9. Cancer of the Colon

ICD-9 153

KEY FACTS

- On average 624 cancers of the colon were registered per year.
- Slightly more cases in females (52%).
- 7% of all cancers diagnosed.
- Half of cases were over 71 years in males, 73 years in females.
- Lower numbers than expected in females from the Eastern Board area.
- Higher numbers than expected in females in Ballymoney District Council.

On average, over the 1993-95 period, 624 colon cancers were registered each year, just over half of these occurred in females (52%). Colon cancer was the third most commonly diagnosed cancer in females and the fourth in males and accounted for about 7% of all cancers diagnosed. There were less than twice as many cases diagnosed as deaths recorded reflecting a modest survival.

Table 15 Summary Statistics

	MALES			FEMALES		
Year	**1993**	**1994**	**1995**	**1993**	**1994**	**1995**
INCIDENCE						
Incident Cases	290	305	307	318	310	342
Crude Rate (per 100,000)	36.4	38.04	38.13	38.08	36.91	40.53
Cumulative Risk (0-74) (%)	2.97	3.36	3.03	2.33	2.34	2.33
WASR (per 100,000)	26.81	28.38	27.58	20.61	20.68	21.78
EASR (per 100,000)	41.56	43.09	43.13	31.28	31.23	33.00
% of All Cancers	6.86	7.10	7.56	7.20	7.19	7.96
DATA QUALITY						
Mortality : Incidence Ratio	0.59	0.51	0.59	0.57	0.54	0.51
% Death Certificate Only	4.14	1.64	3.91	6.92	3.55	5.26
% Microscopically Verified	87.59	87.54	84.04	77.67	83.55	84.50
MORTALITY						
Number of Deaths	170	156	182	181	168	173
Crude Rate (per 100,000)	21.34	19.46	22.60	21.67	20.00	20.50
Cumulative Risk (0-74) (%)	1.62	1.51	1.63	1.13	1.14	1.03
WASR (per 100,000)	15.60	14.48	16.21	10.64	10.35	10.37
EASR (per 100,000)	24.52	22.22	25.80	16.71	15.96	15.98
% of All Cancer Deaths	9.02	8.40	9.86	10.38	9.56	10.48

WASR = Rates standardised for age to the World standard population
EASR = Rates standardised for age to the European standard population

Age Profile

The age at diagnosis was younger in males than in females, half of the cases registered were over 71 years in males, and 73 years in females - see Figures 15 and 16. The majority of cases occurred after the age of 40 years beyond which age specific rates rose continuously, faster in males than in females. The numbers of female cases predominated, at older ages due to the larger numbers of females at risk as females live longer than males.

Figure 15 Age Distribution of New Cases 1993-95, Cancer of the Colon

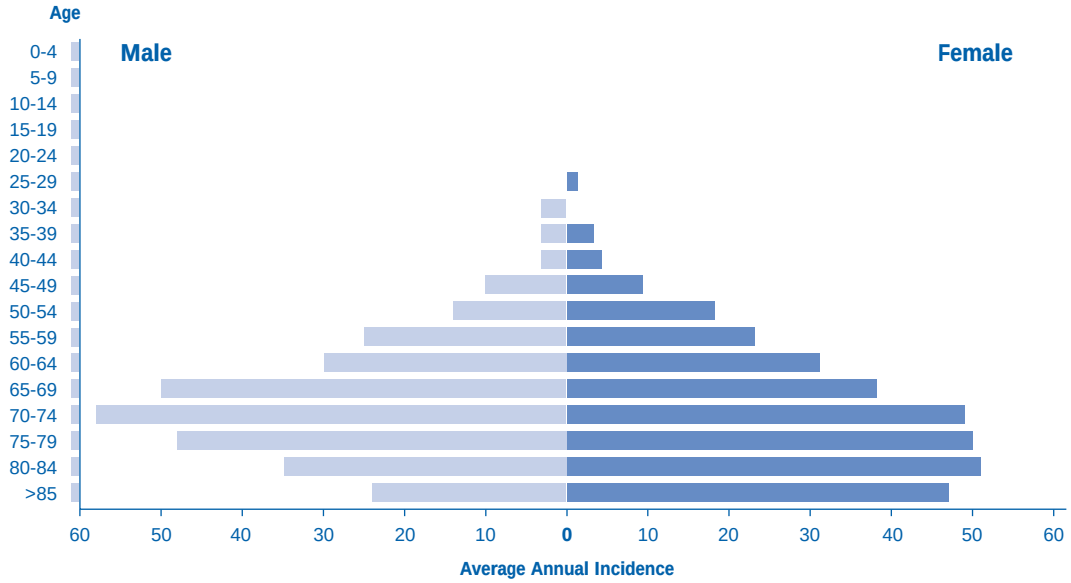
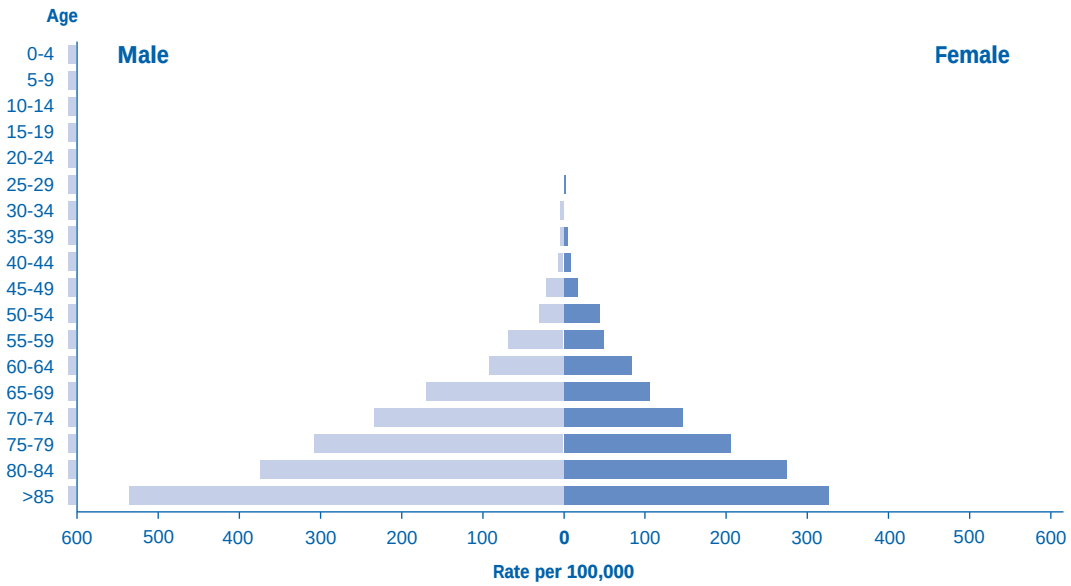


Figure 16 Average Annual Age Specific Rates (per 100,000) 1993-95, Cancer of the Colon



Morphology and Site

Microscopic Verification was not available for 15% of tumours diagnosed in males and 18% of tumours diagnosed in females. The majority of tumours (73%) were classified as adenocarcinomas. Carcinoid tumours were diagnosed in only 0.4% of those verified microscopically. This did not include carcinoids of the appendix which were considered to be of borderline malignancy. One third (33.1%) of all colon cancers were right sided tumours, (caecum, appendix, ascending colon and hepatic flexure), whereas 30% were left sided tumours (splenic flexure, descending colon and sigmoid colon). These proportions should be interpreted cautiously as a large number (30%) of colon cancers had no proper assignment of site within the colon.

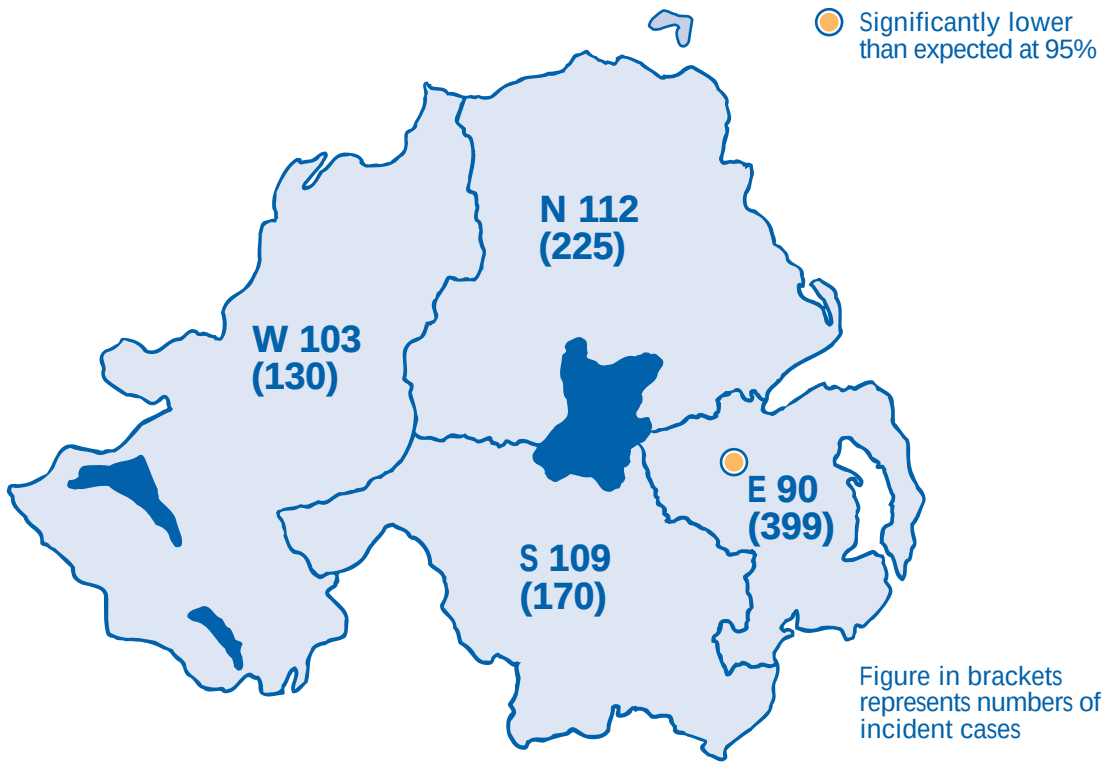
Geographical Distribution of Disease

Variation across Health Boards/District Councils in the observed number of cases that arise because of differences in the age structure of the underlying population has been accounted for by using Standardised Incidence Ratios (SIRs) - see Appendix ii. Values above or below 100 indicate an excess/deficit over what would be expected if that area experienced the same level of incidence as Northern Ireland as a whole.

For females, the Eastern Board area had a lower than expected number of cases - see Map 3.

Ballymoney District Council displayed a higher than expected number of cases in females though caution needs to be exercised as this was based on only 26 cases for the period 1993-95. Fermanagh had lower than expected numbers but in younger females only.

Map 3. All Age Female Standardised Incidence Ratios (SIRs) by Health Board 1993-95, Cancer of the Colon



Data Quality

The proportion of Microscopically Verified cases was relatively high at about 84% (the comparative figure for England being 76%). The proportion from Death Certificate Only (DCO) cases was higher in females, perhaps reflecting the later age at diagnosis, but compares favourably with the figure for England of 8% DCO.

Comparison with other Countries

Table 16 provides comparative figures for the number of cases and European Age Standardised Rates for the year 1995.

Table 16 Comparative Numbers and Rates for Britain and Ireland 1995, Cancer of the Colon

	Males		Females	
Country	Cases	EASR (per 100,000)	Cases	EASR (per 100,000)
Scotland	1014	38.90	1204	31.00
England & Wales	8350	29.50	9140	22.40
Republic of Ireland	584	38.22	551	29.28
Northern Ireland	307	43.13	342	33.00

In both sexes the standardised rate was higher than Scotland, England & Wales and the Republic of Ireland. This corresponds with the pattern of deaths and that of the incidence for rectal cancer. (Ref: 1).

Comment

The cause of colonic cancer is not completely understood and it is likely due to many factors. There are at least three broadly agreed factors.

(i) Genetic factors are increasingly being recognised as important and these divide into two main groups (a) those associated with hereditary *Polyposis coli* and (b) those associated with hereditary non-polyposis colorectal cancer. The risk of an individual developing colorectal cancer is also dependent on the number of first degree relatives who are similarly affected.

(ii) It is also known that chronic diseases, especially ulcerative colitis, are associated with increased risk of colorectal cancer. The risk of cancer is proportional to the extent and length of time the person has the disease.

(iii) However, for the vast majority of people environmental factors are most important. The evidence for this comes primarily from migration studies where migrants from countries with low levels of cancer risk develop the higher rates of their adopted country over the course of one or two generations. Perhaps two-thirds of all new cases of colorectal cancer in the world occur in westernised countries which contain only about a quarter of the world's population. Dietary factors which are thought to contribute to colonic cancer include a high fat intake and a low intake of fruit and vegetables. There is also a social gradient evident with the risk of colonic cancer tending to be higher in higher social classes (opposite to the pattern for that of stomach cancer).

Colonic cancer is a common, potentially fatal, disease and early intervention can significantly affect the outcome. Two major European trials have been completed recently, showing that population screening based on testing of faeces for the presence of blood (e.g. Haemoccult test) is effective in reducing mortality from colorectal cancer. The UK trial showed that the test was able to detect some asymptomatic, early-stage carcinomas and potentially malignant adenomas. Results of this trial point to a 15% reduction in mortality (ref: 10). Consideration is now being given to the cost effectiveness of such screening.

Other screening methods being evaluated include the use of flexible sigmoidoscopy to view the rectum, the rectosigmoid junction and the colon. A UK multi-centre trial is evaluating this as a form of population screening in which people aged 55 to 64 will be invited to undergo a once-only flexible sigmoidoscopy.

The case for high risk individuals is easier to make. Patients with ulcerative colitis and those with

familial *Polyposis coli* are recommended to have regular colonoscopies and relatives at increased risk of familial colorectal cancer should also have regular surveillance.

For Health Gain

- The population should eat a high fibre, low fat diet consuming at least five portions of fruit or vegetables per day.
- There should be increased awareness that changes in bowel habit, weight loss or passing blood require urgent investigations.
- Those with a family history, especially of a young relative with cancer of the colon, should contact specialists about the advisability of regular surveillance.
- Participation in clinical trials, which can advise on the best treatment outcomes, should be enhanced.
- The organisation of services should be such as to ensure those with the disease have the best chance of a good outcome.
- The full range of palliative care services should be available for those with established disease.

Recommendations

- Further research into the aetiology of colon cancers and the role of diet should be conducted in Northern Ireland.
- The assignment of site within the colon should be as precise as possible.