

Appendix A: Further Reading

Traditional detailed teaching of cancer for students includes study of each cancer under subheadings including *introduction, incidence, causes, symptoms, signs, pathology, clinical investigations, prevention, treatment, complications, prognosis, follow-up or long-term care and record keeping. Details of treatment included could be surgical procedures, radiotherapy indications and techniques and medical management involving drugs, hormones or other agents used, their indications, doses and treatment schedules, as well as special nursing, dietary, social and community care requirements and facilities.* To cover all known information about each cancer recorded in one book this way would not be possible and would require many volumes, and indeed before it could be published, much would already be outdated.

In this book a limited number of drugs and techniques only can be mentioned to help establish principles of cancer care and understanding. Some likely future directions are also suggested but practitioners will need to be constantly updated as years pass.

Many books and multitudes of papers are available for further reading on different aspects of cancer, according to more specific needs or at a more advanced level. Some we recommend are:

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Appendix B: Appendix

Table A.1 Worldwide incidence of more common cancers: male

	Brain/nervous system	Thyroid	Non-Hodgkin lymphoma	Hodgkin disease	Leukaemia	Multiple myeloma
World	3.6	1.2	6.1	1.3	5.2	1.5
More developed countries	5.9	1.8	10.3	2.3	7.9	2.7
Less developed countries	2.8	1.0	4.3	1.0	3.9	0.9
Eastern Africa	0.7	1.6	7.9	2.1	3.9	0.9
Middle Africa	0.1	1.1	4.4	0.8	1.2	1.5
Northern Africa	2.5	0.8	4.8	2.0	4.3	0.8
Southern Africa	1.5	0.9	4.8	0.9	3.7	1.6
<i>South Africa</i>	<i>1.6</i>	<i>1.0</i>	<i>5.0</i>	<i>0.9</i>	<i>3.7</i>	<i>1.6</i>
Western Africa	0.4	0.7	7.3	1.7	2.4	0.9
Caribbean	3.4	0.8	4.9	2.0	6.6	2.7
Central America	4.5	1.2	5.2	2.0	6.3	2.2
South America	4.8	1.8	6.9	1.4	5.8	1.9
<i>Argentina</i>	<i>4.2</i>	<i>1.5</i>	<i>8.1</i>	<i>1.5</i>	<i>6.9</i>	<i>1.8</i>
<i>Brazil</i>	<i>6.0</i>	<i>2.1</i>	<i>6.6</i>	<i>1.3</i>	<i>5.5</i>	<i>1.7</i>
United States	6.5	3.0	16.1	2.3	9.6	4.0
Canada	6.8	2.3	14.6	2.7	10.4	4.3
Eastern Asia	3.5	0.8	3.7	0.3	4.6	0.8
<i>China</i>	<i>3.6</i>	<i>0.7</i>	<i>2.9</i>	<i>0.2</i>	<i>4.3</i>	<i>0.6</i>
<i>Hong Kong</i>	<i>4.4</i>	<i>2.1</i>	<i>8.7</i>	<i>0.6</i>	<i>6.7</i>	<i>1.7</i>
<i>Japan</i>	<i>2.7</i>	<i>1.4</i>	<i>7.4</i>	<i>0.4</i>	<i>5.9</i>	<i>1.8</i>
<i>Korea</i>	<i>3.7</i>	<i>1.4</i>	<i>6.6</i>	<i>0.8</i>	<i>5.2</i>	<i>0.8</i>
S.E. Asia	1.6	1.4	5.2	0.7	4.3	0.8
<i>Indonesia</i>	<i>1.4</i>	<i>1.2</i>	<i>6.0</i>	<i>0.7</i>	<i>4.4</i>	<i>1.3</i>
<i>Malaysia</i>	<i>2.1</i>	<i>1.9</i>	<i>7.7</i>	<i>1.1</i>	<i>6.1</i>	<i>2.0</i>
<i>Philippines</i>	<i>2.5</i>	<i>2.5</i>	<i>4.9</i>	<i>0.7</i>	<i>6.0</i>	<i>0.8</i>
<i>Singapore</i>	<i>2.5</i>	<i>1.9</i>	<i>7.5</i>	<i>0.7</i>	<i>6.2</i>	<i>1.3</i>
<i>Thailand</i>	<i>1.9</i>	<i>1.1</i>	<i>3.7</i>	<i>0.6</i>	<i>3.3</i>	<i>0.3</i>
South Central						
Asia	2.4	1.0	3.4	1.3	3.0	0.9
<i>India</i>	<i>2.6</i>	<i>1.0</i>	<i>3.2</i>	<i>1.1</i>	<i>3.1</i>	<i>1.0</i>

	Brain/nervous system	Thyroid	Non-Hodgkin lymphoma	Hodgkin disease	Leukaemia	Multiple myeloma
<i>Pakistan</i>	3.4	1.2	5.1	2.8	3.4	0.9
<i>Saudi Arabia</i>	3.9	2.9	10.0	3.3	6.0	2.2
<i>Turkey</i>	3.8	0.8	5.7	1.3	6.5	0.9
<i>United Arab Emirates</i>	4.6	2.4	5.7	6.0	4.8	2.0
Eastern Europe	5.8	1.5	6.6	2.9	6.6	1.5
<i>Russian Federation</i>	5.7	1.5	6.0	2.7	6.1	1.4
Northern Europe	7.0	1.0	10.1	2.1	8.7	3.2
<i>Denmark</i>	7.0	1.3	9.7	2.1	8.6	3.6
<i>Ireland</i>	7.3	1.0	10.4	2.1	9.2	4.2
<i>Norway</i>	8.0	1.6	10.7	2.2	8.2	3.7
<i>Sweden</i>	11.1	1.7	10.6	2.0	10.5	3.5
United Kingdom	6.4	0.7	10.4	2.0	8.8	3.2
Southern Europe	6.8	1.2	9.2	2.5	8.0	2.8
<i>Italy</i>	6.3	1.8	12.3	3.1	8.7	3.4
<i>Greece</i>	10.6	0.8	5.6	4.9	8.8	2.3
<i>Spain</i>	6.5	0.5	8.3	1.6	8.0	2.6
Western Europe	6.5	1.7	11.1	2.9	8.9	3.2
<i>France</i>	5.7	1.4	12.8	2.3	8.7	3.4
<i>Germany</i>	7.0	2.0	10.5	3.0	9.2	3.0
<i>Netherlands</i>	6.2	1.0	10.7	2.1	8.5	4.2
Australia	7.0	2.2	14.4	2.1	10.3	4.0
New Zealand	8.6	1.7	14.0	1.9	11.8	5.1
Melanesia	0.4	1.3	8.0	0.7	3.8	0.2
Polynesia	2.3	4.6	8.4	1.1	7.6	2.0

	Oral cavity	Nasopharynx	Oropharynx	Oesophagus	Stomach	Colon/rectum
World	6.4	1.7	3.8	10.8	21.5	19.1
More developed countries	7.6	0.7	4.8	6.7	24.6	37.3
Less developed countries	6.0	2.0	3.5	12.8	19.9	9.9
Eastern Africa	5.9	1.6	2.6	10.4	7.1	7.2
Middle Africa	4.8	0.7	1.3	1.9	17.0	2.0
Northern Africa	3.5	2.8	1.0	2.7	5.6	6.5
Southern Africa	12.4	1.6	1.5	17.6	8.6	12.7
<i>South Africa</i>	11.3	1.6	1.2	16.4	8.8	13.7
Western Africa	2.4	0.4	0.4	1.1	5.4	4.3
Caribbean	7.7	0.8	3.9	6.7	14.5	15.5

	Oral cavity	Nasopharynx	Oropharynx	Oesophagus	Stomach	Colon/rectum
Central America	3.8	0.4	2.0	3.1	18.6	9.5
South America	7.4	0.4	4.7	8.3	23.1	15.6
<i>Argentina</i>	6.5	0.3	2.1	8.6	12.8	27.9
<i>Brazil</i>	10.5	0.6	7.9	10.8	21.6	13.6
United States	6.3	0.6	3.1	4.9	7.6	40.6
Canada	7.4	0.8	2.9	4.1	9.1	40.8
Eastern Asia	1.7	2.6	0.6	21.8	42.6	17.8
<i>China</i>	1.2	3.0	0.4	24.5	36.1	13.0
<i>Hong Kong</i>	4.8	25.2	2.6	14.2	19.4	35.0
<i>Japan</i>	4.0	0.5	1.8	10.0	69.2	43.2
<i>Korea</i>	3.3	0.5	1.1	10.1	70.0	14.9
S.E. Asia	3.6	5.8	2.3	3.1	8.7	12.6
<i>Indonesia</i>	1.5	5.7	0.7	0.6	3.5	11.9
<i>Malaysia</i>	2.4	9.7	1.5	3.0	12.1	25.7
<i>Philippines</i>	5.8	6.4	2.3	2.5	9.2	18.1
<i>Singapore</i>	3.7	15.0	2.5	5.9	21.4	37.9
<i>Thailand</i>	5.3	3.5	3.3	3.7	4.9	10.3
South Central Asia	13.0	0.6	8.8	8.5	6.6	4.8
<i>India</i>	12.8	0.5	9.6	7.6	5.7	4.7
<i>Pakistan</i>	14.7	1.2	6.7	6.3	3.8	5.0
Western Asia	3.7	1.4	1.2	2.4	11.2	11.4
<i>Saudi Arabia</i>	3.7	3.4	1.2	3.9	6.6	7.7
<i>Turkey</i>	3.5	0.9	1.5	2.2	10.5	9.1
<i>United Arab Emirates</i>	2.9	2.8	1.0	2.8	6.1	9.4
Eastern Europe	7.8	0.7	5.3	7.2	34.1	32.9
<i>Russian Federation</i>	7.7	0.7	5.1	9.0	42.9	31.8
Northern Europe	5.0	0.4	2.2	7.4	12.7	34.7
<i>Denmark</i>	7.7	0.3	3.4	6.4	8.4	38.8
<i>Ireland</i>	5.9	0.6	2.8	8.6	12.9	44.2
<i>Norway</i>	5.8	0.3	2.2	3.2	11.6	40.0
<i>Sweden</i>	4.5	0.3	1.7	3.1	8.8	33.0
United Kingdom	4.4	0.4	1.9	8.9	12.4	35.4
Southern Europe	9.2	0.9	4.9	4.7	19.5	32.9
<i>Italy</i>	6.7	0.9	3.8	4.0	19.9	35.3
<i>Greece</i>	3.0	0.5	1.7	1.6	11.6	17.4
<i>Spain</i>	13.8	1.0	6.1	6.1	17.9	32.0
Western Europe	12.6	0.8	10.6	7.7	13.8	42.1
<i>France</i>	14.9	0.7	19.2	11.9	11.1	39.8
<i>Germany</i>	13.2	1.0	7.7	5.8	16.2	45.0
<i>Netherlands</i>	5.8	0.5	3.0	6.4	12.9	41.6
Australia	13.6	0.6	3.2	5.2	9.6	49.9

	Oral cavity	Nasopharynx	Oropharynx	Oesophagus	Stomach	Colon/rectum
New Zealand	4.6	0.7	2.0	5.4	10.9	55.3
Melanesia	36.3	0.2	1.5	3.1	5.9	9.2
Polynesia	5.2	2.8	4.9	3.9	13.0	14.3

	Larynx	Lung	Melanoma	Prostate	Testis	Bladder
World	5.5	34.9	2.2	21.2	1.6	10.0
More developed countries	7.7	55.6	6.7	46.7	5.0	18.9
Less developed countries	4.5	24.8	0.8	7.7	0.8	5.5
Eastern Africa	3.4	3.1	1.8	14.8	0.5	4.9
Middle Africa	2.0	5.7	3.0	25.4	0.1	2.5
Northern Africa	5.2	15.4	0.9	7.2	0.7	25.3
Southern Africa	6.4	23.8	6.0	41.1	0.7	12.1
<i>South Africa</i>	5.7	25.5	6.4	42.8	0.7	13.4
Western Africa	0.7	2.2	1.2	17.8	0.5	3.2
Caribbean	7.0	28.8	0.9	38.6	0.8	7.5
Central America	5.1	22.7	2.1	26.9	1.5	5.2
South America	7.3	25.3	3.1	28.5	2.2	8.6
<i>Argentina</i>	8.5	40.8	4.1	29.4	4.3	14.7
<i>Brazil</i>	9.3	25.0	3.5	28.7	1.6	8.5
<i>United States</i>	5.3	58.7	13.3	104.3	4.0	23.4
<i>Canada</i>	5.0	55.1	8.2	83.9	3.9	17.9
Eastern Asia	2.3	39.4	0.3	3.4	0.5	5.0
<i>China</i>	1.7	38.5	0.2	1.7	0.4	3.9
<i>Hong Kong</i>	7.8	74.7	1.0	7.6	1.3	14.3
<i>Japan</i>	3.2	40.3	0.4	11.1	1.3	9.2
<i>Korea</i>	10.0	31.1	0.3	4.2	0.6	9.5
S.E. Asia	3.8	27.8	0.4	7.1	0.8	4.0
<i>Indonesia</i>	2.0	20.8	0.5	7.0	0.9	4.0
<i>Malaysia</i>	3.6	35.6	0.4	11.7	1.1	6.0
<i>Philippines</i>	5.8	51.6	0.8	18.8	0.8	4.1
<i>Singapore</i>	5.4	47.5	0.4	13.8	1.1	7.1
<i>Thailand</i>	3.3	26.0	0.4	4.4	0.4	5.2
South Central Asia	7.1	11.6	0.4	4.3	0.7	4.2
<i>India</i>	6.2	9.0	0.3	4.6	0.6	3.2
<i>Pakistan</i>	8.5	20.1	0.2	5.6	0.7	8.8
Western Asia	8.1	31.2	1.3	9.1	1.6	12.7
<i>Saudi Arabia</i>	2.8	10.3	0.6	7.9	0.8	8.2
<i>Turkey</i>	10.2	40.1	1.0	6.9	1.9	11.6
<i>United Arab Emirates</i>	3.1	15.1	0.4	9.7	0.9	6.4
Eastern Europe	12.1	69.7	5.2	19.4	6.4	17.7
<i>Russian Federation</i>	13.0	74.9	5.4	15.9	6.4	16.4
Northern Europe	4.2	44.3	7.4	45.4	5.6	18.2
<i>Denmark</i>	5.6	46.8	10.6	31.2	10.4	13.6
<i>Ireland</i>	3.7	39.6	7.9	47.8	4.3	14.3
<i>Norway</i>	3.2	35.1	14.1	65.3	8.8	21.3

	Larynx	Lung	Melanoma	Prostate	Testis	Bladder
<i>Sweden</i>	2.1	21.4	12.6	70.0	6.2	17.9
United Kingdom	4.2	47.6	6.1	40.2	5.6	19.2
Southern Europe	11.7	58.8	3.8	23.9	4.6	24.6
<i>Italy</i>	<i>10.8</i>	<i>59.4</i>	<i>4.6</i>	<i>24.9</i>	<i>5.8</i>	<i>28.0</i>
<i>Greece</i>	6.9	55.8	1.9	20.2	3.7	22.5
<i>Spain</i>	14.1	53.2	2.8	24.2	3.8	28.4
Western Europe	8.2	53.2	7.0	54.9	7.3	20.0
<i>France</i>	<i>10.2</i>	<i>53.5</i>	<i>6.8</i>	<i>56.5</i>	<i>6.3</i>	<i>25.6</i>
<i>Germany</i>	7.3	50.3	6.5	53.6	8.9	18.0
<i>Netherlands</i>	5.7	62.0	9.4	55.9	4.9	15.5
<i>Australia</i>	<i>4.3</i>	<i>42.2</i>	<i>40.5</i>	<i>76.0</i>	<i>5.7</i>	<i>15.6</i>
<i>New Zealand</i>	<i>2.9</i>	<i>41.4</i>	<i>36.7</i>	<i>101.1</i>	<i>6.5</i>	<i>17.1</i>
Melanesia	3.3	4.7	5.1	4.6	0.8	2.0
Polynesia	2.0	38.4	5.8	35.4	2.6	6.3

The table shows the incidence of the more common cancers in different parts of the world and in major countries in these world regions. (Countries are *italicised*, regions *not italicised*.) They show the incidence per 100,000 people per annum. These figures are not the absolute incidence but have been age standardised to give a truer comparison because of different life expectancies of people in different parts of the world and in different countries

The table has been compiled from Globocan website. Specific download reference as follows: 09/01/2004, <http://www-dep.iarc.fr/cgi-bin/exe/globom.exe>

Table A.2 Worldwide incidence of more common cancers: female

	Bladder	Kidney	Brain/nervous system	Thyroid	Non-Hodgkin lymphoma	Hodgkin lymphoma	Leukaemia	Multiple myeloma
World	2.4	2.3	2.5	3.0	4.0	0.8	3.7	1.1
More developed countries	4.1	4.6	4.1	4.4	6.6	1.8	5.4	1.1
Less developed countries	1.5	1.1	2.0	2.5	2.6	0.5	3.0	0.6
Eastern Africa	2.7	0.8	0.5	2.7	4.6	0.9	2.9	0.6
Middle Africa	0.5	0.7	0.1	2.1	7.8	0.3	1.0	2.2
Northern Africa	4.5	1.6	1.6	3.3	2.6	0.8	2.9	0.7
Southern Africa	3.5	1.4	0.9	1.9	2.9	0.5	2.1	1.0
<i>South Africa</i>	3.7	1.4	1.0	2.0	3.0	0.5	2.2	1.1
Western Africa	1.5	0.5	0.2	2.0	3.3	1.0	2.7	0.3
Caribbean	2.6	1.7	2.8	3.2	3.5	1.2	5.2	1.8
Central America	1.9	2.4	3.7	4.2	3.5	1.1	5.0	1.5
South America	2.8	2.7	3.7	3.5	4.7	0.9	4.5	1.5
<i>Argentina</i>	2.6	3.7	2.9	2.6	5.0	0.9	4.6	1.3
<i>Brazil</i>	3.2	2.6	4.6	3.3	4.5	0.9	4.3	1.5
United States	5.4	6.0	4.4	6.2	10.9	2.0	6.3	2.9
Canada	4.6	5.8	4.8	6.8	10.5	2.2	6.8	3.0
Eastern Asia	1.2	1.3	2.6	2.2	2.1	0.1	3.4	0.6
<i>China</i>	1.0	1.0	2.8	1.6	1.5	0.1	3.3	0.3
<i>Hong Kong</i>	4.6	2.3	3.4	7.3	6.4	0.3	4.8	1.7
<i>Japan</i>	2.0	2.5	2.0	4.8	4.2	0.2	3.8	1.4
<i>Korea</i>	1.5	1.7	2.8	5.5	3.5	0.4	3.5	0.5
S.E. Asia	1.1	1.3	1.0	4.0	3.1	0.3	3.4	0.5
<i>Indonesia</i>	1.0	1.5	0.8	3.9	3.6	0.4	3.4	0.7
<i>Malaysia</i>	1.5	2.6	1.3	5.6	4.7	0.5	4.3	1.3
<i>Philippines</i>	1.3	2.0	1.8	8.2	3.3	0.4	5.4	0.7

<i>Singapore</i>	1.8	2.4	2.0	5.9	4.6	0.4	4.2	1.1
<i>Thailand</i>	1.3	0.7	1.4	3.2	2.4	0.3	2.7	0.3
South Central Asia	1.1	0.6	1.5	2.3	2.0	0.6	2.2	0.5
India	0.7	0.5	1.6	1.9	1.7	0.5	2.1	0.6
Pakistan	3.4	0.9	1.8	3.9	3.5	0.8	3.8	0.7
Western Asia	2.4	1.8	2.9	3.1	4.5	1.8	3.9	1.1
Israel	5.6	5.5	4.3	8.1	11.1	2.9	5.5	2.2
Saudi Arabia	1.9	1.8	2.4	7.7	7.3	2.0	4.5	1.3
Turkey	1.6	1.7	3.0	2.0	4.0	0.7	3.5	0.9
United Arab Emirates	1.8	1.9	2.6	7.3	4.5	3.6	4.5	1.1
Eastern Europe	4.0	4.7	3.8	2.7	3.9	2.0	5.0	1.0
Russian Federation	3.9	4.4	3.7	2.4	3.5	1.8	4.9	0.9
Northern Europe	5.3	4.6	5.4	3.1	6.9	1.5	6.2	2.4
Denmark	4.2	5.2	5.8	3.1	7.0	1.7	6.3	2.3
Ireland	4.4	4.0	5.0	1.6	7.9	2.1	6.3	3.0
Norway	5.9	5.9	6.6	3.9	7.6	1.4	6.0	2.4
Sweden	5.4	5.7	11.3	3.4	7.8	1.7	8.1	2.5s
United Kingdom	6.0	3.8	4.4	2.4	7.0	1.4	6.1	2.4
Southern Europe	4.1	3.5	4.8	5.2	6.3	2.1	5.3	2.1
Italy	5.0	4.3	4.4	8.5	8.1	2.7	6.2	2.5
Greece	4.2	2.8	7.1	3.0	3.3	4.0	5.5	1.5
Spain	3.3	2.7	5.0	2.8	6.3	1.4	4.9	2.0
Western Europe	4.2	5.4	4.6	4.4	7.1	2.5	5.9	2.3
France	4.0	4.7	4.2	6.5	7.6	2.1	6.0	2.3
Germany	4.4	5.9	4.8	3.7	6.7	2.8	6.0	2.2
Netherlands	3.5	5.2	4.5	2.5	7.7	1.6	5.1	2.7
Australia	4.6	6.0	4.8	5.8	10.8	1.9	6.9	2.8

	Bladder	Kidney	Brain/nervous system	Thyroid	Non-Hodgkin lymphoma	Hodgkin lymphoma	Leukaemia	Multiple myeloma
New Zealand	4.7	4.9	5.5	3.9	11.1	1.6	8.7	3.4
Melanesia	0.5	0.9	0.2	4.2	4.8	0.4	2.8	0.1
Polynesia	1.0	1.5	2.9	18.8	4.7	1.0	6.1	1.9
	Oral cavity	Nasopharynx	Oropharynx	Oesophagus	Stomach	Colon/rectum	Liver	Pancreas
World	3.3	0.6	0.8	4.5	10.4	14.4	5.5	3.2
More developed countries	2.4	0.3	0.6	1.3	11.0	25.4	2.9	5.1
Less developed countries	3.7	0.8	0.8	6.2	10.0	7.9	6.8	2.1
Eastern Africa	6.0	0.9	0.4	5.1	6.7	4.9	6.0	1.6
Middle Africa	2.7	0.2	0.6	0.2	14.1	3.3	13.0	4.0
Northern Africa	1.7	1.2	0.3	1.8	3.3	5.2	2.7	1.1
Southern Africa	3.4	0.4	0.3	6.4	3.7	8.7	2.1	1.1
<i>South Africa</i>	3.2	0.4	0.3	6.2	3.8	9.4	2.1	1.2
Western Africa	1.5	0.1	0.1	1.4	3.9	3.8	6.2	0.7
Caribbean	4.5	0.3	1.4	2.0	7.2	15.4	4.2	3.0
Central America	1.8	0.2	0.5	1.2	13.1	9.1	1.6	4.8
South America	2.4	0.2	0.7	2.5	11.7	14.3	3.7	4.2
<i>Argentina</i>	1.7	0.1	0.3	2.5	5.4	18.9	3.3	5.9
<i>Brazil</i>	2.9	0.2	1.1	2.8	9.7	13.8	4.5	3.7
<i>United States</i>	3.7	0.2	0.7	1.4	3.6	30.7	1.7	6.3
<i>Canada</i>	2.6	0.3	0.8	1.3	4.2	29.8	1.1	5.9
Eastern Asia	1.0	0.9	0.1	8.9	19.6	12.5	12.7	3.2
<i>China</i>	0.9	1.1	0.1	10.9	17.5	9.8	13.3	2.6
<i>Hong Kong</i>	2.7	9.7	0.4	3.2	10.1	28.9	9.8	3.0
<i>Japan</i>	1.7	0.1	0.2	1.6	28.6	25.3	8.1	5.7
<i>Korea</i>	1.0	0.2	0.2	1.0	25.7	10.3	11.6	3.7

<i>S.E. Asia</i>	2.6	2.2	0.7	1.3	4.8	10.0	5.7	1.6
<i>Indonesia</i>	1.0	1.9	0.3	0.4	2.1	10.6	2.6	1.6
<i>Malaysia</i>	1.8	3.1	0.4	1.1	6.7	21.0	3.7	2.7
<i>Philippines</i>	5.4	2.5	1.7	1.3	5.5	13.5	6.8	3.4
<i>Singapore</i>	1.9	5.1	0.3	1.5	11.8	30.3	4.9	3.2
<i>Thailand</i>	4.0	1.2	0.6	1.3	2.9	7.4	15.2	1.0
<i>S Central Asia</i>	8.6	0.3	2.0	6.3	3.5	3.7	1.5	0.8
<i>India</i>	7.5	0.3	1.8	5.1	2.8	3.2	1.1	0.8
<i>Pakistan</i>	14.7	0.9	2.6	6.3	2.8	5.1	3.6	0.9
<i>Western Asia</i>	2.1	0.5	0.5	1.4	6.1	8.3	2.1	2.1
<i>Israel</i>	3.0	0.4	0.1	1.2	6.9	33.6	1.8	6.3
<i>Saudi Arabia</i>	4.1	1.5	1.1	4.3	3.9	7.2	5.9	1.7
<i>Turkey</i>	1.9	0.3	0.5	0.9	5.6	5.3	1.0	1.2
<i>United Arab Emirates</i>	2.5	1.2	0.9	3.2	3.0	8.0	4.0	2.6
<i>Eastern Europe</i>	2.1	0.5	0.5	1.1	14.5	21.5	2.6	4.8
<i>Russian Federation</i>	2.0	0.5	0.4	1.5	18.0	22.1	2.3	4.6
<i>Northern Europe</i>	2.1	0.2	0.7	3.2	6.1	25.2	1.4	5.2
<i>Denmark</i>	3.2	0.3	1.1	1.9	4.2	30.5	2.0	5.9
<i>Ireland</i>	2.2	0.1	0.6	3.6	6.2	28.7	0.9	5.8
<i>Norway</i>	2.6	0.1	0.5	0.8	5.6	33.8	0.8	6.3
<i>Sweden</i>	2.7	0.1	0.5	0.9	4.7	24.6	2.4	5.3
<i>United Kingdom</i>	2.0	0.2	0.7	4.3	5.5	25.3	1.1	4.9
<i>Southern Europe</i>	1.6	0.2	0.4	0.7	9.7	22.0	3.5	4.7
<i>Italy</i>	1.4	0.2	0.5	0.7	10.3	24.0	4.6	5.5
<i>Greece</i>	1.0	0.2	0.3	0.4	6.4	13.6	4.6	3.9
<i>Spain</i>	1.7	0.3	0.3	0.6	8.5	21.0	2.4	3.5
<i>Western Europe</i>	3.0	0.3	1.2	1.3	7.0	29.4	1.6	4.6

	Oral cavity	Nasopharynx	Oropharynx	Oesophagus	Stomach	Colon/rectum	Liver	Pancreas
<i>France</i>	2.6	0.2	1.3	1.4	4.5	26.8	1.8	3.0
<i>Germany</i>	3.3	0.3	1.3	1.1	9.2	32.0	1.6	5.3
<i>Netherlands</i>	3.1	0.2	1.1	2.2	5.2	30.4	0.8	5.2
<i>Australia</i>	5.4	0.2	0.7	2.2	5.0	35.4	7.0	5.5
<i>New Zealand</i>	2.6	0.3	0.5	2.4	5.2	43.4	2.0	6.2
<i>Melanesia</i>	23.6	0.2	0.5	2.4	3.8	4.6	10.2	0.5
<i>Polynesia</i>	2.2	1.7	0.8	0.9	9.2	13.7	3.9	3.0
	Larynx	Lung	Melanoma	Breast	Cervix/uterus	Body/uterus	Ovary	
<i>World</i>	0.7	11.1	2.2	35.7	16.1	6.4	6.5	
<i>More developed countries</i>	0.7	15.6	6.1	63.2	11.4	11.3	9.9	
<i>Less developed countries</i>	0.6	6.8	0.7	23.1	18.7	3.9	4.9	
<i>Eastern Africa</i>	0.5	2.1	3.3	20.2	44.3	3.4	9.0	
<i>Middle Africa</i>	0.2	0.8	2.3	13.5	25.1	3.0	2.9	
<i>Northern Africa</i>	0.7	2.8	0.7	28.3	16.8	2.2	3.2	
<i>Southern Africa</i>	0.8	7.3	4.6	31.8	30.3	4.6	3.9	
<i>South Africa</i>	0.8	8.0	4.8	33.5	28.9	4.8	4.0	
<i>Western Africa</i>	0.1	0.4	1.3	24.8	20.3	1.6	3.1	
<i>Caribbean</i>	1.3	9.7	0.7	33.8	35.8	8.6	5.6	
<i>Central America</i>	1.0	8.4	1.6	36.2	40.3	15.8	7.0	
<i>South America</i>	1.0	8.3	2.0	45.1	30.9	14.3	7.3	
<i>Argentina</i>	0.7	8.3	1.8	64.7	14.2	28.8	12.7	
<i>Brazil</i>	1.1	8.9	2.2	46.4	31.3	12.9	6.8	
<i>United States</i>	1.2	34.0	9.4	91.4	7.8	15.5	10.6	
<i>Canada</i>	0.9	30.2	8.0	81.8	8.3	14.9	11.7	
<i>Eastern Asia</i>	0.3	15.0	0.2	18.1	6.4	2.4	3.7	
<i>China</i>	0.3	15.7	0.2	16.4	5.2	2.2	3.2	
<i>Hong Kong</i>	0.8	32.1	0.8	34.4	15.6	7.1	7.5	
<i>Japan</i>	0.1	12.1	0.3	31.4	11.1	4.5	6.6	

<i>Korea</i>	0.6	12.1	0.2	12.5	15.3	1.5	4.1
<i>S.E. Asia</i>	0.5	9.1	0.5	25.6	18.3	4.3	7.1
<i>Indonesia</i>	0.2	6.8	0.8	26.1	15.7	5.3	8.1
<i>Malaysia</i>	0.3	12.9	0.8	41.9	12.0	7.7	11.4
<i>Philippines</i>	0.9	14.2	0.6	44.7	22.7	6.0	10.2
<i>Singapore</i>	0.4	18.9	0.5	47.1	14.9	8.2	11.1
<i>Thailand</i>	0.4	10.9	0.4	15.9	20.7	2.8	4.7
<i>South Central Asia</i>	1.0	2.3	0.4	22.2	26.5	2.2	5.2
<i>India</i>	0.8	2.0	0.2	19.1	30.7	1.7	4.9
<i>Pakistan</i>	1.5	2.8	0.8	50.1	6.5	5.8	9.8
<i>Western Asia</i>	0.9	4.8	1.2	27.9	4.8	4.9	5.9
<i>Israel</i>	0.7	9.7	0.8	79.1	5.8	11.5	11.7
<i>Saudi Arabia</i>	0.4	3.3	0.4	21.6	5.0	3.1	5.0
<i>Turkey</i>	0.6	4.0	0.9	20.4	3.9	4.0	6.2
<i>United Arab Emirates</i>	0.4	4.9	0.3	27.1	4.6	3.4	5.3
<i>Eastern Europe</i>	0.5	8.8	5.0	49.4	16.8	10.7	10.3
<i>Russian Federation</i>	0.4	7.6	4.7	48.8	13.6	10.1	9.3
<i>Northern Europe</i>	0.7	18.9	8.7	73.2	9.8	11.1	12.6
<i>Denmark</i>	1.0	27.7	13.0	86.2	15.3	13.1	16.1
<i>Ireland</i>	0.6	18.7	10.2	71.6	7.9	9.8	13.9
<i>Norway</i>	0.6	16.6	15.9	68.5	12.6	13.5	13.1
<i>Sweden</i>	0.3	12.1	13.3	81.0	9.4	15.2	11.9
<i>United Kingdom</i>	0.8	21.8	7.7	74.9	9.3	9.3	12.2
<i>Southern Europe</i>	0.5	8.0	4.6	56.2	10.2	13.8	8.7
<i>Italy</i>	0.6	9.0	5.5	64.9	9.1	16.5	8.7
<i>Greece</i>	0.6	8.3	2.0	47.6	6.9	6.4	7.7
<i>Spain</i>	0.2	4.0	4.5	47.9	7.2	12.0	8.3

	Larynx	Lung	Melanoma	Breast	Cervix/uterus	Body/uterus	Ovary
Western Europe	0.8	10.7	8.1	78.2	10.4	10.9	11.1
<i>France</i>	0.9	7.4	8.0	83.2	10.1	9.6	9.2
<i>Germany</i>	0.7	11.4	7.1	73.7	11.5	11.4	12.2
<i>Netherlands</i>	0.9	17.5	12.9	91.6	7.3	11.6	11.9
<i>Australia</i>	0.5	17.5	31.9	82.7	7.1	10.6	9.1
<i>New Zealand</i>	0.6	21.7	34.9	82.6	10.6	11.5	12.4
Melanesia	0.9	2.9	3.1	21.7	43.8	7.1	7.1
Polynesia	0.2	14.2	2.1	55.2	29.0	15.3	3.8

The table shows the incidence of the more common cancers in different parts of the world and in major countries in these world regions. (Countries are *italicised*, regions *not italicised*.) They show the incidence per 100,000 people per annum. These figures are not the absolute incidence but have been age standardised to give a truer comparison because of different life expectancies of people in different parts of the world and in different countries. The table has been compiled from Globocan 2002 database. Specific download reference as follows: 09/01/2004, <http://www-dep.iarc.fr/cgi-bin/exe/globof.exe?>

Glossary

Acute Having a sudden onset.

Adenoma A benign (not malignant) tumour in which the cells are derived from glands or from glandular epithelium (such as the lining of the stomach).

Adenocarcinoma A cancer of glandular cells.

Adjuvant Chemotherapy Chemotherapy given after operative surgery to help ensure complete eradication of all cancer cells.

Allele One of two or more alternative forms of a gene.

Anaemia A blood condition with a reduction in the amount of haemoglobin carried in the blood.

Anaplasia More extreme abnormality of cells. Cancer cells are described as being anaplastic when they have lost the special features of the cells from which they developed. Anaplastic cells tend to grow and invade more aggressively. They more readily invade surrounding tissues and more readily spread to other places to form metastases.

Angiogram An X-ray of blood vessels (see arteriogram).

Anorexia A feeling of not wanting to eat (lack of hunger) or early satiety.

Antibody A type of protein produced by the immune system that recognises invading organisms or other substances as foreign. The antibody attaches itself to the foreign or invading substance in an attempt to destroy it.

Apoptosis An inbuilt ability of cells to undergo self-destruction after they have served their function; part of the ageing process of death and replacement and turnover of ageing cells during normal life. Cancer cells seem to have lost this inbuilt self-limiting life process.

Arteriogram A radiograph (X-ray photograph) of an artery taken after injection of an iodine-based radio-opaque substance into an artery.

Aspiration Act of sucking up or sucking out.

Ascites Accumulation of abnormal amounts of fluid in the abdominal cavity.

Astrocytoma A malignant tumour of connective tissue cells in the brain.

Atrophic Wasted; degenerate; having lost special qualities.

Atrophy Wasting away; losing special qualities (verb or noun).

Axilla Armpit.

Bacteria Germs. Microscopic organisms usually consisting of one cell only that normally occur in the skin, the mouth and the alimentary tract of humans and all

animal species. Some bacteria are toxic and some tend to invade body organs or tissues causing damage and illness.

Barium Enema or Baryum Enema (French) Similar to a barium (baryum) meal except that the radio-opaque/contrast material is introduced via a tube through the anus to allow X-ray films and X-ray screening of the rectum and large bowel.

Barium Meal or (Baryum French) Meal A test that involves swallowing a liquid containing the radio-opaque element – barium. This allows radiographs (X-rays) to be taken to show the size and shape of organs such as the stomach or duodenum.

Barium Swallow (Baryum Swallow) Similar to a barium meal except that whilst the material is being swallowed, the shape and outline of the oesophagus can be studied.

Basal The lowest part of a structure forming its base. The basal layer of the skin consists of the deep cells from which the upper or more superficial cells grow.

BCC Basal cell carcinoma. A slowly growing skin cancer that has grown from the basal (deep) layer of skin cells.

BCG Bacillus Calmette-Guerin. A bacterial preparation originally used as an active immunising agent against tuberculosis. It consists of harmless living organisms that promote a similar body defence action to that of tuberculosis bacteria. It is also used in the bladder as an immune-stimulating agent against benign papillomas and non-invasive carcinoma.

Benign Not malignant; favourable for recovery; unlikely to be dangerous. A benign tumour is one that remains localised and does not invade or destroy the tissue in which it originates and does not spread to distant sites in the body.

Benign Mammary Dysplasia A condition of the breasts that is likely to cause cysts and other benign lumps in the breasts. This condition is probably more widely known as fibro-cystic disease, but other names are fibro-adenosis-cystica, hormonal mastopathy or “chronic mastitis”. Cells in dysplastic tissues are not themselves malignant or pre-malignant, but when a cancer develops in a breast with lumpy dysplastic changes, it may be more difficult to identify. They do have a small but significantly greater potential for malignant change.

Biopsy The removal of a small sample of tissue for microscopic examination.

Block Dissection Total surgical excision of a whole group of lymph nodes in one piece of tissue.

Brachytherapy A method of applying radiotherapy by placement of tiny radioactive pellets (seeds) or wires or needles directly into a tumour to destroy it.

Buccal Mucosa The lining of the cheek in the mouth.

Calcitonin A hormone produced by certain cells (C cells) in the thyroid gland. Calcitonin lowers the level of calcium and phosphates in the blood.

Cancer A malignant growth of cells. A continuous, purposeless, unwanted and uncontrolled growth of cells that actually or potentially has power to invade and damage surrounding tissues and of metastasising to distant tissues or organs.

Cachexia The wasting condition often associated with terminal cancer due to abnormal metabolism of glucose.

Capsule The fibrous or membranous sac-like covering that encloses a tissue or organ.

- Carcinogen** A substance that causes cancer.
- Carcinoma** Cancer. More specifically a cancer of epithelial lining cells or of glandular cells.
- Cervix Uteri** The neck of the uterus; the entrance of the womb.
- Chemotherapy** Treatment with chemical agents or drugs.
- Chronic** Persisting for a long time; having a long or protracted course.
- Chronic Atrophic Gastritis** A gradual and persistent degeneration of the lining of the stomach.
- Colostomy** An opening made surgically between the large bowel (colon) and the abdominal wall to allow evacuation of faeces when the lower bowel is blocked.
- Congenital** Present from the time of birth.
- Corynebacterium parvum* A harmless bacterium sometimes; a bacterium used to stimulate an immune reaction defence reactions.
- Cryotherapy** The use of cold or freezing as treatment.
- Crohn's Disease** A chronic granular inflammatory condition that may affect the small intestine, the large intestine or both. It was first described by Dr Dalziel in Scotland and thoroughly studied and reported by Dr Crohn in America (see granulomatous colitis).
- CT Scan** CAT scan or computerised axial tomography; a method of visualising body tissues by using computerised radiographic techniques. These give X-ray "pictures" of sections of body tissues.
- Cytokines** Protein molecules released by cells when activated by an antigen. Cytokines are involved in cell-to-cell communication as enhancing mediators for immune responses through interaction with specific cell surface receptors on white blood cells. Interleukins are cytokines produced by leukocytes. Interferons are cytokines produced by lymphocytes. Lymphokines and tumour necrosis factor (TNF) are also cytokines.
- Cytotoxic** Having a toxic or harmful effect upon cells.
- DNA** Deoxyribonucleic acid. The material from which the genes and chromosomes in body cells are made.
- Dysplasia** An abnormal development of tissues. Dysplastic tissues are not in themselves malignant but have an increased potential for malignant change.
- Endocrine Gland** A gland that secretes its product into the bloodstream for wide distribution in the body. The thyroid, the pituitary and adrenal glands are examples.
- Endoscope** An instrument used for visual examination of the interior of hollow organs or the interior of body cavities.
- Epidemiology** The branch of medicine that deals with the distribution of diseases, their causes and the ways in which they appear and spread in different population groups and at different periods of time.
- Epidemiological** To do with epidemiology.
- Erythropoietin** A hormone secreted by certain cells in the kidneys to increase rate of red cell production.
- ESR (Erythrocyte Sedimentation Rate)** The rate at which red blood cells settle out of suspension in plasma. In general the ESR is raised in poor health conditions including cancer, inflammations, arthritic conditions, etc.

- Exocrine Gland** A gland that secretes its product through a duct into a body cavity. The parotid gland is an example.
- Faeces** Waste material passed as a bowel motion. Stool, poo or shit (slang).
- Familial Polyposis Coli** An inherited condition in which about half of the members of a family will develop polyps (small glandular tumours) in the wall of the large bowel. Eventually one or more of these will become malignant.
- Fascia** A fibrous layer or covering.
- Superficial Fascia** The fibro-fatty layer consisting mostly of fat under the skin.
- Deep Fascia** The fibrous or membranous layer of tissue that covers muscles, nerves and blood vessels or separates muscles or other tissues into different compartments.
- Fibroma** A benign tumour composed of fibrous tissue and cells capable of forming fibrous tissue.
- Floor of Mouth** The lower part of the mouth under the tongue.
- Gastroscope** A long, thin, flexible instrument used for visual examination of the interior of the stomach.
- Genome** The total genetic material of an organism, containing the genes in its chromosomes.
- Germ Cells** Cells of embryonic tissue that have capacity to develop into spermatozoa or ova.
- Gland** A tissue or organ that manufactures and secretes fluids and chemical substances necessary for maintenance of normal health and body function (e.g. a salivary gland secretes saliva, an adrenal gland secretes a number of hormones).
- Glucan** A complex carbohydrate (type of sugar or starch) that constitutes much of the fibre in common vegetable and grain foodstuffs and has also been found to have immune stimulatory properties.
- Goitre** Enlargement of the thyroid gland causing a swelling in the front part of the lower neck.
- Granulomatous Colitis** A chronic inflammatory condition of the large bowel of no known cause (see Crohn's disease).
- Hormone** A chemical substance produced by an endocrine gland and secreted directly into the bloodstream.
- HRT** Hormone replacement therapy: Treatment with a low dose of hormones to reduce menopausal and postmenopausal symptoms and other problems such as loss of calcium from bones.
- Hutchinson's Freckle** A large freckle that develops slowly on the face or other sun-exposed skin of elderly people. Sometimes it develops into a superficial melanoma.
- Hyperkeratosis** A thickening of the flat protective surface layer of epithelium of skin or lip. The condition is usually characterised by the formation of crusts or flakes that drop off. There is a tendency for malignant changes to appear gradually and thus a skin cancer may develop.
- Immunotherapy** The treatment of disease by giving immune substances or by stimulating the immune system of body defences.
- Induration** Hardening or thickening of a tissue or a part of the body such as due to inflammation or infiltration with cancer.

Induction The process of starting a change or starting something to happen. The first step in a process that will be developed.

Induction Chemotherapy Induction chemotherapy is the use of chemotherapy to begin changes in a cancer as the first step in an integrated cancer treatment programme. The cancer is usually made smaller and less aggressive by the use of induction chemotherapy, hopefully making it more curable by following treatment, usually surgery or radiotherapy or both.

Inflammation A reaction of tissues due to injury.

Isoflavones Members of a class of plant hormones (phytoestrogens) that are present in many plants but are especially plentiful in legumes like soybeans. The greatest known source is the red clover plant. The red clover is a legume that contains all the phytoestrogens known to be most active in human physiology.

Isotope A different form of an element with the same chemical properties but different physical properties. Radioactive isotopes are unstable and slowly emit small amounts of irradiation and thus decay into other isotopes.

Kaposi's Sarcoma A malignant tumour arising in blood vessels in the skin.

Kinase An agent that can convert the inactive form of an enzyme (pro-enzyme) to the active form.

Langerhans Cells Cells of the immune system in the skin.

Lesion An abnormal area of tissue.

Leukocyte A white cell. The "white" or colourless type of cell that circulates in the blood, has amoeboid movement and is chiefly concerned with defending the body against invasion by foreign organisms.

Leukoplakia A white patch. A condition distinguished by the presence of white thickened patches in mucous membranes, commonly in the mouth. There may be a tendency for malignant characteristics to appear gradually and thus for a cancer to develop.

Lipoma A benign tumour composed of fat cells.

Lycopene A recently studied anti-oxidant found in tomatoes and some other fruits that appears to have anti-cancer or cancer preventative properties. It is the red colouring component of tomatoes. Tissue culture and animal experiments suggest potential especially against prostate and breast cancer cells.

Lymphangiogram A radiograph (X-ray photograph) of lymphatic vessels shown after injection of a radio-opaque substance (dye) into the lymphatic vessels.

Lymphocyte One of the types of white cells that circulate in the blood and take part in immune reactions and the body's defence reactions. A mononuclear, non-granular leukocyte produced by lymph nodes and other lymphoid tissue.

Lymphoid Resembling or pertaining to the tissue of the lymphatic system. Tissue that contains and produces lymphocytes.

Lymphoma A malignant disease or cancer of lymphoid tissue.

Lymph Nodes Small masses of lymphatic tissue contained in a bean-shaped capsule measuring 1–25 mm. They are scattered along the course of lymph vessels and often grouped in clusters. They form an important part of the body's defence system. They function as factories for the development of lymphocytes and as filters for bacteria and foreign debris from tissue fluid. They are not glands but are sometimes referred to as lymph "glands".

- Lymph Vessels or Lymphatics** Small vessels that drain tissue fluid into lymph nodes and inter-connect groups of lymph nodes. Eventually the larger lymph vessels drain this fluid into the bloodstream.
- Malaise** A general feeling of lassitude and ill health; feeling unwell.
- Malignant** Life threatening. A condition that in the natural course of events would become progressively worse resulting in death. A malignant growth or cancer is a growth of unwanted cells that tend to continue growing and invading, thus destroying surrounding tissues. It also tends to spread to other parts of the body causing eventual destruction of other tissues.
- Malignant Fibrous Histiocytoma** A malignant tumour of histiocytes which are protective (immune) cells in soft tissues (muscles, fat, etc.) or in bone.
- Mediastinum** The central midline area within the chest and between the lungs. That part of the chest between the sternum (breast bone) and the vertebrae (backbone), containing the heart, great blood vessels, trachea and oesophagus.
- Medulloblastoma** An uncommon malignant brain tumour that usually develops from primitive brain cells in the cerebellar part of the brain, most commonly in children and young people.
- Melanoma** A malignant tumour of pigment-producing cells most commonly arising in the skin, sometimes in the eye or occasionally elsewhere.
- Menopause** The “change of life”; that time in the life of a woman when menstruation stops due to reduced activity of the ovaries and other glands. A number of other physical and emotional changes are likely to be associated.
- Metaplasia** An abnormal change in a tissue, a cell or cell genes.
- Metastasis** Metastatic cancer – a secondary growth of malignant cells that has spread from a primary cancer elsewhere.
- Mitosis** A process of cell division in which a single cell including its nucleus and genes divides to form two identical cells.
- Mitotic Figures** The numbers of dividing cells in a tissue.
- MRI** Magnetic resonance imaging; a special test based on certain laws of physics (electromagnetic fields). The test allows very detailed pictures to be taken of cross sections of the trunk, head, neck or limbs. The resulting pictures are rather like those of CT scans.
- Mucus** A protective slimy material secreted by certain glands and certain cells lining body cavities and hollow organs.
- Mucous Membrane or Mucosa** The lining of most hollow organs and some body cavities, such as the mouth, stomach, bowel or vagina, all of which contain mucous glands and secrete protective mucus onto the surface.
- Myelodysplasia** An abnormal change in bone marrow blood-forming cells.
- Naevus (or Nevus)** A localised collection of pigment-forming skin cells forming a circumscribed malformation, usually light or dark brown in colour, such as a mole or a birthmark.
- Neoplasm** “New growth”; an abnormal growth of body cells. A neoplasm may be benign (innocent and usually harmless) with limited growth or malignant (cancer) with continuing, unwanted and uncontrolled growth.

- Neuroblastoma** A malignant tumour of primitive nerve-forming cells that usually arises in the autonomic nervous system.
- Neuroma** A benign tumour composed of nerve cells.
- Occult Blood** Hidden blood. Blood that cannot be seen with the naked eye but is found to be present on chemical testing.
- Oesophagus** The gullet; the part of the digestive tract for passage of food from the mouth and pharynx above to the stomach below. It is a muscular tube lined with epithelium and extends from the neck, through the chest and into the abdomen.
- Oncology** The study of tumours and of patients suffering from tumours.
- Osteomyelitis** Infection of bone. Acute osteomyelitis occurs when bacteria enter the bone via the bloodstream establishing a localised, painful swelling with fever and sometimes septicaemia. It most often occurs in children. Osteosarcoma in children can sometimes resemble acute osteomyelitis in its initial presentation.
- Paget's Disease of Bone** A degenerative bone disease in which bones become thickened and disorganised.
- Paget's Disease of the Nipple** A malignant condition of the nipple in which the nipple appears to develop a rash or "abrasion-like" appearance.
- Palliative** Giving relief; relieving symptoms but not curing the condition.
- Palliation** Relief.
- Pancreas** A pale fleshy gland that lies across the back of the abdominal cavity behind the stomach. It is responsible for secreting digestive juices containing digestive enzymes into the digestive tract and for secretion of the hormone insulin into the bloodstream.
- Papilloma** A benign wart-like or fern-like tumour derived from the epithelium and projecting from an epithelial surface with a central core of small blood vessels.
- PCR (Polymerase Chain Reaction)** Simple laboratory technique that involves repeat cycles of targeted replication of genes, to produce copies that can easily be analysed.
- Petechiae** Small, often pinhead size, reddish or pink spots in the skin caused by minute haemorrhages. They are often associated with a deficiency of blood platelets but are sometimes associated with other conditions such as liver failure or some infections such as typhoid.
- Petechial** Having to do with petechiae.
- Pernicious Anaemia** A type of anaemia resulting from a failure of gastric mucosa (stomach lining) to produce a vital ingredient for making blood. This is called intrinsic factor.
- PET Scan** Positron emission tomography scan. A special imaging technique that produces "pictures" of body tissues based on glucose metabolism in the cells of those tissues (cancer cells metabolise more glucose than do normal cells).
- Philadelphia Chromosome** A chromosome detected in cells in patients with chronic myeloid leukaemia.
- Phytoestrogens** Naturally occurring oestrogen-like hormones present in all plants but in large quantities in certain leguminous plants such as soybeans. Thought to be at least partly responsible for the lower incidence of some diseases (especially

breast and prostate cancer) in people such as Asians living in Asia who have a high intake of legumes in their diets.

Platelets Small disc-shaped particles in the blood that are essential for normal blood clotting.

Pleomorphic Having a variety of appearances. Pleomorphic cells in a cancer are cells of different sizes, shapes and other features of the cancer.

Pleura The lining or membrane surrounding the lungs and surrounding the cavity in which the lungs move during respiration.

Polyposis Coli A condition in which there are many polyps in the colon mucous membrane lining.

Polyp A tumour projecting on a stalk from the mucous membrane lining the cavity of a hollow organ.

PMS Postmenopausal syndrome; symptoms of hot flushes, depression, vaginal dryness, bone wasting, etc. associated with menopausal changes.

PMT Premenstrual tension. Hormone-produced emotional changes that often occur in women over a few days preceding menstruation.

Prosthesis An artificial replacement for a missing body part.

Prosthetic To do with a prosthesis.

PSA Prostate-specific antigen. The PSA test is a blood test to determine the amount of this special protein enzyme in the circulation. Prostate gland cells produce this enzyme, and when the number of these cells is increased, there is usually a raised level of PSA in the blood. High PSA levels can be an indication of the presence of prostate cancer although other non-malignant conditions, especially prostate hyperplasia and prostatitis, can also cause the PSA level to be raised.

Radical Extreme or very extensive. A radical mastectomy is removal of the whole breast together with lymph nodes in the axilla and other nearby tissues.

Radio-Opaque Material A substance that does not allow penetration of X-rays. It thus shows as a white area on an X-ray film. It is commonly referred to as “dye”.

Radiotherapy Treatment with X-rays or gamma rays.

Reticuloendothelial System Special defensive cells that form part of the immune system. These cells protect the body against foreign materials and invading organisms. The cells are predominantly found in the bone marrow, spleen, liver and lymph nodes but are also found in other tissues such as skin and soft tissues and the wall of stomach and bowel.

Retinoblastoma A rare malignant tumour of the eye retina that occurs in infants. Monolateral forms represent sporadic tumours, and bilateral forms are familial.

Sarcoma A cancer that arises and develops in connective tissues such as the muscle, fat, fascia or bone.

Science The study of truth or fact; provable information.

Scientific Methods Methods of determining what is truth as opposed to what might be unproven beliefs, theories, assumptions or concepts. The most accepted form of scientific method is to propose a hypothesis and then present it for scrutiny or testing. Different methods are used for testing hypotheses in different situations. In medicine the most commonly used method of scientific analysis is

to propose a hypothesis and subject it to scrutiny by making statistical comparison with one other, or several other, concepts in the same field. The hypothesis is then further tested, by determining whether information gained will reliably give the same results when tested in different circumstances.

Screening Test A relatively simple, safe, inexpensive and easily performed test that can be carried out on large numbers of people to determine whether they are likely to have a cancer or other serious disease.

Sentinel Node The lymph node into which tissue fluid first drains from a tissue via lymphatics.

Side Effect An effect other than the effect wanted.

Sigmoidoscope A sigmoidoscope may be a rigid, hollow metal tube or a long flexible tube containing multiple fibre-optic channels.

Sigmoidoscopy Passage of a sigmoidoscope through the anus to allow visual examination of the inside of the lower bowel and biopsy of suspicious areas.

Squamous Flat, like a scale or pavement. Squamous cells are flat scale-like cells that cover the skin, the mouth, throat, oesophagus, vagina and some other cavities.

Stem Cells Cells that have the capacity to develop into all cells within the organ and repair or replace organ tissue; immortal, undifferentiated and uncommitted cells. Most commonly used in reference to stem cells in the bone marrow.

STI 571 Code name for an agent that counteracts tyrosine kinase, an enzyme involved in cellular changes of some cancer cells, especially chronic myeloid leukaemia. Generic name, imatinib. Trade name, Glivec or Gleevec.

Tamoxifen A drug that combines with oestrogen receptors of cells, thus “blocking” the attachment of oestrogen to the cells.

Telangiectasia A collection of distended capillaries in skin giving a red lacework pattern or “spidery” localised appearance to an area of skin.

Therapy Treatment.

Tissue A layer or group of cells of particular specialised types that together perform a special function.

Toxic Poisonous.

Transcription Factor A protein transferred from DNA to RNA that is responsible for the first step in manufacture of cellular proteins.

Trauma Injury (e.g. broken bones) or response to surgery or sepsis.

Traumatised or Traumatized Injured.

Tumour A swelling or lump. Commonly used to describe a swelling caused by a growth of cells – a new growth or neoplasm that may be a cancer.

Ulcer A deficiency or hole in a covering or lining such as a hole in lining of skin or a mucous membrane.

Ulcerative Colitis An inflammatory condition of the large bowel characterised by small ulcers in the bowel lining and causing episodes of diarrhoea, often with blood loss.

Ultrasound High-frequency sound waves that cannot be heard by the human ear.

Uterus The womb. The organ in the female pelvis in which a foetus develops.

Varicose Ulcer An ulcer in the skin, usually on the lower leg, caused by poor circulation in the tissues due to long-standing varicose veins.