

Sister Study Mortality and Primary Cause of Death: Overall (Full Cohort) and Among Incident DCIS or Invasive Breast Cancer Events¹: Data Release 8.1²

	Full Cohort		Incident DCIS or Invasive ¹ Breast Cancer	
	N	% of cohort	N	% of cases ⁴
Total Deaths	2,074	4.1	213	5.8
Primary Cause of Death³	N	% of deaths	N	% of deaths
Cancer	953	45.9	150	70.4
Breast Cancer⁵	102	4.9	100	46.9
Reproductive Cancer	151	7.3	16	7.5
Ovarian, fallopian tube, and peritoneal	103	5.0	10	4.7
Uterine (including endometrial)	38	1.8	5	2.3
Other reproductive	10	0.5	1	0.5
Non-reproductive Cancer	640	30.9	22	10.3
Colon and rectal (including appendiceal)	43	2.1	1	0.5
Pancreatic	95	4.6	2	0.9
Biliary tract (excluding intrahepatic bile duct)	4	0.2	0	0.0
Liver (including intrahepatic bile duct)	24	1.2	1	0.5
Stomach and esophageal	26	1.3	3	1.4
Head and neck	8	0.4	0	0.0
Bronchus and lung	219	10.6	10	4.7
Kidney	16	0.8	0	0.0
Bladder	10	0.5	0	0.0
Melanoma (skin)	19	0.9	2	0.9
Non-Hodgkin's lymphoma	24	1.2	0	0.0
Multiple myeloma	21	1.0	1	0.5
Leukemia	31	1.5	2	0.9
Other lymphoid, hematopoietic, or immunoproliferative	6	0.3	0	0.0
Brain tumors (malignant and benign)	49	2.4	0	0.0
Mesothelium and soft tissue	16	0.8	0	0.0
Other non-reproductive cancer	29	1.4	0	0.0
Multiple/Unspecified Primaries	60	2.9	12	5.6
Non-cancer Disorders	930	44.8	54	25.4
Circulatory System Disorders	375	18.1	22	10.3
Myocardial infarction	44	2.1	2	0.9
Chronic ischemic heart disease	86	4.1	8	3.8
Cardiac arrest	11	0.5	1	0.5
Heart failure	24	1.2	2	0.9
Other circulatory	109	5.3	6	2.8
Stroke	89	4.3	3	1.4
Other cerebrovascular	12	0.6	0	0.0

Primary Cause of Death ³	Full Cohort		Incident DCIS or Invasive ¹ Breast Cancer	
	N	% of deaths	N	% of deaths
Respiratory Disorders	158	7.6	7	3.3
COPD	81	3.9	0	0.0
Other respiratory	77	3.7	7	3.3
Endocrine/Metabolic Disorders	52	2.5	2	0.9
Diabetes, type 2	33	1.6	1	0.5
Other endocrine/metabolic	19	0.9	1	0.5
Dementia	82	4.0	4	1.9
Alzheimer's	41	2.0	1	0.5
Other dementias	41	2.0	3	1.4
Nervous System Disorders	72	3.5	3	1.4
Parkinson's	16	0.8	0	0.0
Motor neuron disease	25	1.2	0	0.0
Other nervous system	31	1.5	3	1.4
Digestive Disorders	67	3.2	3	1.4
Urinary System Disorders	29	1.4	4	1.9
Infection and Parasitic Diseases	50	2.4	5	2.3
Other Non-cancer Disorders	45	2.2	4	1.9
Injury and Other External Causes	97	4.7	1	0.5
Unknown Cause	94	4.5	8	3.8

Abbreviations: DCIS=Ductal carcinoma *in situ*

¹ DCIS or invasive breast cancer events are defined by the following ICD10 codes: D05.1 (DCIS), C50 (invasive breast cancer), and D48.6 (neoplasm of uncertain behavior of breast).

² Data release 8.1 includes reported deaths that occurred on or before 12/31/2017 and incident DCIS or invasive breast cancer diagnoses that occurred on or before 9/23/2018, excluding all data from participants who have withdrawn their data from the study (n=3). To be considered an incident DCIS or invasive breast cancer event, breast must be the primary site, and the cancer diagnosis must have occurred after the participant's baseline date.

³ See specific ICD10 codes for primary cause of death [here](#). Priority for cause of death when death is reported by multiple sources: Medical record>National Death Index (NDI) Plus>Death certificate. Death was assigned to unknown cause when report of death was not available from one of these sources.

⁴ Based on total number of incident DCIS or invasive breast cancer cases (n=3,681). See First DCIS or Invasive Breast Cancer summary table [here](#).

⁵ Breast cancer deaths in the full cohort include women who were diagnosed with invasive breast cancer prior to the participant's baseline date and hence were excluded from total deaths among incident DCIS or invasive breast cancer cases (n=2).