



Glossary

Adjuvant chemotherapy

Adjuvant chemotherapy (postoperative treatment) is used to eradicate any microscopic non-detectable cancer cells when there is little evidence of cancer presence, but there is risk of circulating microscopic cancer cells leading to recurrence.

Age-standardised rate

This term is a weighted average of age-specific rates according to the World Standard Population of the same age group and is expressed per 100,000 people. It is a method of eliminating the effects of age distribution in order to facilitate valid comparisons between groups in different countries with differing age structures, or for the same population over time.

Axillary dissection

A surgical procedure to remove the lymph nodes in the armpit (axillary nodes) hidden under the pectoral major and minor muscles. It is performed when there is evidence of cancerous cells in lymph nodes with palpation or imaging, or as sentinel lymph nodes.

Bilateral breast cancer

Bilateral breast cancer is cancer occurring in both breasts at the same time (synchronous) or at different times at least six months apart (metachronous).

Breast conserving surgery

This could be lumpectomy, wide local excision, partial mastectomy or segmentectomy. It is the surgical removal of a cancerous breast lump with a rim of non-cancerous tissue around the lump, without removing the entire breast.

Breast reconstruction

A surgical treatment that rebuilds the breast contour after mastectomy. A breast implant of the woman's own tissue provides the contour. If desired, the nipple and areola may also be preserved or recreated. Reconstruction can usually be done at the time of mastectomy or any time later.

Breast surgery

Surgery for breast cancer is a local therapy to remove the breast tumour.

Cancer specific death

A death with the underlying cause indicated as cancer. People with cancer who die of other causes are not counted in the death statistics of this publication.

Chemotherapy

Treatment with drugs which destroy cancer cells. Chemotherapy is often used in addition to surgery or radiation to treat cancer when metastasis (spread) is proven or suspected, when the cancer has come back (recurred), or when there is a strong likelihood that the cancer could recur.

Crude rate

A crude rate is the number of new cases (or deaths) occurring in a specific population per year, usually expressed as the number of cases per 100,000 people at risk.

Distant recurrence

Cancer that occurs in organs or tissues distant from the original site or regional lymph nodes (such as the lungs, liver, bone marrow, or brain). The term metastasis is used to describe a disease that has recurred at another location in the body.

Endocrine therapy

Treatment with hormonal drugs that interfere with hormone production or hormone action, or surgical removal of hormone-producing glands to kill cancer cells or cause programmed cell death (apoptosis).

Human epidermal growth factor receptor 2 (HER2) positive

In HER2 positive breast cancer, the cancer cells have an abnormally large number of HER2 genes per cell. When this happens, excessive HER2 protein appears on the surface of these cancer cells. This is called HER2 protein over-expression. Excessive HER2 protein is thought to cause cancer cells to grow and divide more quickly. This is why HER2 positive breast cancer is considered aggressive.

In situ breast cancer

This term refers to early stage breast cancer, when it is confined to the layer of cells where it began. In breast cancer, in situ means that the cancer cells remain confined to ducts (ductal carcinoma in situ). They have not grown into deeper tissues in the breast or spread to other organs in the body, and are sometimes referred to as non-invasive or pre-invasive breast cancers.

Lobular carcinoma in situ (LCIS) is considered a precancerous lesion, a risk factor for developing invasive cancer in future, but is not classified as breast cancer.

Invasive breast cancer

An invasive cancer is one that has already grown beyond the outer lining of the layer of cells where it started, for example breast ducts or lobules (as opposed to carcinoma in situ). Most breast cancers are invasive carcinomas.

Latissimus dorsi flap (LD flap)

A method of breast reconstruction that rotates the fanshaped flat muscle of the back to the chest area.

Locoregional recurrence

Cancer that returns after treatment, and occurs at the same site as the original cancer or in the lymph nodes near the site of origin.

Mastectomy

A mastectomy is the surgical removal of the entire breast. It is usually used to treat serious breast disease, such as breast cancer.

Mortality

Mortality is the incidence of death in a population.

Multicentricity

Breast cancer occurring in multiple quadrants of a breast.

Multifocality

Multifocality in breast cancer is defined as the presence of two or more tumour foci within a single quadrant of the breast with two or more foci 5 mm apart in the same breast quadrant.

Necrosis

A term used to describe the death of cellular tissue. Necrosis within a cancerous tumour may indicate that the tumour is growing so rapidly that blood vessels are not able to multiply fast enough to nourish some of the cancer cells. Necrosis usually indicates that the tumour is very

70 71



aggressive and can spread quickly. Fat necrosis is a benign (non-cancerous) breast condition that may occur when fatty breast tissues swell or become tender spontaneously or as a result of an injury to the breast.

Neoadjuvant chemotherapy

In neoadjuvant chemotherapy (preoperative treatment), initial chemotherapy is designed to shrink the primary tumour, thereby rendering local therapy (surgery or radiotherapy) less destructive or more effective.

Oestrogen receptor positive

This refers to the status of cancer cells with receptor proteins that bind the hormone oestrogen. Cancer cells that are oestrogen receptor positive need oestrogen to grow, and may stop growing or die when treated with substances that block the binding with oestrogen.

Progesterone receptor positive

The hormone progesterone will bind to protein in cells. Cancer cells that are progesterone receptor positive need progesterone to grow and will usually stop growing when hormonal therapy drugs block progesterone from binding.

Radiation therapy

Treatment with radiation to destroy cancer cells. External sources of radiation used include linear accelerators, cobalt, and betatrons. This type of treatment may be used to reduce the size of a cancer before surgery, or to destroy any remaining cancer cells after surgery.

Risk exposures

Risk exposures are associated with an increased probability of a specified outcome, for example, the occurrence of a disease. Risk exposures are not necessarily the causes of disease.

Sentinel node biopsy

A surgical procedure to remove the first few nodes receiving lymphatic drainage from the breast in clinically node-negative cancers. This is to determine if breast cancer has spread to the armpit (axillary) lymph node basin.

Sensitivity of the test

The ratio of true positive tests to the total number of affected (positive) patients tested expressed as a percentage.

Survival time

The time from initial diagnosis until the occurrence of death.

Targeted therapy

A type of medication that blocks the growth of cancer cells by interfering with specific targeted molecules needed for carcinogenesis and tumour growth.

Time to recurrence

The time from initial diagnosis until the occurrence of recurrence.

Transverse rectus abdominus muscle flap (TRAM flap)

A method of breast reconstruction in which tissue from the lower abdominal wall receiving its blood supply from the rectus abdominus muscle is used. The tissues from this area are moved up to the chest to create a breast mound; usually an implant is not required. Moving muscles and tissues from the lower abdomen to the chest results in flattening of the lower abdomen.

Triple negative breast cancer

This term is used to describe breast cancers (usually invasive ductal carcinomas) in which the cells lack estrogen receptors and progesterone receptors, and do not have an excess of the HER2 protein on their surfaces.

LIST OF TABLES AND FIGURES



LIST OF TABLES

		rage
Table 1.1	Dietary habits, exercise habits and stress levels at the time of diagnosis	27
Table 1.2	Body mass index at the time of diagnosis	28
Table 1.3	Family history of breast cancer at the time of diagnosis	28
Table 1.4	Personal history of tumours at the time of diagnosis	29
Table 1.5	Types of malignant tumours reported by the patients	29
Table 1.6	History of breast disease at the time of diagnosis	29
Table 1.7	Early menarche, late menopause and reproductive history at the time of diagnosis	30
Table 1.8	Number of live births reported by the patients	30
Table 1.9	Use of oral contraceptives at the time of diagnosis	31
Table 1.10	Use of hormone replacement therapy (by menopausal patients) at the time of diagnosis	31
Table 1.11	The ten most common risk factors in the patient cohort	32
Table 1.12	Breast screening habits by age group	33
Table 1.13	Breast screening habits by residential district	34
Table 2.1	Mode of first breast cancer detection by type of medical service received at diagnosis	38
Table 2.2	Duration from onset of symptoms to first medical consultation for patients who self-detected their cancers	38
Table 2.3	Duration from onset of symptoms to first medical consultation for patients who self-detected their cancers by type of medical service	39
Table 2.4	Duration from onset of symptoms to first medical consultation for patients who self-detected their cancers by cancer stage at diagnosis	39
Table 2.5	Sensitivity and diagnostic results of breast imaging tests	41
Table 2.6	Sensitivity and diagnostic results of breast tissue biopsies	41
Table 2.7	Mammographic findings of the patients diagnosed through mammography	42
Table 2.8	Cancer staging in 5,798 breast cancer patients	42
Table 2.9	Histological type, grading, multifocality and multicentricity of invasive breast cancer	44
Table 2.10	Biological characteristics of invasive breast cancer	45
Table 2.11	Biological subtypes of oestrogen receptors, progesterone receptors and HER2 receptors in 5,822 invasive breast cancer cases	45
Table 2.12	Histological type, grade, multifocality and multicentricity of in situ breast cancer	46
Table 2.13	Biological characteristics of in situ breast cancer	46

		Page
Table 2.14	Types of surgical operations in the patient cohort	47
Table 2.15	Irradiated regions among the patients receiving radiotherapy	53
Table 2.16	Most common treatment combinations received by patients by cancer stages	55
Table 2.17	Follow-up of 5,958 subjects	56
Table 2.18	Sites involved in locoregional recurrence in patients by type of surgery received	57
Table 2.19	Organs involved in distant metastasis	57
Table 2.20	Characteristics of breast cancer-specific deaths	58
Table 3.1	The five most common forms of discomfort after surgery	61
Table 3.2	The five most common forms of discomfort after radiotherapy	62
Table 3.3	The five most common forms of discomfort after chemotherapy	62
Table 3.4	The five most common forms of discomfort after endocrine therapy	63
Table 3.5	The most common forms of discomfort after targeted therapy	63
Table 3.6	Psychosocial impacts of breast cancer on patients	65
Table 3.7	Psychosocial adjustments and coping strategies for survivorship	67

74



LIST OF FIGURES

		Page
Figure 1	Distribution of year of diagnosis of 7,241 participants	7
Figure 1.1	Distribution of age at diagnosis	25
Figure 1.2	Occupation of the patients	25
Figure 1.3	Education level of the patients	26
Figure 1.4	Distribution of residential districts of the patients	26
Figure 1.5	Monthly household income of the patients	26
Figure 1.6	Bra size of the patients	26
Figure 1.7	Bra cup size of the patients	26
Figure 1.8	Number of risk factors for breast cancer at the time of diagnosis	32
Figure 2.1	Mode of first breast cancer detection in the patient cohort	37
Figure 2.2	Major symptoms of self-detected breast cancer	38
Figure 2.3	Laterality of 6,848 breast cancer cases	40
Figure 2.4	Locations of breast cancer	40
Figure 2.5	Mammographic density of breasts of the patients	42
Figure 2.6	Cancer stage at diagnosis in breast cancer patients	42
Figure 2.7	Distribution of tumour size of invasive breast cancer	43
Figure 2.8	Number of positive lymph nodes in invasive breast cancer	43
Figure 2.9	Distribution of tumour size of in situ breast cancer	43
Figure 2.10	Type of surgery by age group	48
Figure 2.11	Type of surgery by tumour size	48
Figure 2.12	Type of surgery by cancer stage	48
Figure 2.13	Type of surgery by type of medical service	49
Figure 2.14	Type of nodal surgery in invasive cancer by cancer stage	49
Figure 2.15	Distribution of node positive cancer by tumour size (invasive tumour only)	49
Figure 2.16	Distribution of tumour size in invasive cancer with negative or positive nodal status	49
Figure 2.17	Distribution of tumour size in in situ cancer with negative or positive nodal status	50
Figure 2.18	Number of positive nodes by type of nodal surgery	50
Figure 2.19	Chemotherapy treatment in patients at different cancer stages	50

		rage
Figure 2.20	Type of chemotherapy regimens in patients by cancer stage	51
Figure 2.21	Radiotherapy rate in patients at different cancer stages	52
Figure 2.22	Distribution of cancer stages in patients treated with mastectomy and radiotherapy	52
Figure 2.23	Endocrine therapy rates in patients by cancer stage	53
Figure 2.24	Forms of endocrine therapy used in patients by age group	54
Figure 2.25	Targeted therapy rate in the patients by cancer stage	54
Figure 2.26	Type of drugs used for targeted therapy in patients	54
Figure 2.27	Type of complementary and alternative therapies used in 2,288 patients	55
Figure 3.1	Level of physical discomfort after surgical operations	61
Figure 3.2	Level of physical discomfort by type of surgery	61
Figure 3.3	Level of physical discomfort after radiotherapy	62
Figure 3.4	Level of physical discomfort after chemotherapy	62
Figure 3.5	Level of physical discomfort after endocrine therapy	63
Figure 3.6	Level of physical discomfort after targeted therapy	63
Figure 3.7	Level of physical discomfort after complementary and alternative therapies	64
Figure 3.8	Change in outlook of life by age group	66
Figure 3.9	Change in self-image by age group	66
Figure 3.10	Level of worry about recurrence by age group	68

76 7