438	*31*	525	*16*	
4	**2,327**	***45***	0	*0*	0	*0*	340	*24*	1,987	*59*	
Not Known	**957**	***18***	36	*20*	43	*18*	226	*16*	652	*19*	
	p < 0.001										
Grade											p < 0.001
I (Well differentiated)	**49**	***1***	15	*8*	8	*3*	15	*1*	11	*0*	
II (Moderately well differentiated)	**629**	***12***	51	*28*	77	*32*	283	*20*	218	*6*	
III (Poorly differentiated)	**804**	***16***	34	*19*	31	*13*	241	*17*	498	*15*	
IV (Undifferentiated)	**85**	***2***	0	*0*	1	*0*	22	*2*	62	*2*	
Grade not determined	**3,615**	***70***	79	*44*	121	*51*	837	*60*	2,578	*77*	
	p < 0.001										
Small Cell/Non Small Cell											p < 0.001
Small cell	647	*12*	3	*2*	5	*2*	156	*11*	483	*14*	
Other/NK	4,535	*88*	176	*98*	233	*98*	1,242	*89*	2,884	*86*	
	p < 0.001										
Treatments[3]											p < 0.001
Surgery only	486	*9*	115	*64*	123	*52*	202	*14*	46	*1*	p < 0.001
Radiotherapy only	1,075	*21*	28	*16*	49	*21*	310	*22*	688	*20*	p = 0.189
SACT only	481	*9*	1	*1*	1	*0*	151	*11*	328	*10*	p < 0.001
Radiotherapy & SACT	737	*14*	6	*3*	7	*3*	370	*26*	354	*11*	p < 0.001
Other Treatment	153	*3*	12	*7*	9	*4*	108	*8*	24	*1*	p < 0.001
No treatment	2,250	*43*	17	*9*	49	*21*	257	*18*	1,927	*57*	p < 0.001
	p < 0.001										

[1] Confidence intervals (CI) are only calculated for rates where there are more than 20 cases (as CI estimates are unreliable otherwise).

[2] Five cases had no stage recorded (these cases have been recoded to Not Known).

[3] Treatments are reported separately if number receiving that treatment/combination is greater than 100 in 2007 or 2012. SACT (Systemic Anti-Cancer Therapy) is chemotherapy and/or biological therapy.

2012: Prostate Cancer

Characteristic	Prostate cancer cases diagnosed in 2012		Outcome Group 1 (Living with similar acute healthcare needs)		Outcome Group 2 (Living with increased acute healthcare needs)		Outcome Group 3 (Living with a continued presence of cancer)		Outcome Group 4 (Limited survival)		CHI^2 Test
	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	
Total Cases	**3,107**		**858**	*28*	**742**	*24*	**1,243**	*40*	**264**	*8*	
Age Band											p < 0.001
15 - 54	**132**	***4***	64	*7*	37	*5*	28	*2*	3	*1*	
55 - 64	**706**	***23***	269	*31*	194	*26*	225	*18*	18	*7*	
65 - 74	**1,269**	***41***	401	*47*	333	*45*	486	*39*	49	*19*	
75 - 84	**747**	***24***	112	*13*	149	*20*	391	*31*	95	*36*	
85 - 99	**253**	***8***	12	*1*	29	*4*	113	*9*	99	*38*	
	p < 0.001										
Average Age (mean)	**70.9**	***(70.6-71.3)***	66.9	*(66.4-67.5)*	69.3	*(68.7-69.9)*	72.7	*(72.2-73.2)*	80.3	*(79.1-81.4)*	
Ethnicity											
White	1,575	*51*									
Other ethnicity	7	*0*									
Not Known or refused/not disclosed	1,525	*49*									
	p < 0.001										
Deprivation (SIMD at diagnosis): Crude rate of cases per 100,000 population[1]											
1 (Most deprived)	**110**	***(100-120)***	24	*(20-29)*	27	*(22-32)*	45	*(39-52)*	13	*(10-17)*	
2	**138**	***(128-150)***	38	*(32-44)*	36	*(30-42)*	53	*(47-61)*	12	*(9-15)*	
3	**145**	***(134-156)***	39	*(34-45)*	34	*(29-40)*	59	*(52-67)*	12	*(9-16)*	
4	**165**	***(153-178)***	42	*(36-48)*	39	*(33-45)*	70	*(62-78)*	15	*(11-19)*	
5 (Least deprived)	**167**	***(155-180)***	57	*(50-65)*	38	*(32-44)*	62	*(55-70)*	10	*(7-13)*	
Deprivation (SIMD at diagnosis): Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
1 (Most deprived)	**266**	***(242-292)***	53	*(43-64)*	61	*(50-73)*	113	*(97-131)*	39	*(29-50)*	
2	**304**	***(280-330)***	78	*(66-90)*	76	*(65-89)*	119	*(104-135)*	31	*(22-40)*	
3	**312**	***(287-337)***	77	*(66-89)*	72	*(60-84)*	130	*(115-147)*	33	*(24-43)*	
4	**336**	***(311-361)***	79	*(68-91)*	76	*(64-88)*	143	*(127-160)*	38	*(29-48)*	
5 (Least deprived)	**348**	***(322-375)***	110	*(96-125)*	75	*(64-88)*	136	*(120-153)*	27	*(19-36)*	
Urban Rural Indicator: Crude rate of cases per 100,000 population[1]											
Large Urban Areas	**128**	***(120-136)***	35	*(31-39)*	34	*(30-38)*	48	*(43-53)*	11	*(9-14)*	
Other Urban Areas	**135**	***(127-145)***	39	*(35-44)*	31	*(27-36)*	55	*(50-61)*	10	*(8-13)*	
Accessible Small Towns	**163**	***(145-183)***	52	*(42-64)*	35	*(27-44)*	64	*(53-77)*	12	*(8-18)*	
Remote Small Towns	**149**	***(123-179)***	43	*(29-60)*	31	*(20-46)*	62	*(46-83)*	13		
Accessible Rural Areas	**189**	***(173-206)***	48	*(40-57)*	44	*(36-53)*	81	*(71-93)*	16	*(12-22)*	
Remote Rural Areas	**184**	***(162-207)***	43	*(33-56)*	41	*(31-53)*	77	*(63-93)*	22	*(15-32)*	
Urban Rural Indicator: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
Large Urban Areas	**322**	***(302-342)***	81	*(72-90)*	83	*(73-93)*	125	*(113-138)*	33	*(27-41)*	
Other Urban Areas	**289**	***(270-309)***	77	*(68-87)*	64	*(55-74)*	119	*(107-132)*	29	*(22-36)*	
Accessible Small Towns	**318**	***(282-356)***	96	*(78-117)*	66	*(50-84)*	129	*(106-154)*	27	*(17-40)*	
Remote Small Towns	**261**	***(216-312)***	74	*(51-101)*	53	*(34-76)*	112	*(83-146)*	23		
Accessible Rural Areas	**368**	***(335-402)***	83	*(69-99)*	80	*(66-96)*	162	*(140-186)*	42	*(29-56)*	
Remote Rural Areas	**315**	***(277-357)***	66	*(51-84)*	64	*(48-81)*	134	*(109-161)*	52	*(35-73)*	
Cancer Networks: Crude rate of cases per 100,000 population[1]											
North of Scotland	**153**	***(143-163)***	38	*(33-43)*	33	*(28-38)*	67	*(60-74)*	15	*(12-18)*	
South-East of Scotland	**161**	***(151-172)***	54	*(48-60)*	37	*(32-42)*	58	*(52-65)*	12	*(9-15)*	
West of Scotland	**131**	***(124-138)***	33	*(29-37)*	34	*(31-38)*	53	*(48-58)*	11	*(9-13)*	
Cancer Networks: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
North of Scotland	**315**	***(294-337)***	72	*(63-82)*	65	*(56-75)*	139	*(125-154)*	39	*(31-48)*	
South-East of Scotland	**347**	***(325-370)***	108	*(96-120)*	78	*(68-89)*	130	*(116-144)*	32	*(25-40)*	
West of Scotland	**294**	***(278-311)***	68	*(61-76)*	73	*(66-82)*	122	*(111-133)*	30	*(25-37)*	
Method of Detection											p = 0.081
Clinical presentation	**2,865**	***92***	784	*91*	686	*92*	1,162	*93*	233	*88*	
Incidental finding	**212**	***7***	65	*8*	48	*6*	70	*6*	29	*11*	
Other and Not Known	**30**	***1***	9	*1*	8	*1*	11	*1*	2	*1*	
	p < 0.001										
Gleason score											p < 0.001
1 - 6	**856**	***28***	409	*48*	325	*44*	107	*9*	15	*6*	
7	**950**	***31***	422	*49*	337	*45*	166	*13*	25	*9*	
8 - 10	**705**	***23***	0	*0*	0	*0*	667	*54*	38	*14*	
Not Known	**596**	***19***	27	*3*	80	*11*	303	*24*	186	*70*	
	p < 0.001										
Treatments[2]											p < 0.001
Surgery only	467	*15*	216	*25*	155	*21*	81	*7*	15	*6*	p < 0.001
Radiotherapy only	178	*6*	100	*12*	50	*7*	22	*2*	6	*2*	p < 0.001
Hormonal therapy	724	*23*	44	*5*	84	*11*	478	*38*	118	*45*	p < 0.001
Radiotherapy & Hormonal therapy	786	*25*	229	*27*	173	*23*	361	*29*	23	*9*	p < 0.001
Other Treatment	230	*7*	22	*3*	22	*3*	172	*14*	14	*5*	p < 0.001
No treatment	722	*23*	247	*29*	258	*35*	129	*10*	88	*33*	p < 0.001
	p < 0.001										

[1] Confidence intervals (CI) are only calculated for rates where there are more than 20 cases (as CI estimates are unreliable otherwise).

[2] Treatments are reported separately if number receiving that treatment/combination is greater than 100 in 2007 or 2012. SACT (Systemic Anti-Cancer Therapy) is chemotherapy and/or biological therapy.

2007: Breast Cancer

Characteristic	Breast cancer cases diagnosed in 2007		Outcome Group 1 (Living with similar acute healthcare needs)		Outcome Group 2 (Living with increased acute healthcare needs)		Outcome Group 3 (Living with a continued presence of cancer)		Outcome Group 4 (Limited survival)		CHI^2 Test
	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	
Total Cases	**4,020**		**1,231**	*31*	**865**	*22*	**1,614**	*40*	**310**	*8*	
Age Band											p < 0.001
15 - 44	**415**	***10***	87	*7*	73	*8*	249	*15*	6	*2*	
45 - 54	**849**	***21***	288	*23*	184	*21*	358	*22*	19	*6*	
55 - 64	**971**	***24***	380	*31*	210	*24*	358	*22*	23	*7*	
65 - 74	**887**	***22***	293	*24*	196	*23*	340	*21*	58	*19*	
75 - 84	**606**	***15***	145	*12*	136	*16*	219	*14*	106	*34*	
85 - 99	**292**	***7***	38	*3*	66	*8*	90	*6*	98	*32*	
	p < 0.001										
Average Age (mean)	**63.1**	***(62.7-63.6)***	61.8	*(61.2-62.5)*	63.9	*(62.9-64.8)*	61.0	*(60.3-61.7)*	77.4	*(76.0-78.8)*	
Ethnicity											
White	**461**	***11***									
Other ethnicity	**5**	***0***									
Not Known or refused/not disclosed	**3,554**	***88***									
	p < 0.001										
Deprivation (SIMD at diagnosis): Crude rate of cases per 100,000 population[1]											
1 (Most deprived)	**152**	***(141-164)***	40	*(35-46)*	37	*(32-43)*	59	*(52-66)*	16	*(13-20)*	
2	**170**	***(158-182)***	50	*(43-57)*	36	*(31-42)*	71	*(63-79)*	13	*(10-17)*	
3	**185**	***(172-198)***	56	*(49-63)*	43	*(37-50)*	71	*(63-79)*	15	*(11-19)*	
4	**186**	***(174-199)***	63	*(56-71)*	37	*(32-43)*	72	*(65-81)*	13	*(10-17)*	
5 (Least deprived)	**200**	***(187-214)***	65	*(57-73)*	39	*(33-45)*	85	*(77-95)*	11	*(8-14)*	
Deprivation (SIMD at diagnosis): Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
1 (Most deprived)	**277**	***(255-299)***	77	*(66-89)*	69	*(59-81)*	99	*(87-113)*	31	*(24-39)*	
2	**291**	***(270-313)***	89	*(78-102)*	62	*(52-72)*	116	*(102-130)*	25	*(19-31)*	
3	**307**	***(285-330)***	95	*(83-108)*	74	*(64-86)*	111	*(98-125)*	26	*(20-33)*	
4	**311**	***(289-334)***	109	*(96-123)*	63	*(53-74)*	114	*(101-128)*	25	*(19-31)*	
5 (Least deprived)	**341**	***(318-365)***	116	*(102-130)*	68	*(57-79)*	137	*(122-152)*	21	*(15-27)*	
Urban Rural Indicator: Crude rate of cases per 100,000 population[1]											
Large Urban Areas	**160**	***(152-168)***	46	*(42-51)*	36	*(32-40)*	64	*(59-70)*	14	*(11-17)*	
Other Urban Areas	**192**	***(182-203)***	59	*(54-65)*	42	*(38-48)*	78	*(71-85)*	13	*(10-16)*	
Accessible Small Towns	**177**	***(159-197)***	57	*(47-68)*	38	*(30-48)*	68	*(57-80)*	14	*(10-21)*	
Remote Small Towns	**230**	***(199-265)***	85	*(66-107)*	50	*(36-68)*	79	*(61-100)*	17		
Accessible Rural Areas	**171**	***(155-187)***	56	*(47-66)*	31	*(25-39)*	71	*(61-82)*	13	*(9-18)*	
Remote Rural Areas	**208**	***(185-233)***	60	*(48-75)*	42	*(32-54)*	90	*(75-106)*	16	*(10-24)*	
Urban Rural Indicator: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
Large Urban Areas	**293**	***(277-310)***	88	*(79-97)*	67	*(60-75)*	111	*(102-122)*	27	*(22-32)*	
Other Urban Areas	**327**	***(308-346)***	107	*(96-118)*	74	*(65-83)*	123	*(111-134)*	24	*(19-29)*	
Accessible Small Towns	**286**	***(256-319)***	92	*(75-110)*	61	*(47-76)*	107	*(89-127)*	27	*(18-37)*	
Remote Small Towns	**362**	***(311-417)***	137	*(106-172)*	78	*(55-104)*	121	*(92-154)*	26		
Accessible Rural Areas	**282**	***(255-311)***	96	*(80-113)*	55	*(43-68)*	106	*(89-124)*	26	*(18-35)*	
Remote Rural Areas	**308**	***(272-345)***	92	*(73-113)*	62	*(47-80)*	129	*(106-154)*	24	*(15-36)*	
Cancer Networks: Crude rate of cases per 100,000 population[1]											
North of Scotland	**192**	***(181-204)***	60	*(54-67)*	39	*(34-44)*	81	*(74-89)*	12	*(9-15)*	
South-East of Scotland	**175**	***(165-186)***	52	*(47-58)*	37	*(32-42)*	72	*(65-79)*	15	*(12-18)*	
West of Scotland	**172**	***(165-180)***	53	*(49-58)*	39	*(35-43)*	66	*(61-71)*	14	*(12-17)*	
Cancer Networks: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
North of Scotland	**319**	***(299-339)***	105	*(94-116)*	67	*(58-77)*	125	*(113-138)*	21	*(17-27)*	
South-East of Scotland	**302**	***(284-322)***	95	*(84-106)*	65	*(56-74)*	116	*(104-128)*	27	*(22-33)*	
West of Scotland	**300**	***(286-315)***	95	*(87-104)*	68	*(61-75)*	110	*(101-119)*	27	*(23-31)*	
Method of Detection[2],[3]											p < 0.001
Clinical presentation	**2,716**	***68***	675	*55*	549	*63*	1,239	*77*	253	*82*	
Screening examination	**1,157**	***29***	528	*43*	296	*34*	320	*20*	13	*4*	
Incidental finding	**99**	***2***	18	*1*	14	*2*	34	*2*	33	*11*	
Other and Not Known	**48**	***1***	10	*1*	6	*1*	21	*1*	11	*4*	
	p < 0.001										
Stage											p < 0.001
1	**1,282**	***32***	676	*55*	411	*48*	185	*11*	10	*3*	
2	**1,377**	***34***	420	*34*	312	*36*	606	*38*	39	*13*	
3	**484**	***12***	0	*0*	0	*0*	442	*27*	42	*14*	
4	**213**	***5***	0	*0*	0	*0*	152	*9*	61	*20*	
Not Known	**664**	***17***	135	*11*	142	*16*	229	*14*	158	*51*	
	p < 0.001										
Grade[4]											p < 0.001
I (Well differentiated)	**458**	***11***	182	*15*	138	*16*	126	*8*	12	*4*	
II (Moderately well differentiated)	**1,656**	***41***	588	*48*	386	*45*	618	*38*	64	*21*	
III (Poorly differentiated)	**1,435**	***36***	377	*31*	265	*31*	706	*44*	87	*28*	
Grade not determined	**471**	***12***	84	*7*	76	*9*	164	*10*	147	*47*	
	p < 0.001										
Morphology											p < 0.001
Very Good	**140**	***3***	59	*5*	34	*4*	35	*2*	12	*4*	
Good	**660**	***16***	199	*16*	167	*19*	250	*15*	44	*14*	
Intermediate	**2,941**	***73***	919	*75*	623	*72*	1,233	*76*	166	*54*	
Poor or Very poor	**151**	***4***	15	*1*	21	*2*	63	*4*	52	*17*	
Not Known	**128**	***3***	39	*3*	20	*2*	33	*2*	36	*12*	
	p < 0.001										
Treatments[5]											p < 0.001
Surgery only	**503**	***13***	191	*16*	152	*18*	135	*8*	25	*8*	p < 0.001
Hormonal therapy only	**334**	***8***	50	*4*	76	*9*	121	*7*	87	*28*	p < 0.001
Surgery & Radiotherapy	**92**	***2***	42	*3*	19	*2*	28	*2*	3	*1*	p = 0.009
Surgery & SACT	**397**	***10***	90	*7*	60	*7*	232	*14*	15	*5*	p < 0.001
Surgery & Hormonal therapy	**522**	***13***	212	*17*	168	*19*	138	*9*	4	*1*	p < 0.001
Surgery & Radiotherapy & SACT	**298**	***7***	85	*7*	37	*4*	166	*10*	10	*3*	p < 0.001
Surgery & SACT & Hormonal therapy	**216**	***5***	53	*4*	41	*5*	116	*7*	6	*2*	p < 0.001
Surgery & Radiotherapy & Hormonal	**762**	***19***	373	*30*	212	*25*	168	*10*	9	*3*	p < 0.001
Surgery & Radiotherapy & SACT & Hormonal	**579**	***14***	108	*9*	75	*9*	396	*25*	0	*0*	p < 0.001
Other Treatment	**128**	***3***	4	*0*	4	*0*	80	*5*	40	*13*	p < 0.001
No Treatment	**189**	***5***	23	*2*	21	*2*	34	*2*	111	*36*	p < 0.001
	p < 0.001										

[1] Confidence intervals (CI) are only calculated for rates where there are more than 20 cases (as CI estimates are unreliable otherwise).

[2] Age groups shown here do not reflect those in the Breast Screening programme (all women aged between 50 and 70 plus self-referrals for those aged over 70).

[3] Due to low numbers in some categories, 'Other and Not Known' include Interval cancer, Other and Not Known.

[4] One case was recorded as grade IV (it has been recoded to Grade not determined).

[5] Treatments are reported separately if number receiving that treatment/combination is greater than 100 in either 2007 or 2012. SACT (Systemic Anti-Cancer Therapy) is chemotherapy and/or biological therapy.

2007: Colorectal Cancer

Characteristic	Colorectal cancer cases diagnosed in 2007		Outcome Group 1 (Living with similar acute healthcare needs)		Outcome Group 2 (Living with increased acute healthcare needs)		Outcome Group 3 (Living with a continued presence of cancer)		Outcome Group 4 (Limited survival)		CHI^2 Test
	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	
Total Cases	**3,618**		**451**	*12*	**658**	*18*	**1,496**	*41*	**1,013**	*28*	
Age Band											p < 0.001
15 - 44	**92**	***3***	13	*3*	16	*2*	50	*3*	13	*1*	
45 - 54	**268**	***7***	33	*7*	50	*8*	146	*10*	39	*4*	
55 - 64	**670**	***19***	107	*24*	118	*18*	298	*20*	147	*15*	
65 - 74	**1,023**	***28***	154	*34*	193	*29*	464	*31*	212	*21*	
75 - 84	**1,168**	***32***	116	*26*	237	*36*	419	*28*	396	*39*	
85 - 99	**397**	***11***	28	*6*	44	*7*	119	*8*	206	*20*	
	p < 0.001										
Average Age (mean)	**71.2**	***(70.8-71.6)***	69.1	*(68.0-70.2)*	70.8	*(69.9-71.6)*	69.3	*(68.7-69.9)*	75.3	*(74.6-76.0)*	
Sex											p = 0.602
Male	1,957	*54*	246	*55*	369	*56*	808	*54*	534	*53*	
Female	1,661	*46*	205	*45*	289	*44*	688	*46*	479	*47*	
	p < 0.001										
Ethnicity											
White	427	*12*									
Other ethnicity	2	*0*									
Not Known or refused/not disclosed	3,189	*88*									
	p < 0.001										
Deprivation (SIMD at diagnosis): Crude rate of cases per 100,000 population[1]											
1 (Most deprived)	**83**	***(77-90)***	9	*(7-11)*	14	*(11-16)*	34	*(30-38)*	27	*(23-31)*	
2	**90**	***(84-96)***	9	*(8-12)*	17	*(14-20)*	37	*(33-41)*	27	*(23-30)*	
3	**88**	***(82-94)***	11	*(8-13)*	17	*(14-20)*	38	*(34-42)*	23	*(20-26)*	
4	**77**	***(71-83)***	11	*(9-13)*	15	*(12-17)*	31	*(27-35)*	21	*(18-24)*	
5 (Least deprived)	**82**	***(76-88)***	13	*(10-15)*	14	*(12-17)*	34	*(30-38)*	21	*(18-24)*	
Deprivation (SIMD at diagnosis): Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
1 (Most deprived)	**187**	***(173-201)***	19	*(15-24)*	31	*(25-37)*	73	*(65-82)*	64	*(56-73)*	
2	**182**	***(169-196)***	18	*(15-23)*	34	*(28-40)*	75	*(67-84)*	55	*(48-63)*	
3	**181**	***(168-195)***	21	*(17-25)*	34	*(29-40)*	76	*(68-85)*	50	*(43-58)*	
4	**155**	***(143-167)***	21	*(17-25)*	29	*(24-35)*	61	*(54-69)*	44	*(37-51)*	
5 (Least deprived)	**181**	***(167-195)***	27	*(22-33)*	32	*(26-38)*	74	*(66-84)*	48	*(40-56)*	
Urban Rural Indicator: Crude rate of cases per 100,000 population[1]											
Large Urban Areas	**77**	***(73-81)***	9	*(7-10)*	14	*(12-16)*	33	*(30-35)*	21	*(19-24)*	
Other Urban Areas	**81**	***(77-86)***	11	*(10-13)*	13	*(11-15)*	33	*(30-36)*	24	*(21-27)*	
Accessible Small Towns	**97**	***(88-108)***	13	*(9-17)*	19	*(15-24)*	39	*(33-46)*	26	*(21-32)*	
Remote Small Towns	**114**	***(98-132)***	13		23	*(16-31)*	50	*(39-62)*	29	*(21-39)*	
Accessible Rural Areas	**83**	***(75-91)***	10	*(8-13)*	16	*(13-20)*	34	*(29-40)*	22	*(18-27)*	
Remote Rural Areas	**105**	***(94-118)***	12	*(8-17)*	21	*(16-27)*	42	*(35-50)*	30	*(24-37)*	
Urban Rural Indicator: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
Large Urban Areas	**174**	***(164-185)***	19	*(16-23)*	32	*(28-36)*	72	*(66-79)*	51	*(46-57)*	
Other Urban Areas	**174**	***(163-185)***	24	*(20-28)*	27	*(22-31)*	70	*(63-77)*	53	*(47-60)*	
Accessible Small Towns	**198**	***(177-220)***	25	*(18-32)*	41	*(31-51)*	80	*(67-95)*	53	*(42-64)*	
Remote Small Towns	**190**	***(162-220)***	22		39	*(27-53)*	83	*(65-103)*	46	*(33-61)*	
Accessible Rural Areas	**170**	***(153-187)***	19	*(14-24)*	32	*(25-39)*	69	*(58-80)*	51	*(41-61)*	
Remote Rural Areas	**183**	***(162-205)***	20	*(13-27)*	37	*(28-47)*	71	*(59-85)*	55	*(43-68)*	
Cancer Networks: Crude rate of cases per 100,000 population[1]											
North of Scotland	**91**	***(85-97)***	12	*(10-15)*	17	*(14-19)*	38	*(34-42)*	24	*(21-27)*	
South-East of Scotland	**84**	***(79-89)***	13	*(11-15)*	13	*(11-15)*	35	*(31-38)*	23	*(20-26)*	
West of Scotland	**80**	***(76-84)***	8	*(7-9)*	16	*(14-17)*	33	*(31-36)*	23	*(21-26)*	
Cancer Networks: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
North of Scotland	**178**	***(166-189)***	23	*(20-28)*	33	*(28-38)*	73	*(66-80)*	49	*(43-56)*	
South-East of Scotland	**176**	***(165-188)***	26	*(22-30)*	28	*(24-33)*	72	*(65-79)*	50	*(44-56)*	
West of Scotland	**177**	***(168-187)***	17	*(14-20)*	33	*(30-38)*	72	*(66-78)*	55	*(49-60)*	
Method of Detection[2]											p < 0.001
Clinical presentation	**3,396**	***94***	404	*90*	617	*94*	1,423	*95*	952	*94*	
Screening	**109**	***3***	33	*7*	27	*4*	39	*3*	10	*1*	
Incidental finding	**66**	***2***	8	*2*	10	*2*	26	*2*	22	*2*	
Other and Not Known	**47**	***1***	6	*1*	4	*1*	8	*1*	29	*3*	
	p < 0.001										
Dukes' stage											p < 0.001
A	**436**	***12***	154	*34*	181	*28*	77	*5*	24	*2*	
B	**969**	***27***	240	*53*	360	*55*	280	*19*	89	*9*	
C	**870**	***24***	0	*0*	0	*0*	726	*49*	144	*14*	
D	**634**	***18***	0	*0*	0	*0*	234	*16*	400	*39*	
Not Known	**709**	***20***	57	*13*	117	*18*	179	*12*	356	*35*	
	p < 0.001										
Grade[3]											p < 0.001
I (Well differentiated)	**102**	***3***	17	*4*	28	*4*	39	*3*	18	*2*	
II (Moderately well differentiated)	**2,221**	***61***	326	*72*	473	*72*	1,034	*69*	388	*38*	
III (Poorly differentiated)	**530**	***15***	44	*10*	69	*10*	234	*16*	183	*18*	
Grade not determined	**765**	***21***	64	*14*	88	*13*	189	*13*	424	*42*	
	p < 0.001										
Morphology											p < 0.001
Polyp-related	**227**	***6***	56	*12*	83	*13*	62	*4*	26	*3*	
Poor	**264**	***7***	27	*6*	37	*6*	136	*9*	64	*6*	
Not Known	**3,127**	***86***	368	*82*	538	*82*	1,298	*87*	923	*91*	
	p < 0.001										
Treatments[4]											p < 0.001
Surgery only	**1,771**	***49***	365	*81*	518	*79*	564	*38*	324	*32*	p < 0.001
SACT only	**162**	***4***	1	*0*	0	*0*	74	*5*	87	*9*	p < 0.001
Surgery & SACT	**765**	***21***	42	*9*	49	*7*	589	*39*	85	*8*	p < 0.001
Surgery & Radiotherapy & SACT	**192**	***5***	17	*4*	42	*6*	114	*8*	19	*2*	p < 0.001
Other Treatment	**170**	***5***	14	*3*	20	*3*	82	*5*	54	*5*	p = 0.023
No treatment	**558**	***15***	12	*3*	29	*4*	73	*5*	444	*44*	p < 0.001
	p < 0.001										

[1] Confidence intervals (CI) are only calculated for rates where there are more than 20 cases (as CI estimates are unreliable otherwise).

[2] Due to low numbers in some categories, 'Other and Not Known' include Interval cancer, Other and Not Known

[3] Six cases were recorded as grade IV (these cases have been recoded to Grade not determined).

[4] Treatments are reported separately if number receiving that treatment/combination is greater than 100 in 2007 or 2012. SACT (Systemic Anti-Cancer Therapy) is chemotherapy and/or biological therapy.

2007: Lung Cancer

Characteristic	Lung cancer cases diagnosed in 2007		Outcome Group 1 (Living with similar acute healthcare needs)		Outcome Group 2 (Living with increased acute healthcare needs)		Outcome Group 3 (Living with a continued presence of cancer)		Outcome Group 4 (Limited survival)		CHI^2 Test
	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	
Total Cases	**4,884**		**141**	*3*	**182**	*4*	**1,118**	*23*	**3,443**	*70*	
Age Band											p < 0.001
15 - 44	**58**	***1***	5	*4*	7	*4*	12	*1*	34	*1*	
45 - 54	**269**	***6***	15	*11*	12	*7*	84	*8*	158	*5*	
55 - 64	**991**	***20***	41	*29*	32	*18*	277	*25*	641	*19*	
65 - 74	**1,580**	***32***	48	*34*	67	*37*	400	*36*	1,065	*31*	
75 - 84	**1,556**	***32***	29	*21*	57	*31*	293	*26*	1,177	*34*	
85 - 99	**430**	***9***	3	*2*	7	*4*	52	*5*	368	*11*	
	p < 0.001										
Average Age (mean)	**71.4**	***(71.1-71.7)***	66.3	*(64.5-68.1)*	69.1	*(67.3-70.8)*	69.2	*(68.6-69.7)*	72.5	*(72.1-72.8)*	
Sex											p = 0.010
Male	2,554	*52*	70	*50*	81	*45*	553	*49*	1,850	*54*	
Female	2,330	*48*	71	*50*	101	*55*	565	*51*	1,593	*46*	
	p = 0.001										
Ethnicity											
White	398	*8*									
Other ethnicity	5	*0*									
Not Known or refused/not disclosed	4,481	*92*									
	p < 0.001										
Deprivation (SIMD at diagnosis): Crude rate of cases per 100,000 population[1]											
1 (Most deprived)	**179**	***(170-188)***	5	*(3-6)*	7	*(5-9)*	36	*(33-41)*	131	*(123-139)*	
2	**135**	***(127-143)***	4	*(2-5)*	6	*(4-7)*	28	*(25-32)*	97	*(91-104)*	
3	**108**	***(101-115)***	4	*(2-5)*	4	*(3-5)*	26	*(23-30)*	74	*(69-80)*	
4	**81**	***(75-87)***	2		2	*(2-4)*	22	*(19-25)*	54	*(50-60)*	
5 (Least deprived)	**63**	***(58-69)***	2		2		16	*(14-19)*	42	*(38-47)*	
Deprivation (SIMD at diagnosis): Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
1 (Most deprived)	**402**	***(381-424)***	9	*(7-13)*	15	*(12-20)*	80	*(71-89)*	298	*(280-317)*	
2	**279**	***(262-296)***	7	*(5-10)*	11	*(8-14)*	56	*(49-64)*	204	*(190-219)*	
3	**224**	***(210-239)***	8	*(5-11)*	7	*(5-10)*	53	*(46-61)*	156	*(144-169)*	
4	**169**	***(156-182)***	4		5	*(3-8)*	44	*(37-50)*	116	*(105-127)*	
5 (Least deprived)	**139**	***(127-152)***	4		4		36	*(30-43)*	95	*(85-105)*	
Urban Rural Indicator: Crude rate of cases per 100,000 population[1]											
Large Urban Areas	**125**	***(119-130)***	3	*(3-4)*	5	*(4-7)*	27	*(25-30)*	88	*(84-93)*	
Other Urban Areas	**111**	***(106-117)***	4	*(3-5)*	4	*(3-5)*	25	*(23-28)*	79	*(74-84)*	
Accessible Small Towns	**108**	***(98-119)***	3		4		24	*(20-30)*	77	*(68-86)*	
Remote Small Towns	**108**	***(93-126)***	3		3		25	*(17-34)*	78	*(65-93)*	
Accessible Rural Areas	**89**	***(81-98)***	3		3		24	*(20-28)*	60	*(53-67)*	
Remote Rural Areas	**107**	***(96-120)***	3		1		27	*(21-34)*	76	*(66-87)*	
Urban Rural Indicator: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
Large Urban Areas	**285**	***(273-298)***	8	*(6-10)*	12	*(9-14)*	61	*(55-67)*	205	*(194-216)*	
Other Urban Areas	**239**	***(226-252)***	7	*(5-9)*	8	*(6-10)*	53	*(48-60)*	171	*(160-182)*	
Accessible Small Towns	**222**	***(200-245)***	5		7		50	*(40-61)*	159	*(141-179)*	
Remote Small Towns	**193**	***(165-224)***	6		8		42	*(30-57)*	140	*(116-166)*	
Accessible Rural Areas	**183**	***(166-201)***	5		6		46	*(38-55)*	126	*(111-141)*	
Remote Rural Areas	**189**	***(167-211)***	5		3		44	*(34-55)*	137	*(119-157)*	
Cancer Networks: Crude rate of cases per 100,000 population[1]											
North of Scotland	**98**	***(92-104)***	3	*(2-4)*	3	*(2-4)*	25	*(22-28)*	68	*(63-73)*	
South-East of Scotland	**106**	***(100-112)***	3	*(2-4)*	4	*(3-5)*	26	*(23-29)*	74	*(69-79)*	
West of Scotland	**126**	***(121-131)***	4	*(3-5)*	5	*(4-6)*	27	*(24-29)*	90	*(86-95)*	
Cancer Networks: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
North of Scotland	**198**	***(186-211)***	5	*(3-7)*	6	*(4-8)*	49	*(43-55)*	139	*(129-149)*	
South-East of Scotland	**227**	***(215-241)***	6	*(4-9)*	7	*(5-10)*	54	*(48-60)*	160	*(149-172)*	
West of Scotland	**275**	***(263-286)***	7	*(6-9)*	11	*(9-13)*	56	*(51-61)*	200	*(191-210)*	
Method of Detection											p < 0.001
Clinical presentation	**4,543**	***93***	127	*90*	160	*88*	1,036	*93*	3,220	*94*	
Incidental finding	**226**	***5***	10	*7*	19	*10*	67	*6*	130	*4*	
Other and Not Known	**115**	***2***	4	*3*	3	*2*	15	*1*	93	*3*	
	p < 0.001										
Stage[2]											p < 0.001
1	**169**	***3***	42	*30*	45	*25*	61	*5*	21	*1*	
2	**54**	***1***	3	*2*	5	*3*	27	*2*	19	*1*	
3	**514**	***11***	0	*0*	0	*0*	226	*20*	288	*8*	
4	**1,398**	***29***	0	*0*	0	*0*	194	*17*	1,204	*35*	
Not Known	**2,749**	***56***	96	*68*	132	*73*	610	*55*	1,911	*56*	
	p < 0.001										
Grade											p < 0.001
I (Well differentiated)	**68**	***1***	8	*6*	10	*5*	26	*2*	24	*1*	
II (Moderately well differentiated)	**472**	***10***	39	*28*	48	*26*	159	*14*	226	*7*	
III (Poorly differentiated)	**786**	***16***	29	*21*	22	*12*	217	*19*	518	*15*	
IV (Undifferentiated)	**119**	***2***	2	*1*	1	*1*	22	*2*	94	*3*	
Grade not determined	**3,439**	***70***	63	*45*	101	*55*	694	*62*	2,581	*75*	
	p < 0.001										
Small Cell/Non Small Cell											p < 0.001
Small cell	722	*15*	13	*9*	10	*5*	146	*13*	553	*16*	
Other/NK	4,162	*85*	128	*91*	172	*95*	972	*87*	2,890	*84*	
	p < 0.001										
Treatments[3]											p < 0.001
Surgery only	336	*7*	70	*50*	82	*45*	123	*11*	61	*2*	p < 0.001
Radiotherapy only	821	*17*	23	*16*	31	*17*	229	*20*	538	*16*	p = 0.003
SACT only	647	*13*	8	*6*	5	*3*	176	*16*	458	*13*	p < 0.001
Radiotherapy & SACT	649	*13*	13	*9*	10	*5*	303	*27*	323	*9*	p < 0.001
Other Treatment	147	*3*	11	*8*	7	*4*	106	*9*	23	*1*	p < 0.001
No treatment	2,284	*47*	16	*11*	47	*26*	181	*16*	2,040	*59*	p < 0.001
	p < 0.001										

[1] Confidence intervals (CI) are only calculated for rates where there are more than 20 cases (as CI estimates are unreliable otherwise).

[2] Five cases had no stage recorded (these cases have been recoded to Not Known).

[3] Treatments are reported separately if number receiving that treatment/combination is greater than 100 in 2007 or 2012. SACT (Systemic Anti-Cancer Therapy) is chemotherapy and/or biological therapy.

2007: Prostate Cancer

Characteristic	Prostate cancer cases diagnosed in 2007		Outcome Group 1 (Living with similar acute healthcare needs)		Outcome Group 2 (Living with increased acute healthcare needs)		Outcome Group 3 (Living with a continued presence of cancer)		Outcome Group 4 (Limited survival)		CHI^2 Test
	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	Count/Rate	%/(95% CI)	
Total Cases	**2,760**		**728**	*26*	**715**	*26*	**1,045**	*38*	**272**	*10*	
Age Band											p < 0.001
15 - 54	**96**	***3***	42	*6*	31	*4*	19	*2*	4	*1*	
55 - 64	**596**	***22***	230	*32*	176	*25*	170	*16*	20	*7*	
65 - 74	**1,079**	***39***	310	*43*	301	*42*	414	*40*	54	*20*	
75 - 84	**762**	***28***	139	*19*	165	*23*	348	*33*	110	*40*	
85 - 99	**227**	***8***	7	*1*	42	*6*	94	*9*	84	*31*	
	p < 0.001										
Average Age (mean)	**71.5**	***(71.1-71.8)***	67.6	*(67.0-68.2)*	70.0	*(69.4-70.7)*	73.1	*(72.5-73.6)*	79.4	*(78.2-80.5)*	
Ethnicity											
White	425	*15*									
Other ethnicity	4	*0*									
Not Known or refused/not disclosed	2,331	*84*									
	p < 0.001										
Deprivation (SIMD at diagnosis): Crude rate of cases per 100,000 population[1]											
1 (Most deprived)	**111**	***(101-122)***	24	*(19-29)*	30	*(25-36)*	46	*(39-53)*	12	*(8-15)*	
2	**126**	***(115-137)***	25	*(21-30)*	31	*(26-37)*	52	*(45-60)*	17	*(13-21)*	
3	**136**	***(125-148)***	36	*(30-42)*	37	*(32-43)*	51	*(44-58)*	12	*(9-16)*	
4	**147**	***(135-159)***	43	*(37-49)*	34	*(29-40)*	55	*(48-63)*	15	*(11-19)*	
5 (Least deprived)	**150**	***(139-162)***	49	*(43-56)*	41	*(35-48)*	50	*(43-57)*	10	*(7-14)*	
Deprivation (SIMD at diagnosis): Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
1 (Most deprived)	**272**	***(246-299)***	53	*(43-64)*	70	*(57-83)*	115	*(98-133)*	35	*(25-47)*	
2	**293**	***(268-320)***	54	*(44-64)*	70	*(58-83)*	124	*(107-141)*	46	*(35-58)*	
3	**316**	***(289-343)***	74	*(63-87)*	83	*(70-97)*	120	*(104-137)*	38	*(27-51)*	
4	**339**	***(311-368)***	88	*(75-101)*	74	*(62-87)*	130	*(113-148)*	48	*(35-62)*	
5 (Least deprived)	**353**	***(325-383)***	105	*(91-120)*	95	*(80-111)*	118	*(102-135)*	35	*(25-48)*	
Urban Rural Indicator: Crude rate of cases per 100,000 population[1]											
Large Urban Areas	**116**	***(109-124)***	31	*(27-35)*	27	*(24-31)*	47	*(42-52)*	11	*(9-14)*	
Other Urban Areas	**126**	***(118-135)***	31	*(27-36)*	35	*(31-40)*	46	*(41-52)*	14	*(11-17)*	
Accessible Small Towns	**137**	***(120-155)***	37	*(29-47)*	33	*(26-43)*	56	*(45-68)*	10		
Remote Small Towns	**192**	***(162-226)***	55	*(39-74)*	65	*(48-86)*	53	*(38-73)*	19		
Accessible Rural Areas	**155**	***(140-172)***	46	*(38-56)*	35	*(28-43)*	55	*(46-65)*	19	*(14-25)*	
Remote Rural Areas	**200**	***(177-225)***	48	*(37-61)*	60	*(48-74)*	79	*(65-95)*	13		
Urban Rural Indicator: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
Large Urban Areas	**299**	***(279-319)***	72	*(63-82)*	69	*(60-79)*	122	*(110-135)*	36	*(28-44)*	
Other Urban Areas	**303**	***(281-326)***	67	*(58-77)*	81	*(70-93)*	110	*(97-124)*	45	*(35-56)*	
Accessible Small Towns	**298**	***(260-338)***	74	*(57-92)*	67	*(51-85)*	125	*(101-151)*	33		
Remote Small Towns	**373**	***(313-439)***	99	*(71-132)*	124	*(91-163)*	106	*(75-142)*	44		
Accessible Rural Areas	**347**	***(311-385)***	90	*(74-107)*	72	*(58-88)*	127	*(105-149)*	58	*(41-78)*	
Remote Rural Areas	**372**	***(328-420)***	82	*(63-103)*	108	*(85-132)*	156	*(127-189)*	27		
Cancer Networks: Crude rate of cases per 100,000 population[1]											
North of Scotland	**141**	***(131-151)***	34	*(30-40)*	38	*(33-44)*	56	*(50-63)*	12	*(10-16)*	
South-East of Scotland	**151**	***(141-162)***	51	*(46-58)*	35	*(31-41)*	50	*(44-56)*	15	*(12-18)*	
West of Scotland	**120**	***(113-127)***	26	*(23-30)*	32	*(29-36)*	49	*(44-53)*	13	*(11-15)*	
Cancer Networks: Truncated (at 45 yrs) EASR of cases per 100,000 population[1]											
North of Scotland	**319**	***(296-344)***	70	*(60-81)*	83	*(71-95)*	130	*(115-145)*	37	*(28-48)*	
South-East of Scotland	**347**	***(324-372)***	108	*(96-121)*	80	*(69-91)*	117	*(103-131)*	43	*(33-53)*	
West of Scotland	**294**	***(276-313)***	58	*(51-65)*	76	*(67-85)*	119	*(108-130)*	42	*(34-51)*	
Method of Detection											p < 0.001
Clinical presentation	**2,589**	***94***	685	*94*	677	*95*	992	*95*	235	*86*	
Incidental finding	**94**	***3***	26	*4*	18	*3*	26	*2*	24	*9*	
Other and Not Known	**77**	***3***	17	*2*	20	*3*	27	*3*	13	*5*	
	p < 0.001										
Gleason score											p < 0.001
1 - 6	**853**	***31***	385	*53*	357	*50*	90	*9*	21	*8*	
7	**751**	***27***	305	*42*	293	*41*	136	*13*	17	*6*	
8 - 10	**663**	***24***	0	*0*	0	*0*	607	*58*	56	*21*	
Not Known	**493**	***18***	38	*5*	65	*9*	212	*20*	178	*65*	
	p < 0.001										
Treatments[2]											p < 0.001
Surgery only	494	*18*	223	*31*	159	*22*	92	*9*	20	*7*	p < 0.001
Radiotherapy only	151	*5*	64	*9*	46	*6*	30	*3*	11	*4*	p < 0.001
Hormonal therapy	617	*22*	71	*10*	116	*16*	354	*34*	76	*28*	p < 0.001
Radiotherapy & Hormonal therapy	407	*15*	108	*15*	102	*14*	173	*17*	24	*9*	p = 0.015
Other Treatment	200	*7*	22	*3*	24	*3*	136	*13*	18	*7*	p < 0.001
No treatment	891	*32*	240	*33*	268	*37*	260	*25*	123	*45*	p < 0.001
	p < 0.001										

[1] Confidence intervals (CI) are only calculated for rates where there are more than 20 cases (as CI estimates are unreliable otherwise).

[2] Treatments are reported separately if number receiving that treatment/combination is greater than 100 in 2007 or 2012. SACT (Systemic Anti-Cancer Therapy) is chemotherapy and/or biological therapy.