

Cancer in Ireland 1995: incidence and mortality.

A summary

1. THE RISKS

New cancer cases

In 1995, 19833 new cancer cases were diagnosed. This was equivalent to:

- 5.5 new cancers for every 100 people
- a lifetime risk of developing cancer for men of 40% and for women of 43%.

Cancer deaths

Cancer caused 7454 deaths in 1995, the equivalent of

- 2.1 cancer deaths for every 1,000 persons
- a lifetime risk of dying of cancer of 16% for men and 15% for women.

Table 1. Cancer statistics for 1995

| | new cancer cases | | | cancer deaths | | |
|--------------------------------|------------------|---------|-------|---------------|---------|------|
| | males | females | all | males | females | all |
| number | 9813 | 10020 | 19833 | 4040 | 3414 | 7454 |
| lifetime risk | 40% | 43% | 42% | 16% | 15% | 16% |
| cases/deaths per 1,000 persons | | | | | | |
| per year | 5.5 | 5.5 | 5.5 | 2.3 | 1.9 | 2.1 |
| deaths per 100 new cases | 41 | 34 | 38 | | | |

2. COMMON CANCER TYPES

Most cancer cases and deaths were due to a small number of types of cancer.

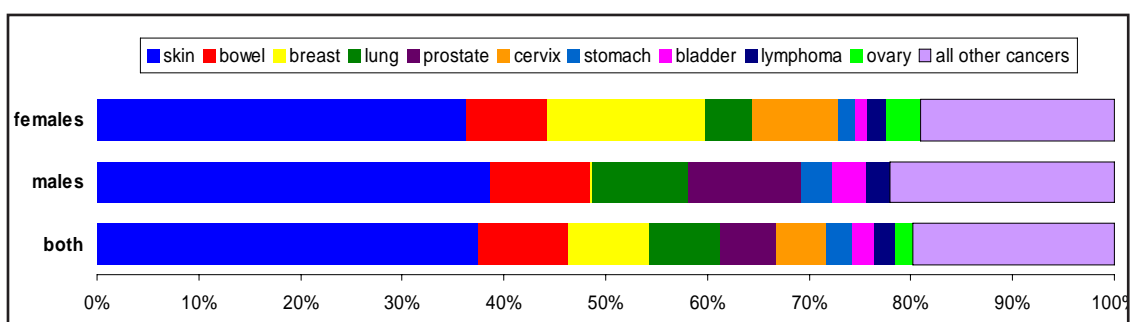
New cancer cases

Skin cancer accounted for almost 40% of all cancers. For both sexes combined, the second most common cancer was bowel cancer (1757 cases). The second most common cancer for men was cancer of the prostate (1083 cases) and for women cancer of the breast (1555 cases). The ten most frequent cancers made up 80% of all cancers diagnosed.

Table 2. Commonest cancers diagnosed.

| | both sexes | | males | | lifetime risk | females | | lifetime risk |
|----------|------------|------------|-----------|------------|---------------|-----------|------------|---------------|
| | all cases | % of total | all cases | % of total | | all cases | % of total | |
| skin | 7433 | 37% | 3789 | 39% | 14.6% | 3644 | 36% | 14.2% |
| bowel | 1757 | 9% | 971 | 10% | 3.9% | 786 | 8% | 3.4% |
| breast | 1563 | 8% | 8 | 0% | 0.0% | 1555 | 16% | 6.7% |
| lung | 1411 | 7% | 936 | 10% | 3.8% | 475 | 5% | 2.0% |
| prostate | 1083 | 5% | 1083 | 11% | 4.4% | | | |
| cervix | 969 | 5% | | | | 969 | 10% | 3.6% |
| stomach | 492 | 2% | 305 | 3% | 1.2% | 187 | 2% | 0.8% |
| bladder | 446 | 2% | 337 | 3% | 1.4% | 109 | 1% | 0.4% |
| lymphoma | 416 | 2% | 224 | 2% | 0.9% | 192 | 2% | 0.8% |
| ovary | 332 | 2% | | | | 332 | 3% | 1.4% |

Figure 1. Common cancers as a percentage of the total



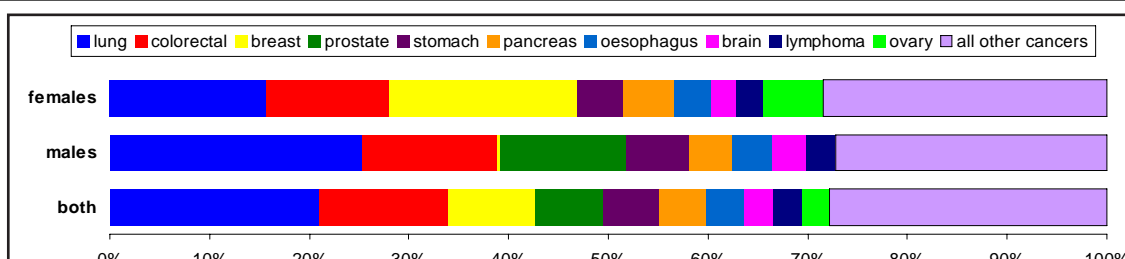
Cancer deaths

The main causes of cancer death were cancers of the lung, bowel and breast. Skin cancer caused few deaths, while cancers of the stomach, pancreas and oesophagus, because of their high mortality, were much higher in the rank of causes of cancer death than they were in numbers diagnosed.

Table 3. Deaths from common cancers.

| | both sexes | | males | | females | |
|-------------------|------------|------------|-----------|------------|-----------|------------|
| | all cases | % of total | all cases | % of total | all cases | % of total |
| lung | 1559 | 21% | 1023 | 25% | 536 | 16% |
| bowel | 971 | 13% | 548 | 14% | 423 | 12% |
| breast | 649 | 9% | 7 | 0% | 642 | 19% |
| prostate | 514 | 7% | 514 | 13% | | |
| stomach | 416 | 6% | 257 | 6% | 159 | 5% |
| pancreas | 345 | 5% | 173 | 4% | 172 | 5% |
| oesophagus | 289 | 4% | 163 | 4% | 126 | 4% |
| brain | 219 | 3% | 134 | 3% | 85 | 2% |
| lymphoma | 218 | 3% | 124 | 3% | 94 | 3% |
| ovary | 204 | 3% | | | 204 | 6% |
| all other cancers | | 28% | | 27% | | 29% |

Figure 2. Percentage of deaths due to cancer



3. AGE AND CANCER RISK

For most cancers, risk increased with age, and almost doubled with every ten years of age (Table 4) The risk to women was higher than for men up to about age 60, but became higher for men after this. This is mainly because the most common cancers in women (breast and cervix) affect a younger population than the commoner cancers in men (lung and prostate).

Figure 3. Increase in cancer risk with age

Table 4. Increase in risk of cancer with age.

| risk of cancer before age | females | males |
|---------------------------|---------|-------|
| 20- | 1% | 1% |
| 30- | 3% | 1% |
| 40- | 6% | 3% |
| 50- | 13% | 7% |
| 60- | 24% | 20% |
| 70- | 43% | 50% |
| 80- | 71% | 97% |

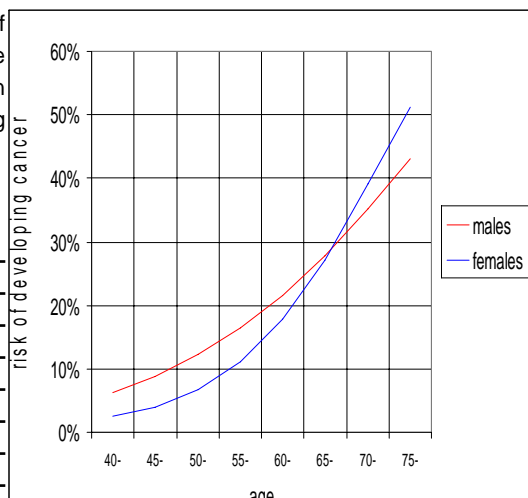


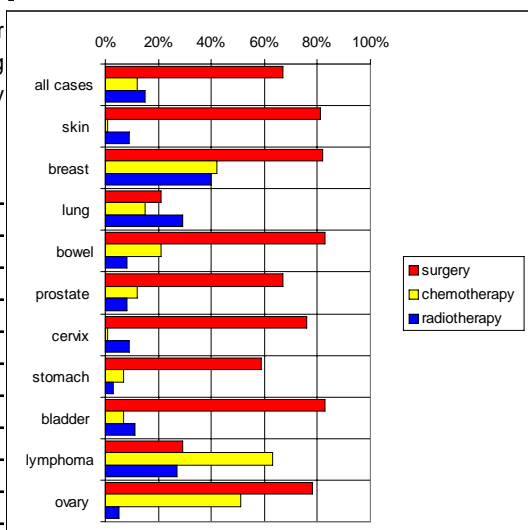
Figure 4. Treatments

3. TREATMENT

Most cancers are treated by surgery (Table 5). The percentage of the commoner cancers treated surgically varied from 83% for bowel and bladder cancer to 21% for lung cancer. Chemotherapy was most frequently administered for cancers of the breast, ovary and lymphoma, and radiotherapy for cancers of the breast, lung and lymphoma.

Table 5. Treatment of common cancers.

| site | cases | % of cases having treatment | | | |
|-----------|-------|-----------------------------|--------------|--------------|-------|
| | | surgery | chemotherapy | radiotherapy | other |
| all cases | 19833 | 67% | 12% | 15% | 8% |
| skin | 7433 | 81% | 1% | 9% | 2% |
| breast | 1563 | 82% | 42% | 40% | 36% |
| lung | 1411 | 21% | 15% | 29% | 4% |
| bowel | 1740 | 83% | 21% | 8% | 2% |
| prostate | 1083 | 67% | 12% | 8% | 22% |
| cervix | 969 | 76% | 1% | 9% | 3% |
| stomach | 492 | 59% | 7% | 3% | 7% |
| bladder | 446 | 83% | 7% | 11% | 5% |
| lymphoma | 418 | 29% | 63% | 27% | 5% |
| ovary | 332 | 78% | 51% | 5% | 5% |



6. STAGE

Once of the most important factors determining treatment and outcome from cancer is the stage, that is, how advanced the cancer was at the time of diagnosis. Cancers at different sites had quite varying proportions of early and later stage at diagnosis (Table 6).

Table 6. Stage at diagnosis of common cancers

| | stage at diagnosis | | |
|----------|--------------------|----------------|------------|
| | early (0, 1, 2) | late (3, 4) | not staged |
| breast | 37% | 13% | 50% |
| lung | 6% | 30% | 64% |
| bowel | 23% | 32% | 45% |
| prostate | 3% | 24% | 74% |
| cervix | 94% | 2% | 9% |
| stomach | 10% | 41% | 49% |
| bladder | 18% | 10% | 72% |
| lymphoma | 48% | 31% | 21% |
| ovary | 12% | 28% | 60% |

6. SURVIVAL

Table 7. Overall survival from cancer

| | deaths per case | survivors per case | survival at three years |
|-----------------------------|--------------------|-----------------------|----------------------------|
| all cancers | 38% | 62% | 64% |
| skin | <1% | >99% | 99% |
| all cancers other than skin | 58% | 42% | 48% |
| bowel | 55% | 55% | 51% |
| breast | 42% | 58% | 75% |
| lung | 100% | <1% | 13% |
| prostate | 47% | 53% | 66% |
| stomach | 85% | 15% | 21% |
| bladder | 36% | 64% | 67% |
| lymphoma | 52% | 48% | 56% |
| ovary | 61% | 39% | 46% |

The overall survival from cancer can be estimated by dividing the number of deaths by the number of new cases. As 38 patients died for every 100 diagnosed with cancer, then approximately 62% of patients with cancer must have survived it. As skin cancer is common but rarely fatal, skin cancer is usually excluded from the figures, giving an overall survival from cancer of 42%. Survival from the commoner cancers ranged from less than 1% for lung cancer to 64% for bladder cancer.

A more accurate estimate can be had by looking at the survival of individual cancer patients over a period of time. The Registry has been able to track patients registered in 1994 for three years and survival for the commoner cancers is also shown in Table 6.

There were major differences in survival for the commoner cancers, depending on their stage at diagnosis. The largest differences were for lung and bowel cancer where survival for the most advanced cases was only one-eighth that for the least advanced. The smallest differences were for lymphoma and breast cancer, but these were still substantial.

Table 8. Cancer survival by stage at diagnosis

| | survival at three years | |
|----------|-------------------------|---------------|
| | least advanced | most advanced |
| | (stage 1) | (stage 4) |
| breast | 86% | 34% |
| lung | 39% | 5% |
| bowel | 83% | 10% |
| prostate | 84% | 32% |
| cervix | 91% | 13% |
| stomach | 41% | 11% |
| bladder | 83% | 19% |
| lymphoma | 71% | 29% |
| ovary | 86% | 20% |

Figure 5. Stage of cancer at diagnosis

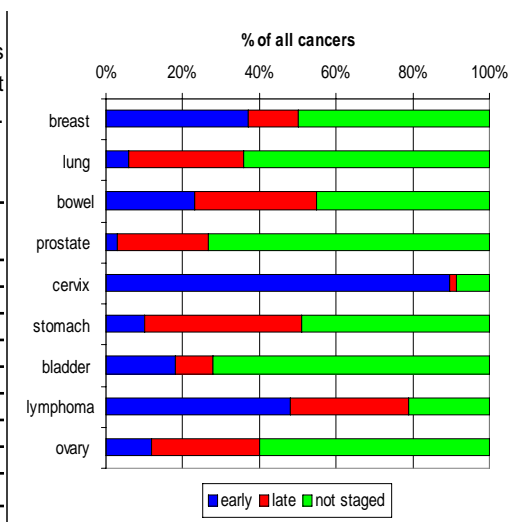


Figure 6. Survival from cancer

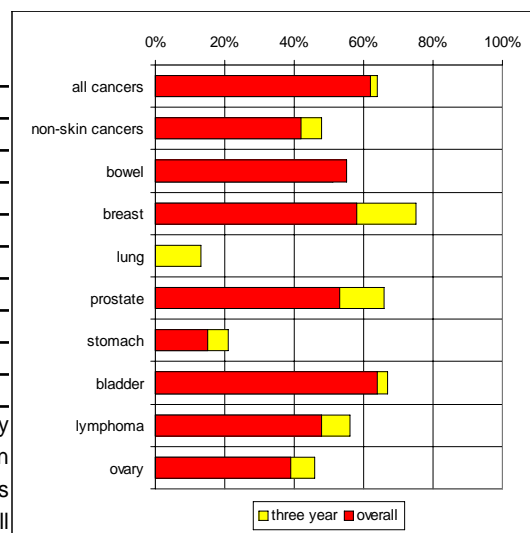
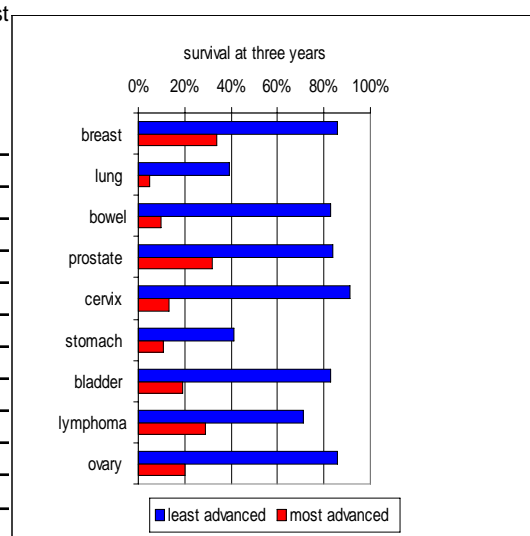


Figure 7. Survival by stage of cancer



9. GEOGRAPHICAL COMPARISONS

Europe

Cancer incidence in Ireland was not very different from that in other European countries (Figure 8). Of note was the high overall incidence rate of bowel cancers and of lung cancer in women (Table 9). Cancers for which the Irish incidence was above average are shown in red and those for which it was below average are shown in blue.

Table 9. Risk of developing cancer before age 75 in Ireland and some European countries

| | female | | | | male | | | |
|-------------|---------|--------|---------|---------|---------|--------|---------|---------|
| | Ireland | lowest | average | highest | Ireland | lowest | average | highest |
| all cancers | 21.9% | 15.8% | 20.2% | 25.9% | 26.0% | 22.4% | 27.6% | 31.8% |
| colorectal | 3.1% | 1.8% | 2.6% | 3.5% | 4.8% | 2.6% | 3.8% | 5.7% |
| lung | 2.2% | 0.4% | 1.3% | 3.2% | 5.2% | 3.1% | 7.5% | 9.9% |
| breast | 7.0% | 3.2% | 6.0% | 8.6% | | | | |
| prostate | | | | | 4.9% | 1.6% | 3.4% | 6.4% |
| bladder | 0.4% | 0.2% | 0.4% | 0.9% | 1.6% | 1.2% | 2.1% | 4.0% |
| melanoma | 1.1% | 0.2% | 0.7% | 1.6% | 0.5% | 0.2% | 0.6% | 1.5% |
| stomach | 0.7% | 0.5% | 1.1% | 2.5% | 1.4% | 1.0% | 2.4% | 5.7% |
| lymphoma | 0.9% | 0.4% | 0.7% | 1.1% | 1.1% | 0.6% | 1.0% | 1.6% |
| leukaemia | 0.5% | 0.4% | 0.5% | 0.7% | 1.1% | 0.5% | 0.8% | 1.1% |

Figure 8. Incidence of all cancers (excluding skin) in Europe

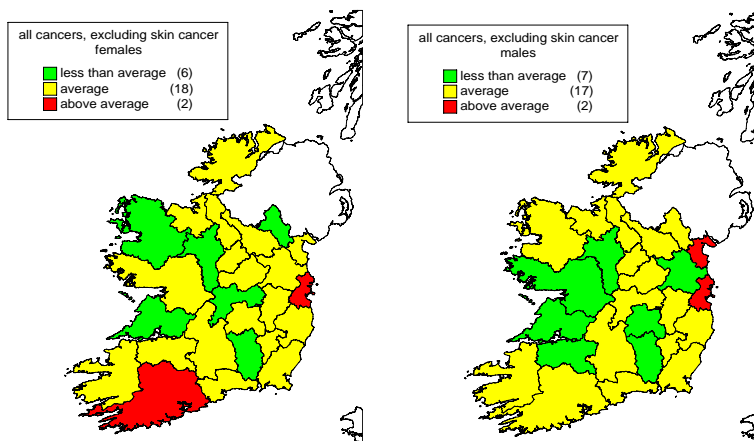
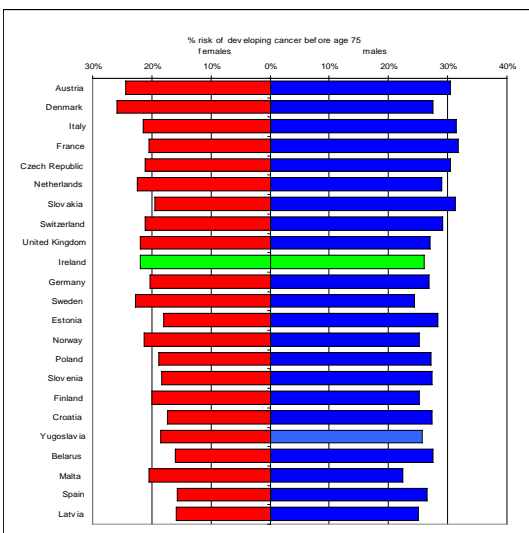


Figure 8. Cancer incidence by county: all cancers excluding skin cancer

Within Ireland

Because of the small numbers of cases in many counties, it was difficult to draw firm conclusions about variation in cancer incidence in Ireland, and we will need to collect data for some more years to be sure if real differences exist. The maps show that overall incidence seemed to be higher in counties Cork, Dublin and Louth. The table below shows counties for which there was a significant difference between the incidence of common cancers in that county and the national average.

Table 10. Counties with cancer incidence significantly above or below the national average

| | females | | males | |
|-----------|------------------------|----------------|-------------------------------|---------------|
| | above average | below average | above average | below average |
| Cavan | stomach | | | |
| Clare | | bowel | | bladder |
| Cork | melanoma | | bowel, prostate | |
| Donegal | bowel | | prostate, stomach | |
| Dublin | lung, bladder, stomach | | bowel, lung, bladder, stomach | |
| Galway | | lung | | lung |
| Kerry | | | prostate | |
| Kildare | | bowel | | |
| Kilkenny | | lung, melanoma | | bowel |
| Laois | | lung | | |
| Mayo | | lung | prostate | stomach |
| Meath | | breast, lung | | bowel |
| Monaghan | | breast | | |
| Offaly | | lung | | |
| Roscommon | | lung | | |
| Sligo | breast | melanoma | | |
| Wicklow | | | prostate | |

