

# **DMCG.dk Benchmarking Consortium Cancer Survival in Denmark 1995-2012 SHORT REPORT (ENGLISH)**

**Danish Multidisciplinary Cancer Groups (DMCG.dk)**

**Danish Breast Cancer Cooperative Group (DBCG)**

**Danish Lung Cancer Group (DLCG)**

**Danish Colorectal Cancer Group (DCCG)**

**Danish Gynaecological Cancer Group (DGCG)**



**databasernes  
fællessekretariat**  
regionernes kliniske kvalitetsudviklingsprogram

## Definition

### **Benchmark**

noun\ 'bench-, märk\

: something that can be used as a way to judge the quality or level of other, similar things

- Merriam-Webster English Dictionary

### **Benchmarking**

verb\ 'bench-, märk-, ing\

: Evaluate (something) by comparison with a standard

-Oxford English Dictionary

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## Table of Contents

I. Executive Summary

II. Methods

III. Results

Chapter 1: Tables - Breast Cancer 1995-2012

Chapter 2: Figures & Tables - Lung Cancer 2001-2012

Chapter 3: Figures & Tables - Colorectal Cancer 2001-2012

Chapter 4: Figures & Tables - Ovarian Cancer 1995-2012

## I. Executive Summary

The Danish Multidisciplinary Cancer Groups (DMCG.dk) is a national network of physicians, other health care professionals, scientists, and government officials committed to improving cancer care in Denmark. DMCG.dk and the national cancer clinical databases are under the administration of the Joint Secretariat for the Danish Clinical Quality Improvement Program (Databasernes Fællessekretariat, Regionernes Kliniske Kvalitetsudviklingsprogram, RKKP).

Previous OECD reports<sup>1</sup> on cancer survival have repeatedly shown that Denmark performs worse when compared to our Scandinavian counterparts and other nations of comparable size and demographics. In this report on cancer survival in Denmark from 1995-2012, we linked individual level data from the national cancer clinical databases to compute age-standardized<sup>2</sup> 1-year and 5-year mortality rates, survival proportions, and relative survival for breast, lung, colorectal, and ovarian cancers. A defining feature of the Danish cancer clinical databases is high data completeness, clinically-based prospective data capture, and an organisational infrastructure (i.e., DMCG.dk) led by clinical experts working closely with their respective patient population.

We provide evidence that cancer survival in Denmark has steadily improved over the past 20 years, and that Danish cancer survival, especially in the most recent years, is higher than what has been previously reported elsewhere. It is important to note that the results presented in this report are based on clinical (i.e., hospital-based) data, in contrast to survival estimates from the OECD and other multinational collaborations such as NORDCAN, which are based on population-based cancer registry data. Thus, although our data analyses cannot be directly compared to results from the OECD 2013 reports, they nevertheless provide insight on temporal trends and developments in cancer survival in Denmark.

### Summary of main findings and conclusions by cancer type

#### *Breast cancer*

Data from the Danish Breast Cancer Cooperative Group (DBCG) showed that the 5-year relative survival for Danish breast cancer patients was 88% for the period 2005-2009. Data analyses presented here also showed that breast cancer mortality rates have significantly decreased in Denmark during the period 1995-2012, and that stage-for-stage, Danish breast cancer patients have the same prognosis as patients in other Nordic and European Countries of comparable size and demographics. However, elderly breast cancer patients and those with major comorbidity are subgroups that were identified with poorer prognosis.

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<sup>1</sup> OECD (2013), *Cancer Care: Assuring Quality to Improve Survival*, OECD Health Policy Studies, OECD Publishing. Available at: <http://dx.doi.org/10.1787/9789264181052-en>. See also OECD *Health at a Glance 2011*. Available at: [http://dx.doi.org/10.1787/health\\_glance-2011-en](http://dx.doi.org/10.1787/health_glance-2011-en).

<sup>2</sup> ICSS Cancer Population. See Corazziari I, Quinn M, Capocaccia R. Standard cancer patient population for age standardising survival ratios. *Eur J Cancer*. 2004;40(15):2307-2316.

*Lung cancer*

Data from the Danish Lung Cancer Registry (DLCR) showed that survival of Danish lung cancer patients is on par with other countries traditionally used for benchmarking comparison. The 5-year relative survival for the period 2005-2009 was 15% overall, and 13% and 16% for males and females, respectively. For the period 2000-2004, the overall 5-year relative survival for Denmark was 12%. Furthermore, mortality rates for Danish lung cancer patients, for both males and females, have been decreasing significantly since the year 2000. However, incidence rates have increased during this same period, especially for females. A high prevalence of comorbidity and delay in primary diagnosis in Danish lung cancer patients continues to contribute to poor survival.

*Colorectal cancer*

Data from the Danish Colorectal Cancer Group and Database (DCCG) showed that the 5-year relative survival was 63% for colon cancer and 65% for rectal cancer for the period 2009-2012. From 2005-2008, the 5-year relative survival was 61% for colon cancer and 64% for rectal cancer. Significant improvements have been made in the care and treatment of Danish colorectal cancer patients in the period 2001-2012. Since 2000, several important initiatives have taken place in Denmark. Notable areas of improvement include major and thorough revision of rectal cancer care and the implementation of laparoscopic surgery for colorectal cancer, which may have had a particular impact on improving colon cancer prognosis.

*Ovarian cancer*

Data from the Danish Gynaecological Cancer Group and Database (DGCG) showed that the 5-year survival for ovarian cancer patients was 37% for the period 2005-2009. Survival trends have been gradually increasing since the year 2000. Data analyses presented here also showed that ovarian cancer mortality rates have gradually decreased in Denmark during the period 1995-2012. The estimates reported here, especially over the most recent years, indicate that Denmark is on par with some, but not all, of the countries that we traditionally compare us to. The greatest improvement in ovarian cancer survival has occurred within the most recent years, and we project further rapid advancements in the 5-year survival. Further improvements in the short-term, 1-year survival is also projected to increase substantially as a result of treatment initiatives such as the implementation of lymph node surgical resection.

## II. Methods

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### *Setting and source population*

Denmark (with a population of 5.6 million residents) is a small and relatively homogenous country located in Northern Europe. All residents have equal-access to tax-financed, national healthcare and only a small fraction of health care services and medications are paid out-of-pocket.<sup>1</sup> Furthermore, linkage of data from all national health registers at the individual patient-level allows for real-time population tracking and virtually complete follow-up of all residents.<sup>2,3</sup>

### *Data sources and organizational infrastructure*

Denmark has more than 70 national clinical databases that prospectively collect data on health care monitoring indicators for the purpose of quality improvement and research infrastructure.<sup>4</sup> The Danish Multidisciplinary Cancer Groups (DMCG.dk) is a national network of physicians and other health care professionals, scientists, and government officials committed to improving cancer care in Denmark.<sup>5</sup> DMCG.dk is under the administration of the Joint Secretariat for the Danish Clinical Quality Improvement Program (Databasernes Fællessekretariat, Regionernes Kliniske Kvalitetsudviklingsprogram, RKKP).<sup>6</sup> Each DMCG cancer group has a corresponding national clinical database and data from these clinical databases can be further linked to numerous national registries and databases (see below) via the unique person-identification number assigned to all residents upon birth or immigration.

There are currently 23 cancer clinical databases under the auspices of DMCG.dk and RKKP.dk (with the 24<sup>th</sup> cancer database recently approved). Data on breast, colorectal, lung and ovarian cancer were obtained from the following national clinical databases and, where relevant, patient histories were also supplemented with data from the Danish National Patient Register,<sup>7</sup> the Danish Civil Registration System,<sup>8</sup> the Danish Pathology Register<sup>9</sup> and the Danish Cancer Registry.<sup>10</sup>

### i. Danish Breast Cancer Cooperative Group (DBCG)<sup>11</sup>

DBCG has prospectively collected data on Danish breast cancer patients since 1977 to present day. Demographic data and data pertaining to the diagnosis, treatment and long-term follow-up of Danish breast cancer patients are systematically registered by relevant pathology, surgery and oncology departments in Denmark. The collected data includes detailed information on primary surgery, pathology, disease stage and adjuvant treatment (endocrine, chemotherapy, biological treatment and radiotherapy), recurrence (local, regional, distant, and contralateral breast cancer) and survival.

ii. Danish Lung Cancer Registry (DLCR)<sup>12</sup>

DLCR has prospectively collected data on Danish lung cancer patients since 01-January 2000 to present day. Data parameters, which are registered by participating hospital departments in Denmark, include (amongst other variables) survival, morbidity, cancer stage, resection/operation rates, and time-to-diagnosis and treatment. Since 2012, the DLCR has been incorporated into the National Clinical Cancer Database (Den Nationale Kliniske Kræftdatabase, DNKK), which is an umbrella clinical database platform currently under development.<sup>6</sup>

iii. Danish Colorectal Cancer Group (DCCG) and Database<sup>13</sup>

DCCG has prospectively collected data on Danish colon and rectal cancer patients from 01-May-2001 to 31-December-2012, including information on demographic data, staging, acute/elective surgery, other treatments received, and postoperative complications. All incident colorectal cancer in persons 18 years or older, diagnosed and/or treated at a surgical department, are registered. See Chapter 3 for further details on DCCG.

iv. Danish Gynaecology Cancer Group (DGCG) and Database<sup>14</sup>

DGCG has prospectively collected data on Danish ovarian cancer patients since 01-January 2005 to present day. The database covers data on ovarian cancer (including borderline-type), peritoneal cancer, tuba cancer, corpus cancer (including hyperplasia med atypical), cervix cancer and trophoblastic disease. In 2014, the database was expanded to include vulvar cancer. Data parameters are registered on-line by participating Gynaecology, pathology, and oncology departments in Denmark. In addition, data on nurse-related care and activities were also registered.

*Inclusion and exclusion criteria*

All incident cancer registered in the above clinical databases were included in the survival analyses. A defining feature of the Danish cancer clinical databases is high data completeness with regard to registration of incident cancer (i.e., minimum requirement of > 90% coverage of the specific cancer population) and great efforts and resources are spent on data validation to ensure data correctness and periodic evaluation of the clinical databases, i.e., medical audit and annual indicator reports. Patients who emigrated outside of Denmark or who were registered as lost-to-follow up were excluded from the analyses for lung and colorectal cancers, whereas for breast and ovarian cancers, patients who were registered as lost-to-follow-up were right-censored. See Appendix 1 algorithm ICD-codes for cancer diagnosis.

It should be briefly noted that the OECD Cancer Care and Health-at-a-Glance reports are based on data from the Danish Cancer Registry, whereas this report is primarily based on data from the Danish national clinical databases. The quality of the data, as well as data on patient and tumor characteristics, can greatly affect the measured survival estimate. Patients included in the national clinical databases have “clinical-only diagnoses,”<sup>15</sup> whereas patients whose cancer diagnoses are registered at-time-of death or just shortly prior to death will not be routinely included in the clinical databases. This is a distinguishing feature of the national clinical databases. Inclusion of this subgroup of patients (e.g. death-certificate-only diagnosis) is controversial and can greatly impact survival estimates, as was illustrated in the UK Thames Cancer Registry, where 5-year relative survival decreased from 9.2 to 5.6 months when including an additional 15% of cases with death-



certificate-only cancer diagnoses.<sup>15</sup> Nevertheless, regardless of the Danish data source, survival estimates from all Danish data sources provide evidence for the same pattern/trend over time, i.e. improved cancer survival in Denmark.

#### *Covariates (other prognostic factors)*

Data on comorbidities, cancer stage, and surgery status/history were also included in the analyses.<sup>15</sup> History of comorbidities were identified using ICD-8 and ICD-10 codes corresponding to the Charlson Comorbidities Index<sup>16,17</sup> and using data-linkage to the Danish National Patient Register for patient histories up to 10 years prior to the cancer diagnosis date. See Appendix 2 for the ICD codes for the 19 Charlson comorbidity diseases and for further algorithm specifications.

Cancer stage and surgery status were queried from either the respective clinical database alone (breast, colorectal), or in combination with supplemental data from the Danish Cancer Registry (lung), the Danish Pathology Register (ovarian, including borderline-type), and the Danish National Patient Register (ovarian, lung).

#### *Outcome measures and statistical analyses*

For each cancer type, we computed 3 outcome measures relating to the first-year and the first five-year period after diagnosis, and additionally the first ten-year period after diagnosis for breast cancer:

- i. Absolute all-cause mortality rate per 100 person-years
- ii. Absolute (overall) survival proportion
- iii. Relative survival

All estimates were then age-standardized according to the ICSS cancer population weights (cluster 1).<sup>18</sup> For colorectal and lung cancer, estimates were also gender-standardized to reflect the gender distributions in real-world patient populations. Thus, for colon cancer and lung cancer, the male and female subpopulations were weighted equally, whereas for rectal cancer the overall male:female ratio was fixed at 60:40. Finally, the mortality and survival measurements reported here reflect all-cause mortality and all-cause survival (in contrast to the OECD Cancer Care 2013 report which reports cancer-specific mortality). Cancer-specific mortality/survival was not investigated because coding in the Danish Register of Causes of Death is known to have less than optimal data quality and likely to yield biased estimates.<sup>19,20</sup> Poor data validity on the causes-of-death in cancer patients<sup>21</sup> is not unique to Denmark.

Absolute all-cause mortality rate (reported per 100 person-years) is calculated as the number of deaths divided by the sum of the patient-time at risk during the period concerned. This method of measurement takes into account “patient-time at risk” by accounting for the length of time each cancer patient contributes while being in the patient population at risk.<sup>22</sup> It is important to note that the mortality rate per 100 person-years is different from the measure of taking the number of deaths caused by a given cancer divided by the total general population (conventionally expressed per 100,000 population as seen in the OECD Cancer Care 2013 report). Taking into accounting the actual “time-at-risk of death” among cancer patients is an appropriate and robust method when

'benchmarking' clinical outcomes within the context of assessing quality of care.<sup>22</sup> In the present report, mortality rates are presented for the first year and the first five years after diagnosis, and additionally, the first ten years with respect to breast cancer. These rates have been calculated from observations in closed cohorts followed from diagnosis and onwards. If a disease has a particularly high short-term mortality it is likely to observe that the 5-years mortality rate is *lower* than the 1-year mortality. This is so, because the long-term survivors accumulate patient-time at risk in the denominator of the 5-years mortality rate, whereas the contribution of the risk-time for long-term survivors is limited to a maximum of 1 year in the denominator of the 1-year rate. Thus, the 1-year mortality rate is controlled by the high short-term mortality, whereas the 5-year mortality rate also includes the contributions from long-term survivorship. Conversely, for a disease with low initial excess mortality, the 5-year mortality rate may be higher than the 1-year mortality rate, due to ageing of the patient and/or accumulating harmful effects related to the disease.

Absolute survival proportion (reported as percentages) is defined as the proportion of a closed population that survives throughout a given period of time.<sup>22</sup> The measurement is estimated using the Kaplan-Meier Method (ovarian), the actuarial method (breast), or using simple calculations of proportions (colorectal, lung). The latter alternative yields identical estimates to those obtained by the Kaplan-Meier method, because of the exclusion of the (very few) patients lost to follow-up before completing 5 years of follow-up.

Relative survival is estimated as the ratio of the observed survival of the patients (all deaths considered events) to the expected survival. The expected survival is estimated from the general Danish population (i.e., reference population), matched by gender, age and calendar time, and using the Ederer II method (breast), Ederer I (ovarian), or a case-mix matrix method (lung, colorectal). Data on the reference (cancer-free) population was queried from the national bureau of statistics, Statistics Denmark.<sup>23</sup>

All estimates are presented with 95% confidence intervals. For the analyses for lung and colorectal, confidence intervals were derived on the basis of Poisson distribution,<sup>24</sup> with scaling of the unadjusted point-estimates to the age/gender standardized point-estimates, and with respect to relative survival, with compensation for the expected number of deaths (assumed to occur without variance). Also, Chi-squared ( $\chi^2$ ) test statistics were used to evaluate for heterogeneity between the diagnosis calendar periods (for lung, colon and rectal cancers, respectively). With respect to the analyses for breast and ovarian cancers, the standard error of the observed survival proportion was estimated using Greenwood's method and the variance of the expected survival was assumed constant. Also, the standard error of the relative survival was estimated as the standard error of the observed survival divided by the expected survival.

Statistical analyses were performed using SAS and STATA (breast), SAS and SPSS (ovarian), and MS Excel programming software (lung and colorectal cancer).

## Appendices

Appendix 1. ICD codes for identification of incident breast, colorectal, ovarian and lung cancers

Appendix 2. ICD codes for identification of the 19 Charlson comorbidity diseases

**Appendix 1. ICD codes for identification of incident breast, colorectal, ovarian and lung cancers**

Danish Cancer Clinical Database	Study Period	ICD-10 Diagnose Code	Total Number of Patients (N)	Notes
DBCG (breast cancer)	1995-2012	DC50	68,842	--
DCCG (colorectal cancer)	2001 -2012	DC18 (colon), but excluding DC 18.1 appendix	29,385 colon	--
		DC20 (rectum)	15,213 rectal	
			44,598 total	
DGCG (ovarian cancer)	1995* -2012	DC56 (ovary)	9,972	<p>*Data from 1995-2004 is from the Danish National Patient Register (NPR). Incident ovarian cancer was defined as first-time registration of ICD-10 code DC56 and with a histologically verified ovarian cancer in the Danish Pathology Register.</p> <p>Data for 2005-2012 is linked from the NPR, the Danish Pathology Register and the DGCG database.</p> <p>For all patients, data was linked to the Danish Pathology Register for data on histology, which was of particular significance when identifying borderline-type cancer.</p>
DLCG (lung cancer)	2000** -2012	DC34 (lung) and DC33 (trachea)	52,435	<p>**DLCR covers the period 2003-2012. Patients with diagnosis in the period 2000-2002 were identified in the Danish Cancer Registry (ICD-10 C33 and C34) and supplemented with data on staging and surgical resections from the Danish National Patient Register.</p>

Abbreviations: ICD-10, International Classification of Diseases, 10<sup>th</sup> Revision

## Appendix 2. ICD codes for identification of the 19 Charlson diseases and Charlson Comorbidity Index Score<sup>16</sup>

Disease	ICD-8 Code	ICD-10 Code	Score
Myocardial Infarction	410	I21; I22; I23	1
Congestive Heart Failure	427.09; 427.10; 427.11; 427.19; 428.99; 782.49	I50; I11.0; I13.0; I13.2	1
Peripheral Vascular Disease	440; 441; 442; 443; 444; 445	I70; I71; I72; I73; I74; I77	1
Cerebrovascular Disease	430-438	I60-I69; G45; G46	1
Dementia	290.09-290.19; 293.09	F00-F03; F05.1; G30	1
Chronic Pulmonary Disease	490-493; 515-518	J40-J47; J60-J67; J68.4; J70.1; J70.3; J84.1; J92.0; J96.1; J98.2; J98.3	1
Connective Tissue Disease	712; 716; 734; 446; 135.99	M05; M06; M08; M09; M30; M31; M32; M33; M34; M35; M36; D86	1
Ulcer Disease	530.91; 530.98; 531-534	K22.1; K25-K28	1
Mild Liver Disease	571; 573.01; 573.04	B18; K70.0 – K70.3; K70.9; K71; K73; K74; K76.0	1
Diabetes Mellitus			1
Insulin dependent	249.00; 249.06; 249.07; 249.09	E10.0; E10.1; E10.9	
Non-Insulin dependent	250.00; 250.06; 250.07; 250.09	E11.0; E11.1; E11.9	
Unspecified type		E14.0; E14.1; E14.9	
Hemiplegia	344	G81; G82	2
Moderate-Severe Renal Disease	403; 404; 580-583; 584; 590.09; 593.19; 753.10-753.19; 792	I12; I13; N00-N05; N07; N11; N14; N17-N19; Q61	2
Diabetes Mellitus with End Organ Damage			2
Insulin dependent	249.01-249.05; 249.08	E10.2 – E10.8	
Non-Insulin dependent	250.01-250.05; 250.08	E11.2 – E11.8	
Unspecified type		E14.2 – E14.8	
Any Tumor	140-194 EXCLUDING: 173 Other malignant neoplasm of skin  AND EXCLUDING THE SPECIFIC CANCER TYPE under investigation:  183 Malignant neoplasm of ovary, Fallopian tube and broad ligament 153 Malignant neoplasm of large intestine, except rectum 154 Malignant neoplasm of rectum and rectosigmoid junction 174 Malignant neoplasm of breast 162 Malignant neoplasm of trachea, bronchus and lung	C00-C75: EXCLUDING: C44 (superficial skin cancers BCC/SCC)  AND EXCLUDING THE SPECIFIC CANCER TYPE under investigation:  C56x ovarian cancer C50x breast cancer C33x and C34x cancer of trachea, bronchus and lung C18x colon cancer C20x rectal cancer	2
Leukemia	204-207	C91-C95	2
Lymphoma	200-203; 275.59	C81-C85; C88; C90; C96	2
Moderate-Severe Liver Disease	070.00; 070.02; 070.04; 070.06; 070.08; 573.00; 456.00-456.09	B15.0; B16.0; B16.2; B19.0; K70.4; K72; K76.6; I85	3
Metastatic Solid Tumor	195-198; 199	C76-C80	6
AIDS	079.83	B21-B24	6

Abbreviations: ICD, International Classification of Diseases; CCI, Charlson Comorbidity Index

**Appendix 2 (continued). ICD codes for identification of the 19 Charlson diseases and Charlson Comorbidity Index Score<sup>16</sup>**

1. Data on comorbidities supplemented from the Danish National Patient Register.
2. 3-month exclusion window: Any cancer registration occurring up to 90 days before the cancer index date is to be excluded from the CCI scoring (in order to eliminate unspecific cancer registrations, which are likely to be related to the incident cancer diagnosis).
3. Overrule to avoid double counting: If a subject has a record of both mild and moderate-severe liver disease, scoring is only to be given for the moderate-severe liver disease. Likewise for diabetes and diabetes with end organ damage.
4. 10-year look-back period for history of comorbidities from index date (i.e. cancer diagnosis date).
5. Four Charlson comorbidity categories based on following CCI scores: 0, 1, 2,  $\geq 3$

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# DMCG.dk Benchmarking Consortium

## Chapter 1: Breast Cancer 1995-2012

Danish Multidisciplinary Cancer Groups (DMCG.dk)  
Danish Breast Cancer Cooperative Group (DBCG)

**DBCG**



databasernes  
fællessekretariat  
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## Tables: Breast Cancer 1995-2012

**Table 1** Distribution of breast cancer by age group, cancer stage and comorbidity (1995-2012)

	Total Period	Calendar Period of Breast Cancer Diagnosis			
	N (%)	N (%)			
	1995-2012	1995-1999	2000-2004	2005-2009	2010-2012
<b>Total</b>	68842	15753	18039	21308	13742
Median Age	62	60	61	62	63
<b>Age Group</b>					
15-44	6597 (10)	1688 (11)	1818 (10)	1890 (9)	1201 (9)
45-54	14363 (21)	3813 (24)	3936 (22)	3926 (18)	2688 (20)
55-64	19389 (28)	3960 (25)	5017 (28)	6669 (31)	3743 (27)
65-74	15839 (23)	3444 (22)	3739 (21)	5045 (24)	3611 (26)
≥75	12654 (18)	2848 (18)	3529 (20)	3778 (18)	2499 (18)
<b>Cancer Stage</b>					
M0	67561 (98)	15489 (98)	17714 (98)	20885 (98)	13473 (98)
Node Negative	32751 (48)	7708 (49)	8214 (46)	9871 (46)	6958 (51)
Node Positive	28506 (41)	6343 (40)	7970 (44)	9139 (43)	5054 (37)
Unknown	5366 (8)	1298 (8)	1337 (7)	1500 (7)	1231 (9)
LABC	938 (1)	140 (1)	193 (1)	375 (2)	230 (2)
M1=DM	1281 (2)	264 (2)	325 (2)	423 (2)	269 (2)
<b>Comorbidity Index</b>					
CCI=0 (None)	53986 (78)	13207 (84)	14204 (79)	16259 (76)	10316 (75)
CCI=1 (Low)	8416 (12)	1467 (9)	2159 (12)	2821 (13)	1969 (14)
CCI=2 (Medium)	3954 (6)	735 (5)	1063 (6)	1293 (6)	863 (6)
CCI≥3 (High)	2486 (4)	344 (2)	613 (3)	935 (4)	594 (4)

Abbreviations: CCI, Charlson Comorbidity Index; M0, Non-metastatic; M1, Metastatic; LABC, Locally Advanced Breast Cancer; DM, Distant Metastatic (=M1)

**Table 2** 1-year, 5-year, and 10-year age-adjusted mortality rate for breast cancer. Overall estimates and stratified by age group, cancer stage and comorbidity (1995-2012)

Mortality Rate, per 100 Patient-Year (95% CI)	Year	Calendar Period of Breast Cancer Diagnosis				
		Total Period 1995-2012	1995-1999	2000-2004	2005-2009	2010-2012
<b>Total</b>	0-1	5.28 (5.11-5.45)	6.20 (5.82-6.61)	5.64 (5.29-6.00)	5.19 (4.89-5.51)	4.06 (3.74-4.42)
	0-5	5.84 (5.75-5.94)	7.10 (6.90-7.31)	6.13 (5.96-6.31)	5.33 (5.18-5.48)	
	0-10		6.84 (6.69-6.99)	5.91 (5.78-6.04)		
<b>Age Group</b>						
15-44	0-1	1.32 (0.60-2.93)	1.63 (0.39-6.85)	1.79 (0.48-6.69)	1.00 (0.18-5.52)	0.86 (0.08-8.94)
	0-5	3.02 (2.34-3.89)	4.75 (3.20-7.06)	2.83 (1.75-4.60)	2.40 (1.44-3.99)	
	0-10		3.97 (2.87-5.48)	2.62 (1.81-3.79)		
45-54	0-1	1.69 (1.18-2.44)	2.38 (1.31-4.33)	1.85 (0.95-3.60)	1.39 (0.64-2.99)	0.94 (0.30-2.90)
	0-5	2.66 (2.32-3.06)	3.60 (2.87-4.51)	2.84 (2.22-3.64)	2.08 (1.55-2.77)	
	0-10		3.14 (2.63-3.75)	2.49 (2.05-3.02)		
55-64	0-1	2.31 (1.90-2.81)	3.71 (2.64-5.21)	3.17 (2.29-4.40)	1.47 (0.97-2.22)	1.30 (0.72-2.34)
	0-5	3.23 (2.99-3.50)	4.66 (4.04-5.38)	3.81 (3.32-4.38)	2.48 (2.14-2.87)	
	0-10		4.40 (3.94-4.90)	3.53 (3.17-3.93)		
65-74	0-1	3.97 (3.43-4.60)	5.28 (4.02-6.95)	3.97 (2.93-5.37)	3.89 (2.99-5.05)	2.75 (1.90-3.97)
	0-5	4.97 (4.65-5.30)	6.47 (5.75-7.28)	5.29 (4.67-5.98)	4.48 (3.99-5.03)	
	0-10		6.45 (5.89-7.05)	5.54 (5.06-6.07)		
≥75	0-1	11.66 (10.58-12.86)	11.99 (9.79-14.69)	12.03 (10.02-14.43)	12.42 (10.44-14.77)	9.84 (7.76-12.48)
	0-5	11.83 (11.24-12.44)	12.59 (11.39-13.90)	12.00 (10.95-13.14)	11.70 (10.70-12.80)	
	0-10		13.46 (12.44-14.57)	12.41 (11.55-13.34)		
<b>Cancer Stage</b>						
M0	0-1	4.63 (4.47-4.80)	5.63 (5.27-6.02)	4.93 (4.61-5.28)	4.42 (4.14-4.72)	3.49 (3.19-3.83)
	0-5	5.54 (5.45-5.63)	6.83 (6.64-7.04)	5.84 (5.67-6.01)	4.98 (4.84-5.13)	
	0-10		6.66 (6.51-6.81)	5.71 (5.59-5.84)		
Node Negative	0-1	1.90 (1.76-2.06)	2.60 (2.26-2.99)	2.23 (1.93-2.58)	1.46 (1.24-1.72)	1.44 (1.18-1.75)
	0-5	3.18 (3.09-3.28)	4.14 (3.94-4.36)	3.45 (3.26-3.64)	2.79 (2.64-2.95)	
	0-10		4.58 (4.42-4.75)	3.93 (3.79-4.09)		

Node Positive	0-1	4.60 (4.36-4.86)	6.85 (6.22-7.54)	5.11 (4.63-5.64)	3.66 (3.28-4.08)	2.88 (2.45-3.40)
	0-5	6.79 (6.64-6.94)	9.53 (9.16-9.92)	7.31 (7.03-7.61)	5.54 (5.31-5.78)	
	0-10		8.99 (8.70-9.28)	7.07 (6.85-7.29)		
Unknown	0-1	16.03 (14.94-17.19)	17.59 (15.34-20.18)	20.79 (18.35-23.56)	17.12 (15.06-19.46)	12.35 (10.47-14.56)
	0-5	13.20 (12.66-13.76)	13.94 (12.89-15.07)	16.30 (15.14-17.54)	12.88 (11.95-13.89)	
	0-10		11.90 (11.13-12.73)	13.81 (12.95-14.73)		
LABC	0-1	22.78 (19.75-26.28)	25.62 (16.93-38.79)	31.23 (23.69-41.17)	21.02 (16.63-26.57)	15.26 (10.81-21.53)
	0-5	21.46 (19.74-23.33)	26.75 (21.20-33.76)	26.81 (22.72-31.64)	18.65 (16.34-21.29)	
	0-10		22.10 (17.79-27.45)	24.36 (20.95-28.32)		
M1=DM	0-1	43.27 (39.39-47.53)	40.08 (31.80-50.51)	52.69 (44.36-62.58)	38.44 (32.36-45.66)	27.79 (21.74-35.54)
	0-5	33.76 (31.66-36.00)	39.88 (34.56-46.03)	37.15 (32.89-41.96)	32.07 (28.77-35.75)	
	0-10		34.96 (30.49-40.08)	33.50 (29.92-37.50)		
<b>Comorbidity Index</b>						
CCI=0 (None)	0-1	4.07 (3.90-4.24)	5.05 (4.67-5.45)	4.26 (3.93-4.61)	3.92 (3.62-4.24)	2.87 (2.56-3.22)
	0-5	4.93 (4.84-5.02)	6.24 (6.03-6.44)	5.18 (5.01-5.36)	4.27 (4.12-4.42)	
	0-10		6.18 (6.03-6.34)	5.19 (5.05-5.32)		
CCI=1 (Low)	0-1	6.30 (5.78-6.87)	8.28 (6.90-9.93)	6.65 (5.63-7.86)	6.21 (5.34-7.22)	4.77 (3.89-5.86)
	0-5	6.90 (6.62-7.19)	9.12 (8.38-9.93)	7.17 (6.64-7.74)	6.41 (5.97-6.88)	
	0-10		8.65 (8.08-9.26)	7.01 (6.60-7.44)		
CCI=2 (Medium)	0-1	8.57 (7.68-9.56)	11.33 (9.07-14.14)	9.87 (8.11-12.01)	7.62 (6.23-9.32)	6.85 (5.28-8.89)
	0-5	8.80 (8.33-9.30)	11.26 (10.07-12.58)	9.33 (8.45-10.30)	7.74 (7.02-8.53)	
	0-10		10.51 (9.60-11.51)	8.48 (7.83-9.20)		
CCI≥3 (High)	0-1	14.67 (13.18-16.32)	16.26 (12.34-21.42)	18.08 (14.84-22.03)	13.91 (11.63-16.62)	11.12 (8.66-14.27)
	0-5	13.87 (13.07-14.71)	14.48 (12.46-16.82)	16.40 (14.73-18.27)	13.75 (12.54-15.08)	
	0-10		13.77 (12.17-15.59)	14.74 (13.43-16.18)		

Abbreviations: CCI, Charlson Comorbidity Index; CI, Confidence Interval; M0, Non-metastatic; M1, Metastatic; LABC, Locally Advanced Breast Cancer; DM, Distant Metastatic (=M1)

**Table 3a** 1-year, 5-year, and 10-year age-adjusted absolute survival for breast cancer. Overall estimates and stratified by age group, cancer stage and comorbidity (1995-2012)

Absolute Survival % (95% CI)	Year	Calendar Period of Breast Cancer Diagnosis				
		Total Period 1995-2012	1995-1999	2000-2004	2005-2009	2010-2012
<b>Median Follow-up</b>		8 years 8 months	16 years 6 months	11 years 8 months	6 years 4 months	2 years 10 months
<b>Total</b>	1	95 (95-95)	94 (94-94)	95 (94-95)	95 (95-95)	96 (96-96)
	5	75 (74-75)	70 (69-71)	74 (73-74)	77 (76-77)	
	10		51 (50-52)	56 (55-56)		
<b>Age Group</b>						
15-44	1	99 (99-99)	98 (98-99)	98 (98-98)	99 (99-99)	99 (99-99)
	5	86 (85-86)	79 (78-79)	87 (86-87)	89 (88-89)	
	10		68 (67-68)	77 (76-78)		
45-54	1	98 (98-98)	98 (97-98)	98 (98-98)	99 (98-99)	99 (98-99)
	5	87 (87-88)	83 (83-84)	87 (86-87)	90 (90-90)	
	10		73 (73-74)	78 (78-79)		
55-64	1	98 (98-98)	96 (96-97)	97 (97-97)	99 (98-99)	99 (99-99)
	5	85 (85-85)	79 (79-80)	83 (82-83)	88 (88-89)	
	10		65 (64-65)	70 (70-71)		
65-74	1	96 (96-96)	95 (94-95)	96 (96-96)	96 (96-96)	97 (97-98)
	5	78 (77-78)	72 (71-73)	77 (76-77)	80 (79-80)	
	10		52 (51-53)	57 (56-58)		
≥75	1	89 (89-89)	89 (88-89)	89 (88-89)	88 (88-89)	91 (90-91)
	5	55 (54-55)	53 (52-54)	55 (54-56)	56 (55-57)	
	10		25 (24-26)	28 (27-29)		
<b>Cancer Stage</b>						
M0	1	95 (95-96)	95 (94-95)	95 (95-96)	96 (95-96)	97 (96-97)
	5	76 (75-76)	71 (70-72)	75 (74-75)	78 (77-78)	
	10		52 (51-52)	57 (56-57)		
Node negative	1	98 (98-98)	97 (97-98)	98 (97-98)	99 (98-99)	99 (98-99)
	5	85 (84-85)	81 (80-82)	84 (83-85)	87 (86-88)	
	10		63 (62-64)	67 (66-68)		
Node positive	1	95 (95-96)	93 (93-94)	95 (94-96)	96 (96-97)	97 (96-98)
	5	71 (70-71)	62 (61-63)	69 (68-70)	75 (74-76)	
	10		41 (40-43)	49 (48-50)		
Unknown	1	85 (84-87)	84 (81-87)	82 (78-85)	84 (82-87)	88 (86-90)
	5	54 (52-56)	52 (47-56)	47 (43-51)	54 (51-57)	
	10		34 (30-38)	30 (26-34)		
LABC	1	80 (77-82)	77 (71-83)	74 (67-80)	81 (77-85)	86 (80-90)
	5	35 (32-39)	28 (22-35)	28 (22-35)	41 (36-46)	
	10		17 (12-23)	13 (9-19)		
M1=DM	1	66 (63-69)	68 (64-73)	60 (54-66)	69 (65-73)	77 (71-82)
	5	22 (20-25)	16 (13-20)	20 (16-24)	22 (18-26)	
	10		8 (5-11)	7 (5-10)		

<b>Comorbidity Index</b>						
CCI=0 (None)	1	96 (96-96)	95 (95-96)	96 (95-96)	96 (96-97)	97 (97-98)
	5	78 (77-78)	73 (72-74)	77 (76-78)	81 (80-81)	
	10		54 (53-55)	59 (59-60)		
CCI=1 (Low)	1	94 (93-94)	92 (91-93)	94 (93-95)	94 (94-95)	95 (94-96)
	5	71 (70-72)	63 (61-66)	70 (68-72)	73 (71-74)	
	10		43 (41-45)	50 (48-52)		
CCI=2 (Medium)	1	92 (91-93)	89 (87-91)	91 (89-92)	93 (91-94)	93 (91-95)
	5	65 (63-66)	57 (54-61)	63 (60-66)	68 (66-71)	
	10		36 (33-40)	44 (41-47)		
CCI≥3 (High)	1	86 (85-88)	85 (81-88)	84 (81-87)	87 (85-89)	90 (87-92)
	5	51 (49-53)	50 (45-55)	44 (40-49)	51 (48-54)	
	10		26 (22-31)	25 (22-29)		

Abbreviations: CCI, Charlson Comorbidity Index; CI, Confidence Interval; M0, Non-metastatic; M1, Metastatic; LABC, Locally Advanced Breast Cancer; DM, Distant Metastatic (=M1)

**Table 3b** 1-year, 5-year, and 10-year age-adjusted absolute survival for breast cancer according to age group for patients with CCI=0 (1995-2012)

Absolute Survival % (95% CI)	Year	Total Period	Calendar Period of Breast Cancer Diagnosis			
		1995-2012	1995-1999	2000-2004	2005-2009	2010-2012
<b>Age Group</b>						
15-44	1	99 (99-99)	98 (98-99)	98 (98-99)	99 (99-99)	99 (99-100)
	5	86 (86-86)	79 (78-79)	87 (87-88)	90 (89-90)	
	10		68 (67-69)	77 (77-78)		
45-54	1	99 (98-99)	98 (98-98)	99 (98-99)	99 (99-99)	99 (99-99)
	5	88 (88-88)	84 (84-84)	88 (87-88)	91 (91-91)	
	10		74 (74-75)	79 (79-80)		
55-64	1	98 (98-98)	97 (97-97)	98 (97-98)	99 (98-99)	99 (99-99)
	5	87 (86-87)	81 (80-82)	85 (84-85)	88 (88-88)	
	10		67 (66-67)	73 (73-74)		
65-74	1	97 (97-98)	96 (96-96)	98 (97-98)	98 (97-98)	98 (98-99)
	5	82 (81-82)	76 (75-77)	80 (79-81)	84 (83-85)	
	10		57 (56-58)	62 (61-63)		
≥75	1	91 (91-91)	91 (90-91)	91 (90-91)	91 (90-91)	93 (92-94)
	5	61 (61-62)	58 (57-59)	61 (60-62)	63 (62-65)	
	10		29 (28-30)	34 (33-35)		

Abbreviations: CCI, Charlson Comorbidity Index; CI, Confidence Interval; M0, Non-metastatic; M1, Metastatic; LABC, Locally Advanced Breast Cancer; DM, Distant Metastatic (=M1)

**Table 4a** 1-year, 5-year, and 10-year age-adjusted relative survival for breast cancer. Overall estimates and stratified by age group, cancer stage and comorbidity (1995-2012)

Relative Survival % (95% CI)	Year	Calendar Period of Breast Cancer Diagnosis				
		Total Period 1995-2012	1995-1999	2000-2004	2005-2009	2010-2012
<b>Total</b>	1	97 (97-98)	97 (96-97)	97 (97-98)	97 (97-98)	98 (98-99)
	5	86 (85-86)	82 (81-83)	85 (84-86)	88 (87-88)	
	10		72 (70-74)	77 (75-78)		
<b>Age Group</b>						
15-44	1	99 (99-99)	99 (98-99)	98 (98-98)	99 (99-99)	99 (99-99)
	5	86 (86-87)	79 (79-80)	87 (87-88)	89 (89-89)	
	10		69 (68-70)	78 (78-79)		
45-54	1	99 (99-99)	98 (98-98)	99 (98-99)	99 (99-99)	99 (99-99)
	5	89 (89-89)	85 (85-86)	88 (88-89)	92 (91-92)	
	10		77 (77-78)	82 (81-82)		
55-64	1	98 (98-99)	97 (97-98)	98 (97-98)	99 (99-99)	99 (99-100)
	5	89 (89-89)	84 (83-84)	86 (86-87)	92 (92-92)	
	10		74 (73-75)	79 (78-79)		
65-74	1	98 (98-98)	97 (97-98)	98 (98-99)	98 (98-98)	99 (99-99)
	5	87 (87-88)	83 (82-84)	87 (86-87)	89 (88-89)	
	10		73 (72-75)	77 (76-78)		
≥75	1	95 (95-96)	95 (95-96)	95 (95-96)	95 (94-95)	97 (96-97)
	5	81 (80-82)	80 (78-81)	81 (80-83)	81 (80-82)	
	10		67 (65-70)	73 (71-76)		
<b>Cancer Stage</b>						
M0	1	98 (98-98)	97 (97-98)	98 (98-98)	98 (98-99)	99 (98-99)
	5	87 (87-88)	83 (82-84)	86 (86-87)	89 (88-90)	
	10		73 (71-74)	78 (77-80)		
Node Negative	1	101 (101-101)	100 (100-101)	101 (101-101)	101 (101-101)	101 (101-101)
	5	99 (98-99)	96 (94-97)	98 (96-99)	101 (100-102)	
	10		92 (88-95)	95 (91-97)		
Node Positive	1	98 (98-98)	96 (95-97)	98 (97-98)	99 (98-99)	99 (98-100)
	5	81 (80-82)	72 (70-74)	80 (78-81)	86 (85-88)	
	10		58 (55-61)	67 (65-70)		
Unknown	1	88 (87-89)	87 (83-90)	84 (81-87)	87 (84-89)	91 (88-93)
	5	63 (61-65)	62 (57-66)	56 (51-60)	61 (58-65)	
	10		49 (43-54)	43 (38-48)		
LABC	1	82 (79-85)	78 (71-84)	76 (69-82)	83 (79-87)	88 (82-92)
	5	40 (36-44)	30 (23-37)	30 (23-37)	46 (40-52)	
	10		19 (13-26)	14 (9-21)		
M1=DM	1	68 (65-70)	69 (64-74)	62 (56-67)	71 (66-75)	78 (72-83)
	5	24 (22-27)	17 (13-21)	22 (17-27)	24 (20-29)	
	10		9 (6-13)	9 (6-14)		

<b>Comorbidity Index</b>						
CCI=0 (None)	1	99 (98-99)	98 (97-98)	99 (98-99)	99 (98-99)	100 (99-100)
	5	91 (90-91)	86 (85-87)	90 (89-91)	93 (92-94)	
	10		78 (76-80)	84 (82-86)		
CCI=1 (Low)	1	96 (96-97)	95 (93-96)	96 (95-97)	96 (95-97)	98 (97-99)
	5	81 (80-82)	73 (70-76)	81 (78-83)	82 (80-84)	
	10		57 (53-61)	68 (64-71)		
CCI=2 (Medium)	1	94 (93-95)	92 (90-94)	93 (91-95)	95 (93-96)	96 (93-97)
	5	74 (72-76)	67 (62-71)	72 (69-75)	77 (74-80)	
	10		50 (44-56)	59 (54-63)		
CCI≥3 (High)	1	89 (87-90)	88 (83-91)	86 (83-89)	89 (87-91)	92 (89-94)
	5	57 (55-60)	57 (51-63)	51 (46-56)	57 (53-61)	
	10		35 (28-41)	33 (28-38)		

Abbreviations: CCI, Charlson Comorbidity Index; CI, Confidence Interval; M0, Non-metastatic; M1, Metastatic; LABC, Locally Advanced Breast Cancer; DM, Distant Metastatic (=M1)



**Table 4b** 1-year, 5-year, and 10-year age-adjusted relative survival for breast cancer according to age group for patients with CCI=0 (1995-2012)

Relative Survival % (95% CI)	Year	Total Period	Calendar Period of Breast Cancer Diagnosis			
		1995-2012	1995-1999	2000-2004	2005-2009	2010-2012
<b>Age Group</b>						
15-44	1	99 (99-99)	99 (98-99)	99 (98-99)	99 (99-99)	100 (99-100)
	5	87 (86-87)	79 (79-80)	88 (87-88)	90 (90-90)	
	10		69 (69-70)	79 (78-79)		
45-54	1	99 (99-99)	98 (98-98)	99 (99-99)	99 (99-99)	100 (99-100)
	5	90 (89-90)	86 (85-86)	89 (89-90)	92 (92-93)	
	10		78 (78-79)	83 (83-84)		
55-64	1	99 (99-99)	98 (98-98)	98 (98-99)	100 (100-100)	100 (99-100)
	5	91 (90-91)	86 (85-86)	89 (88-89)	94 (93-94)	
	10		76 (75-77)	82 (81-83)		
65-74	1	99 (99-100)	98 (98-99)	100 (99-100)	99 (99-100)	100 (99-100)
	5	92 (91-92)	88 (87-89)	91 (90-92)	93 (93-94)	
	10		80 (79-82)	83 (82-84)		
≥75	1	98 (97-98)	97 (97-98)	97 (97-98)	97 (96-98)	99 (98-100)
	5	91 (90-92)	88 (85-89)	91 (89-93)	93 (91-95)	
	10		80 (76-83)	90 (86-93)		

Abbreviations: CCI, Charlson Comorbidity Index; CI, Confidence Interval

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## Chapter 2: Lung Cancer 2000-2012

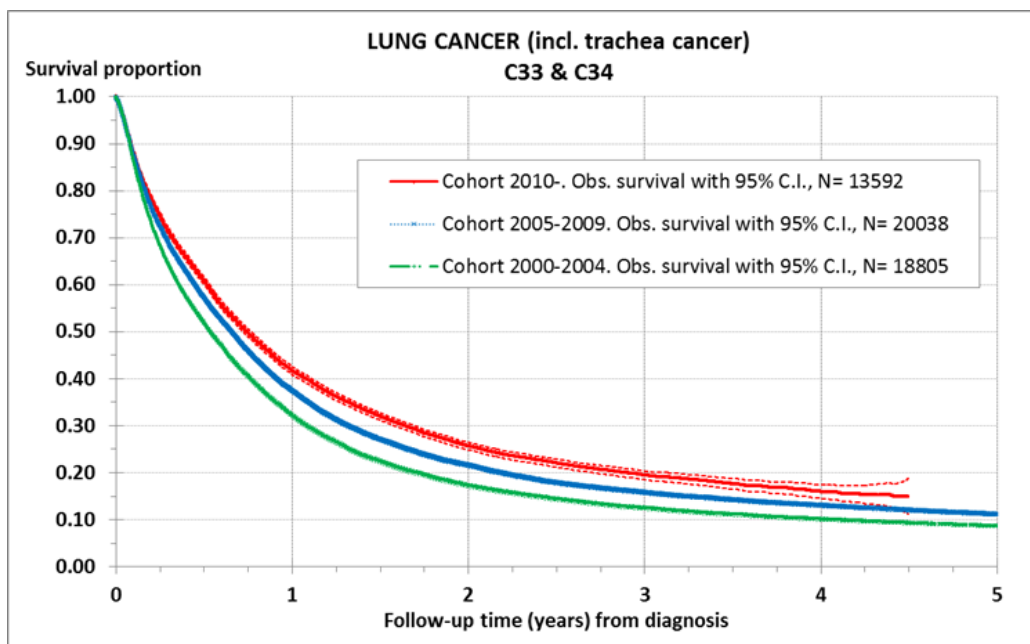
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Danske Lunge Cancer Gruppe (DLCG)



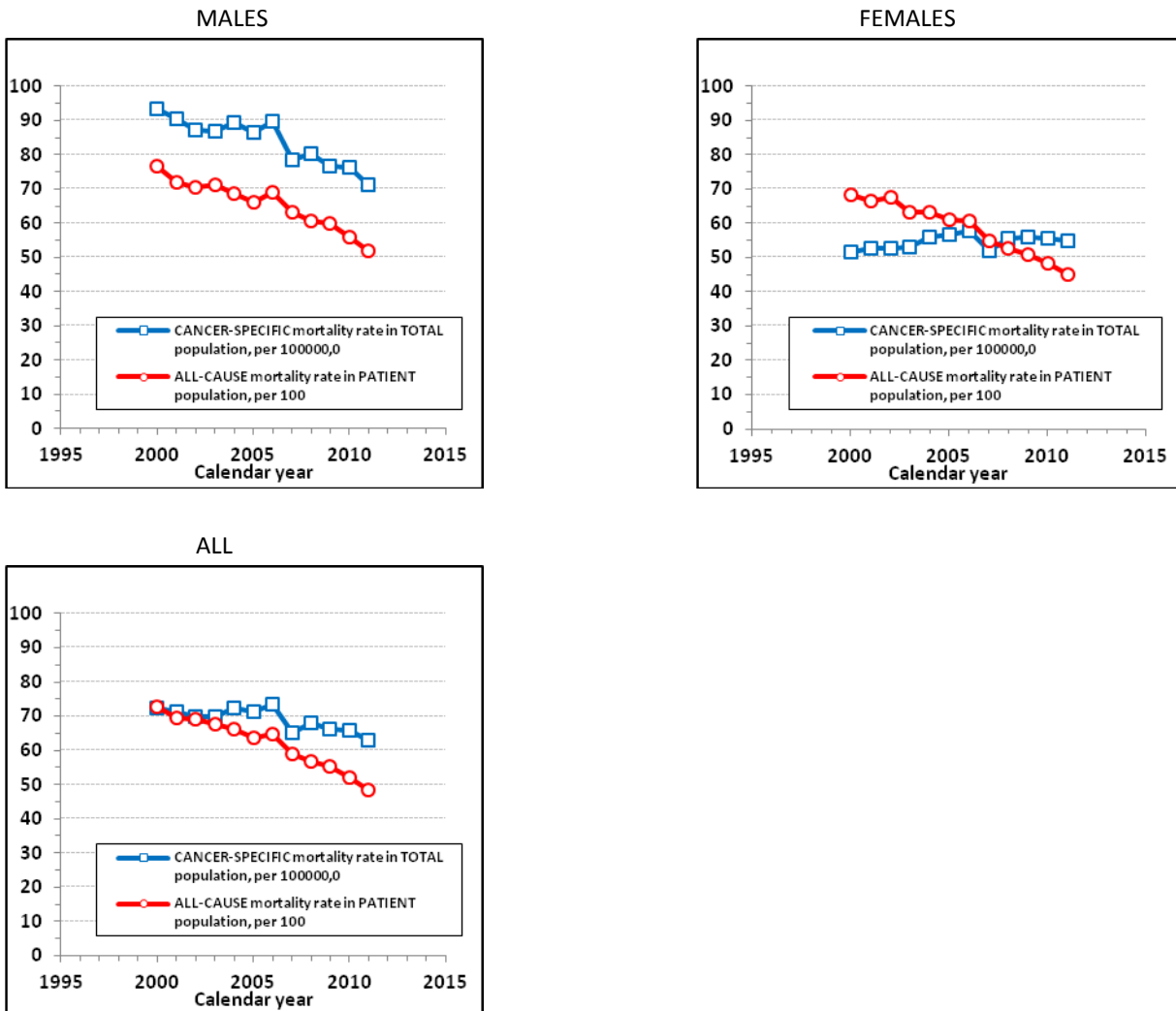
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## Figures: Lung Cancer

**Figure 1** Lung cancer survival 2000-2012



**Figure 2** Comparison of cancer specific mortality pr. 100,000 population and mortality rate pr. 100 patient-years



## Tables: Lung Cancer

**Table 1** Distribution of lung cancer by age group, gender, comorbidity, cancer stage and priority of surgery (2000-2012)

	Year	Total Period	Calendar Period of Lung Cancer Diagnosis		
		N (%)	N (%)		
		2000-2012	2000-2004	2005-2009	2010-2012
<b>Total</b>	0-1 year	52435 (100)	18805 (100)	20038 (100)	13592 (100)
	0-5 year	37095 (100)	18805 (100)	18290 (100)	-
<b>Age Group</b>					
<45 years	0-1 year	853 (1.6)	375 (2.0)	321 (1.6)	157 (1.2)
	0-5 year	676 (1.8)	375 (2.0)	301 (1.6)	-
45-54 years	0-1 year	4336 (8.3)	1778 (9.5)	1618 (8.1)	940 (6.9)
	0-5 year	3286 (8.9)	1778 (9.5)	1508 (8.2)	-
55-64 years	0-1 year	12807 (24.4)	4502 (23.9)	5223 (26.1)	3082 (22.7)
	0-5 year	9247 (24.9)	4502 (23.9)	4745 (25.9)	-
65-74 years	0-1 year	18927 (36.1)	6918 (36.8)	6975 (34.8)	5034 (37.0)
	0-5 year	13289 (35.8)	6918 (36.8)	6371 (34.8)	-
≥75 years	0-1 year	15512 (29.6)	5232 (27.8)	5901 (29.4)	4379 (32.2)
	0-5 year	10597 (28.6)	5232 (27.8)	5365 (29.3)	-
<b>Gender</b>					
Men	0-1 year	28146 (53.7)	10505 (55.9)	10620 (53.0)	7021 (51.7)
	0-5 year	20223 (54.5)	10505 (55.9)	9718 (53.1)	-
Women	0-1 year	24289 (46.3)	8300 (44.1)	9418 (47.0)	6571 (48.3)
	0-5 year	16872 (45.5)	8300 (44.1)	8572 (46.9)	-
<b>Comorbidity Index</b>					
CCI=0 (None)	0-1 year	27238 (51.9)	11113 (59.1)	10057 (50.2)	6068 (44.6)
	0-5 year	20355 (54.9)	11113 (59.1)	9242 (50.5)	-
CCI=1 (Low)	0-1 year	11435 (21.8)	3795 (20.2)	4566 (22.8)	3074 (22.6)
	0-5 year	7960 (21.5)	3795 (20.2)	4165 (22.8)	-
CCI=2 (Medium)	0-1 year	10027 (19.1)	2935 (15.6)	3955 (19.7)	3137 (23.1)
	0-5 year	6521 (17.6)	2935 (15.6)	3586 (19.6)	-
CCI≥3 (High)	0-1 year	3735 (7.1)	962 (5.1)	1460 (7.3)	1313 (9.7)
	0-5 year	2259 (6.1)	962 (5.1)	1297 (7.1)	-
<b>Cancer Stage</b>					
Non-metastatic, M0	0-1 year	23188 (44.2)	8940 (47.5)	8321 (41.5)	5927 (43.6)
	0-5 year	16552 (44.6)	8940 (47.5)	7612 (41.6)	-
Metastatic, M1	0-1 year	22037 (42.0)	6832 (36.3)	8820 (44.0)	6385 (47.0)
	0-5 year	14807 (39.9)	6832 (36.3)	7975 (43.6)	-
Unknown, Mx	0-1 year	7210 (13.8)	3033 (16.1)	2897 (14.5)	1280 (9.4)
	0-5 year	5736 (15.5)	3033 (16.1)	2703 (14.8)	-

<b>UICC Cancer Stage</b>					
I	0-1 year	6955 (13.3)	2259 (12.0)	2746 (13.7)	1950 (14.3)
	0-5 year	4814 (13.0)	2259 (12.0)	2555 (14.0)	-
II	0-1 year	2715 (5.2)	741 (3.9)	946 (4.7)	1028 (7.6)
	0-5 year	1579 (4.3)	741 (3.9)	838 (4.6)	-
III	0-1 year	9816 (18.7)	3075 (16.4)	4021 (20.1)	2720 (20.0)
	0-5 year	6716 (18.1)	3075 (16.4)	3641 (19.9)	-
IV	0-1 year	19508 (37.2)	4303 (22.9)	8820 (44.0)	6385 (47.0)
	0-5 year	12278 (33.1)	4303 (22.9)	7975 (43.6)	-
Unknown	0-1 year	13441 (25.6)	8427 (44.8)	3505 (17.5)	1509 (11.1)
	0-5 year	11708 (31.6)	8427 (44.8)	3281 (17.9)	-
<b>Surgery Status</b>					
Elective	0-1 year	7429 (14.2)	2271 (12.1)	2942 (14.7)	2216 (16.3)
	0-5 year	4934 (13.3)	2271 (12.1)	2663 (14.6)	-
No Surgery	0-1 year	45006 (85.8)	16534 (87.9)	17096 (85.3)	11376 (83.7)
	0-5 year	32161 (86.7)	16534 (87.9)	15627 (85.4)	-

Abbreviations: CCI, Charlson Comorbidity Index; UICC, Union for International Cancer Control

**Table 2** 1-year and 5-year age-adjusted mortality rate for lung cancer. Overall estimates and stratified by gender, comorbidity, cancer stage and priority of surgery (2000-2012)

Absolute Mortality, per 100 Patient-Year (95% CI)	Year	Total Period	Calendar Period of Lung Cancer Diagnosis			p-value
		2000-2012	2000-2004	2005-2009	2010-2012	P
<b>Total</b>	0-1 year	103 (102 - 104)	117 (115 - 119)	102 (100 - 103)	88 (86 - 90)	0.0000
	0-5 year	70 (69 - 70)	75 (74 - 77)	65 (64 - 66)	-	0.0000
<b>Gender</b>						
Men	0-1 year	111 (109 - 113)	124 (121 - 127)	109 (106 - 112)	98 (95 - 101)	0.0000
	0-5 year	76 (74 - 77)	81 (79 - 83)	71 (69 - 72)	-	0.0000
Women	0-1 year	95 (94 - 97)	111 (108 - 114)	95 (92 - 97)	80 (77 - 82)	0.0000
	0-5 year	64 (63 - 65)	71 (69 - 72)	59 (58 - 61)	-	0.0000
<b>Comorbidity Index</b>						
CCI=0 (None)	0-1 year	97 (96 - 99)	108 (106 - 111)	95 (93 - 97)	83 (80 - 86)	0.0000
	0-5 year	66 (65 - 67)	70 (69 - 72)	61 (60 - 62)	-	0.0000
CCI=1 (Low)	0-1 year	107 (104 - 109)	129 (124 - 134)	105 (101 - 109)	88 (84 - 93)	0.0000
	0-5 year	71 (69 - 72)	82 (79 - 85)	64 (62 - 66)	-	0.0000
CCI=2 (Medium)	0-1 year	109 (106 - 112)	128 (123 - 134)	111 (107 - 115)	88 (84 - 92)	0.0000
	0-5 year	74 (72 - 76)	79 (76 - 82)	70 (68 - 73)	-	0.0000
CCI≥3 (High)	0-1 year	136 (130 - 141)	172 (160 - 185)	133 (125 - 141)	114 (107 - 122)	0.0000
	0-5 year	101 (96 - 105)	117 (110 - 125)	90 (85 - 95)	-	0.0000
<b>Cancer Stage</b>						
Non-metastatic, M0	0-1 year	60 (59 - 62)	82 (80 - 85)	55 (53 - 57)	41 (39 - 42)	0.0000
	0-5 year	44 (44 - 45)	53 (52 - 54)	37 (36 - 38)	-	0.0000
Metastatic, M1	0-1 year	168 (166 - 171)	188 (183 - 193)	165 (161 - 169)	157 (153 - 162)	0.0000
	0-5 year	144 (142 - 147)	155 (151 - 159)	137 (133 - 140)	-	0.0000
Unknown, Mx	0-1 year	112 (109 - 115)	110 (105 - 115)	117 (111 - 122)	111 (103 - 119)	0.0124
	0-5 year	68 (66 - 69)	66 (63 - 68)	71 (68 - 74)	-	0.0003
<b>UICC Cancer Stage</b>						
I	0-1 year	26 (24 - 27)	39 (36 - 42)	25 (23 - 27)	13 (12 - 15)	0.0000
	0-5 year	22 (21 - 23)	27 (26 - 29)	18 (17 - 19)	-	0.0000
II	0-1 year	48 (45 - 51)	69 (62 - 77)	47 (42 - 52)	35 (32 - 40)	0.0000
	0-5 year	40 (38 - 43)	53 (49 - 58)	32 (30 - 35)	-	0.0000
III	0-1 year	80 (78 - 82)	94 (89 - 98)	81 (78 - 85)	67 (63 - 70)	0.0000
	0-5 year	69 (67 - 71)	72 (70 - 75)	66 (64 - 69)	-	0.0001
IV	0-1 year	160 (158 - 163)	160 (154 - 165)	165 (161 - 169)	157 (153 - 162)	0.2291
	0-5 year	134 (132 - 137)	131 (127 - 135)	137 (133 - 140)	-	0.2289
Unknown	0-1 year	130 (128 - 132)	146 (141 - 152)	108 (105 - 111)	99 (96 - 102)	0.0000
	0-5 year	83 (82 - 85)	92 (89 - 94)	67 (65 - 69)	-	0.0000

<b>Priority of Surgery</b>						
Elective	0-1 year	18 (17 - 19)	28 (26 - 30)	17 (16 - 19)	11 (10 - 12)	0.0000
	0-5 year	17 (17 - 18)	20 (19 - 21)	15 (15 - 16)	-	0.0000
No Surgery	0-1 year	126 (124 - 127)	136 (134 - 139)	125 (123 - 128)	113 (111 - 116)	0.0000
	0-5 year	96 (95 - 97)	99 (97 - 100)	94 (92 - 95)	-	0.0000

Abbreviations: CCI, Charlson Comorbidity Index; UICC, Union for International Cancer Control



**Table 3** 1-year and 5-year age-adjusted absolute survival for lung cancer. Overall estimates and stratified by gender, comorbidity level, cancer stage and priority of surgery (2000-2012)

Absolute Survival % (95% CI)	Year	Total Period	Calendar Period of Lung Cancer Diagnosis			p-value
		2000-2012	2000-2004	2005-2009	2010-2012	P
<b>Total</b>	1 year	38 (37-38)	33 (32-34)	38 (37-39)	43 (42-44)	0.0000
	5 year	11 (11-11)	10 (09-10)	12 (11-13)	-	0.0000
<b>Gender</b>						
Men	1 year	35 (34-35)	31 (30-33)	35 (34-36)	39 (38-41)	0.0000
	5 year	10 (9-10)	9 (8-10)	10 (10-11)	-	0.0000
Women	1 year	40 (40-41)	35 (34-36)	40 (39-42)	47 (45-49)	0.0000
	5 year	12 (12-13)	11 (10-12)	14 (13-14)	-	0.0000
<b>Comorbidity Index</b>						
CCI=0 (None)	1 year	39 (38-40)	36 (34-37)	40 (39-41)	44 (43-46)	0.0000
	5 year	12 (11-12)	11 (10-12)	13 (12-14)	-	0.0000
CCI=1 (Low)	1 year	37 (36-38)	31 (29-33)	38 (36-40)	44 (42-47)	0.0000
	5 year	11 (11-12)	9 (8-10)	13 (12-14)	-	0.0000
CCI=2 (Medium)	1 year	36 (35-37)	31 (29-33)	35 (34-37)	44 (42-46)	0.0000
	5 year	10 (10-11)	10 (9-11)	11 (10-12)	-	0.0000
CCI≥3 (High)	1 year	31 (29-33)	24 (21-27)	31 (29-34)	38 (35-42)	0.0000
	5 year	7 (6-09)	6 (5-8)	8 (7-10)	-	0.0098
<b>Cancer Stage</b>						
Non-metastatic, M0	1 year	55 (54-56)	45 (43-46)	57 (56-59)	67 (65-69)	0.0000
	5 year	19 (18-20)	16 (15-16)	23 (22-24)	-	0.0000
Metastatic, M1	1 year	20 (20-21)	17 (16-18)	21 (20-22)	22 (21-24)	0.0000
	5 year	2 (2-3)	2 (2-3)	3 (2-3)	-	0.1263
Unknown, Mx	1 year	36 (35-38)	37 (35-39)	35 (33-38)	39 (35-42)	0.0670
	5 year	12 (11-13)	12 (11-13)	11 (10-12)	-	0.0604
<b>UICC Cancer Stage</b>						
I	1 year	77 (75-80)	68 (65-71)	78 (75-82)	88 (84-92)	0.0000
	5 year	38 (36-39)	31 (29-33)	43 (41-46)	-	0.0000
II	1 year	62 (59-65)	51 (46-56)	63 (58-68)	70 (65-76)	0.0000
	5 year	21 (19-24)	15 (12-18)	27 (24-31)	-	0.0000
III	1 year	44 (43-46)	39 (37-41)	44 (42-46)	51 (48-54)	0.0000
	5 year	9 (8-10)	9 (8-10)	9 (8-10)	-	0.4673
IV	1 year	22 (21-22)	22 (20-23)	21 (20-22)	22 (21-24)	0.6957
	5 year	3 (2-3)	3 (2-3)	3 (2-3)	-	0.6986
Unknown	1 year	31 (30-32)	27 (25-28)	37 (36-39)	42 (40-44)	0.0000
	5 year	9 (9-10)	8 (7-9)	12 (11-13)	-	0.0000

<b>Priority of Surgery</b>						
Elective	1 year	84 (82-86)	76 (73-80)	84 (81-88)	90 (86-94)	0.0000
	5 year	44 (42-46)	42 (39-44)	48 (46-51)	-	0.0000
No Surgery	1 year	30 (30-31)	28 (27-28)	30 (29-31)	34 (33-35)	0.0000
	5 year	6 (5-6)	6 (5-6)	6 (5-6)	-	0.6563

Abbreviations: CCI, Charlson Comorbidity Index; UICC, Union for International Cancer Control

**Table 4** 1-year and 5-year age-adjusted relative survival for lung cancer. Overall estimates and stratified by gender, comorbidity, cancer stage and priority of surgery (2000-2012)

Relative Survival % (95% CI)	Year	Calendar Period of Lung Cancer Diagnosis				p-value <i>P</i>
		Total Period 2000-2012	2000-2004	2005-2009	2010-2012	
<b>Total</b>	1 year	39 (38-39)	34 (34-35)	39 (38-40)	44 (43-45)	0.0000
	5 year	13 (13-14)	12 (12-13)	15 (14-15)	-	0.0000
<b>Gender</b>						
Men	1 year	36 (35-37)	33 (32-34)	37 (35-38)	40 (39-42)	0.0000
	5 year	12 (12-13)	11 (11-12)	13 (12-14)	-	0.0001
Women	1 year	41 (41-42)	36 (35-38)	42 (40-43)	48 (46-50)	0.0000
	5 year	14 (14-15)	13 (12-14)	16 (15-17)	-	0.0000
<b>Comorbidity Index</b>						
CCI=0 (None)	1 year	40 (40-41)	37 (36-38)	41 (40-42)	46 (44-47)	0.0000
	5 year	15 (14-15)	13 (13-14)	16 (15-17)	-	0.0000
CCI=1 (Low)	1 year	38 (37-39)	32 (30-34)	39 (37-41)	45 (43-48)	0.0000
	5 year	14 (13-15)	11 (10-13)	16 (15-17)	-	0.0000
CCI=2 (Medium)	1 year	37 (36-39)	32 (30-35)	37 (35-39)	45 (43-48)	0.0000
	5 year	13 (12-14)	13 (11-14)	13 (12-14)	-	0.0001
CCI≥3 (High)	1 year	32 (30-34)	25 (22-28)	32 (30-36)	39 (36-43)	0.0000
	5 year	9 (8-11)	8 (6-10)	10 (8-12)	-	0.0095
<b>Cancer Stage</b>						
Non-metastatic, M0	1 year	57 (56-58)	46 (45-48)	59 (58-61)	69 (66-71)	0.0000
	5 year	23 (22-24)	19 (18-20)	28 (26-29)	-	0.0000
Metastatic, M1	1 year	21 (20-21)	18 (17-19)	22 (21-23)	23 (22-24)	0.0000
	5 year	3 (3-3)	3 (2-3)	3 (3-4)	-	0.1430
Unknown, Mx	1 year	38 (36-39)	38 (36-41)	37 (34-39)	40 (37-44)	0.0652
	5 year	14 (13-15)	15 (14-17)	14 (12-15)	-	0.0637
<b>UICC Cancer Stage</b>						
I	1 year	80 (78-82)	70 (67-74)	81 (77-84)	90 (86-95)	0.0000
	5 year	46 (44-48)	38 (35-41)	52 (49-56)	-	0.0000
II	1 year	64 (61-67)	52 (47-58)	65 (59-70)	73 (67-78)	0.0000
	5 year	26 (23-29)	18 (15-22)	33 (29-38)	-	0.0000
III	1 year	46 (44-47)	40 (38-43)	45 (43-47)	53 (55)	0.0000
	5 year	11 (10-12)	11 (10-12)	11 (10-12)	-	0.5213
IV	1 year	22 (22-23)	22 (21-24)	22 (21-23)	23 (22-24)	0.6819
	5 year	3 (3-3)	4 (3-4)	3 (3-4)	-	0.6947
Unknown	1 year	32 (31-33)	28 (26-29)	39 (37-40)	43 (42-45)	0.0000
	5 year	11 (11-12)	10 (9-11)	14 (13-15)	-	0.0000

<b>Priority of Surgery</b>						
Elective	1 year	86 (84-89)	79 (75-82)	87 (83-90)	92 (88-96)	0.0000
	5 year	53 (51-56)	50 (47-53)	58 (55-61)	-	0.0000
No Surgery	1 year	31 (31-32)	29 (28-30)	31 (30-32)	35 (34-36)	0.0000
	5 year	7 (7-7)	7 (7-8)	7 (6-7)	-	0.8923

Abbreviations: CCI, Charlson Comorbidity Index; UICC, Union for International Cancer Control

# DMCG.dk Benchmarking Consortium

## Chapter 3: Colorectal Cancer 2001-2012

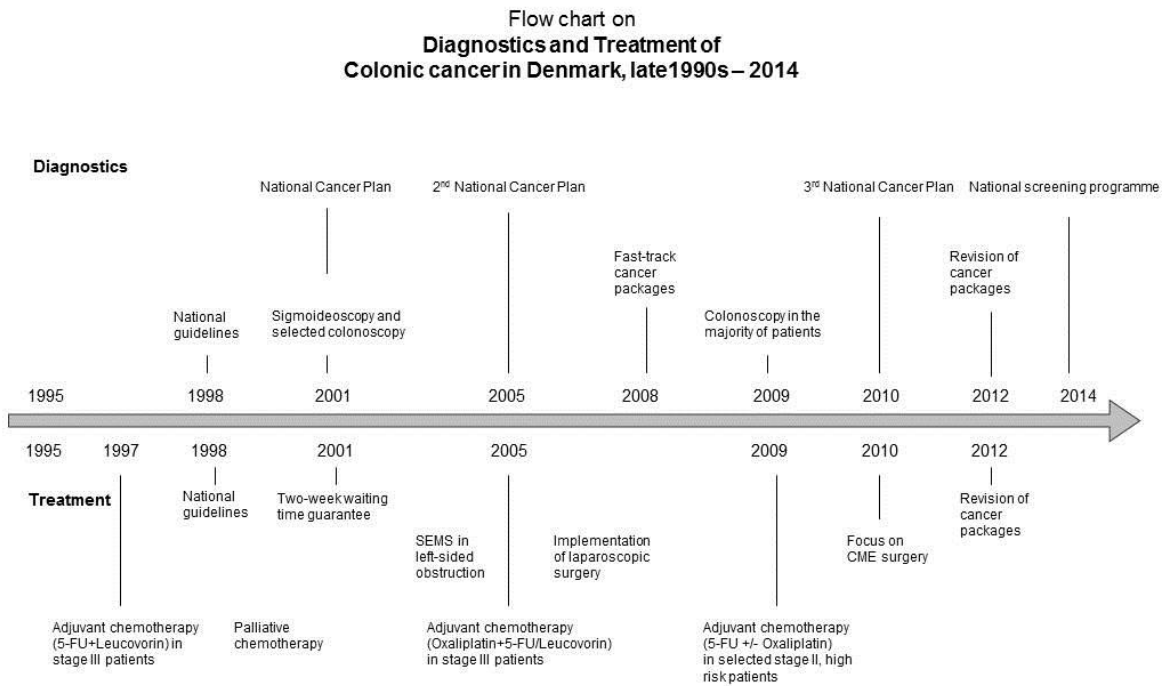
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**Danish Colorectal Cancer Group (DCCG)**



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## Chapter 3: Colorectal Cancer

**Figure 1** Flow chart over diagnostik og behandling for colon cancer siden 1995



**Figure 2** Flow chart over diagnostik og behandling for rectum cancer siden 1995

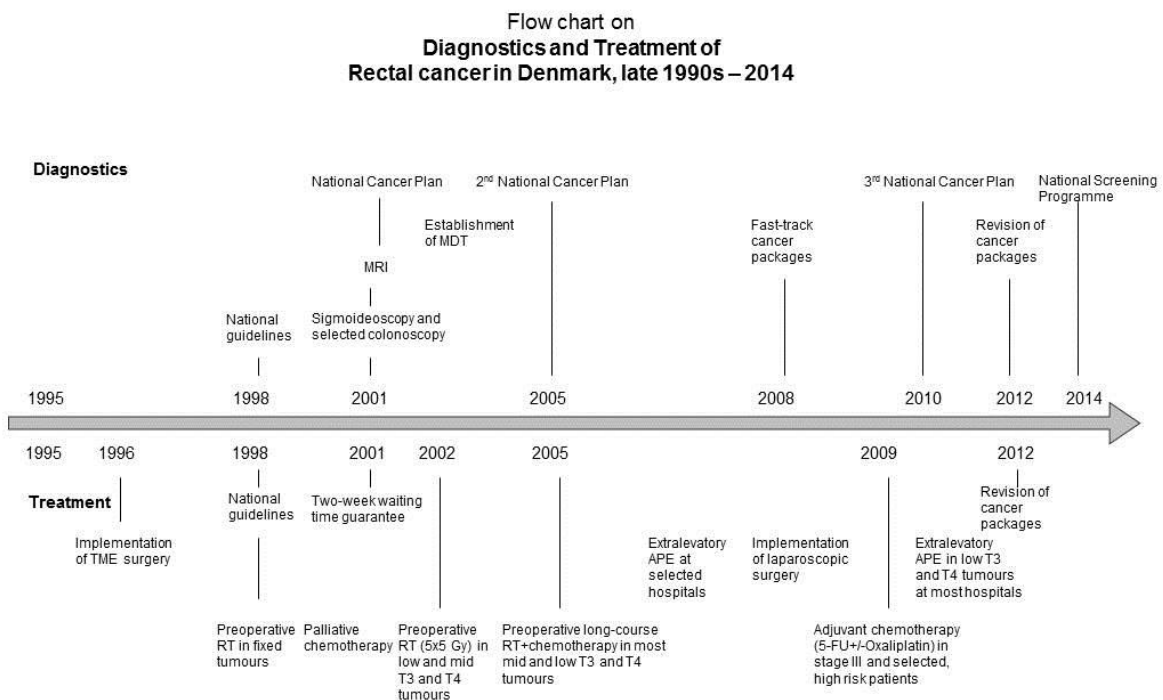


Figure 3 Absolute survival for colon cancer

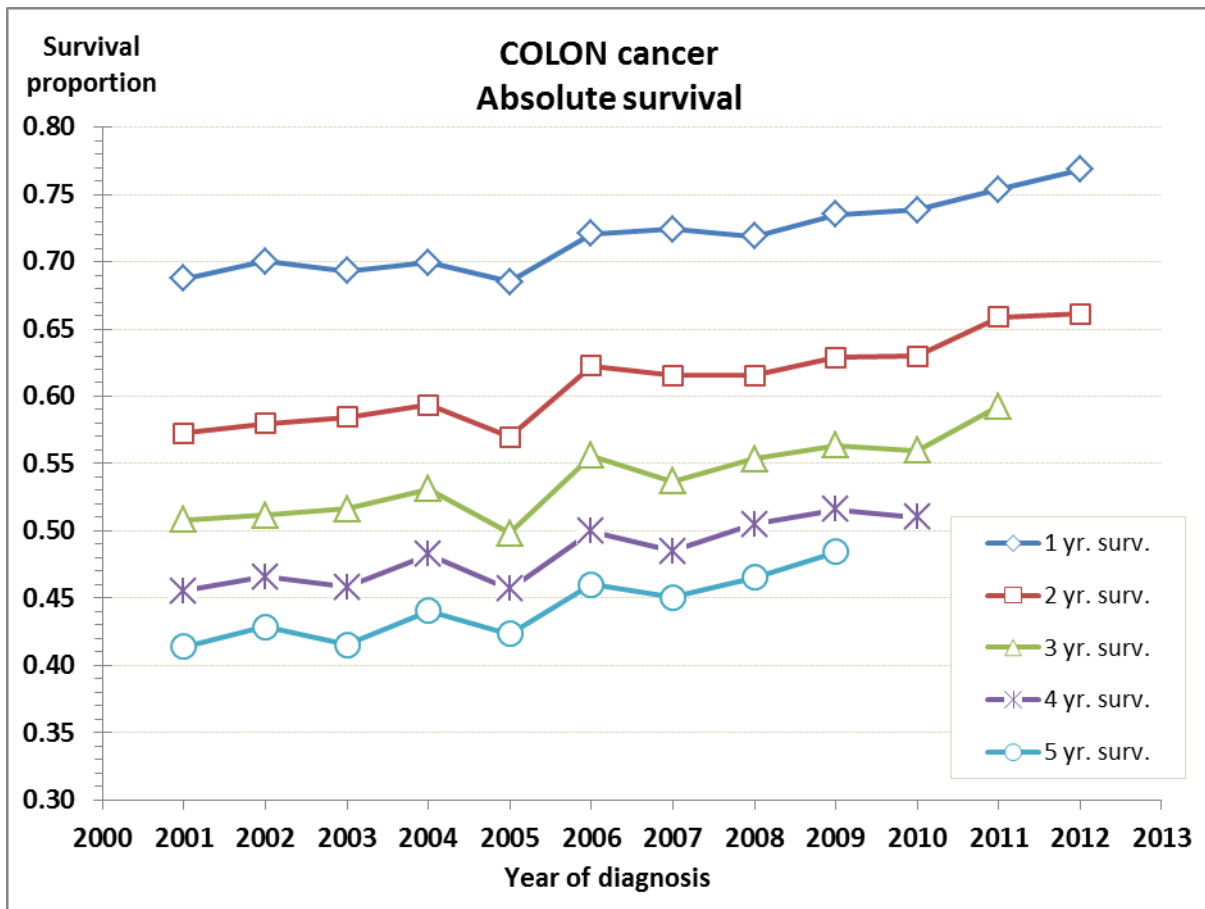
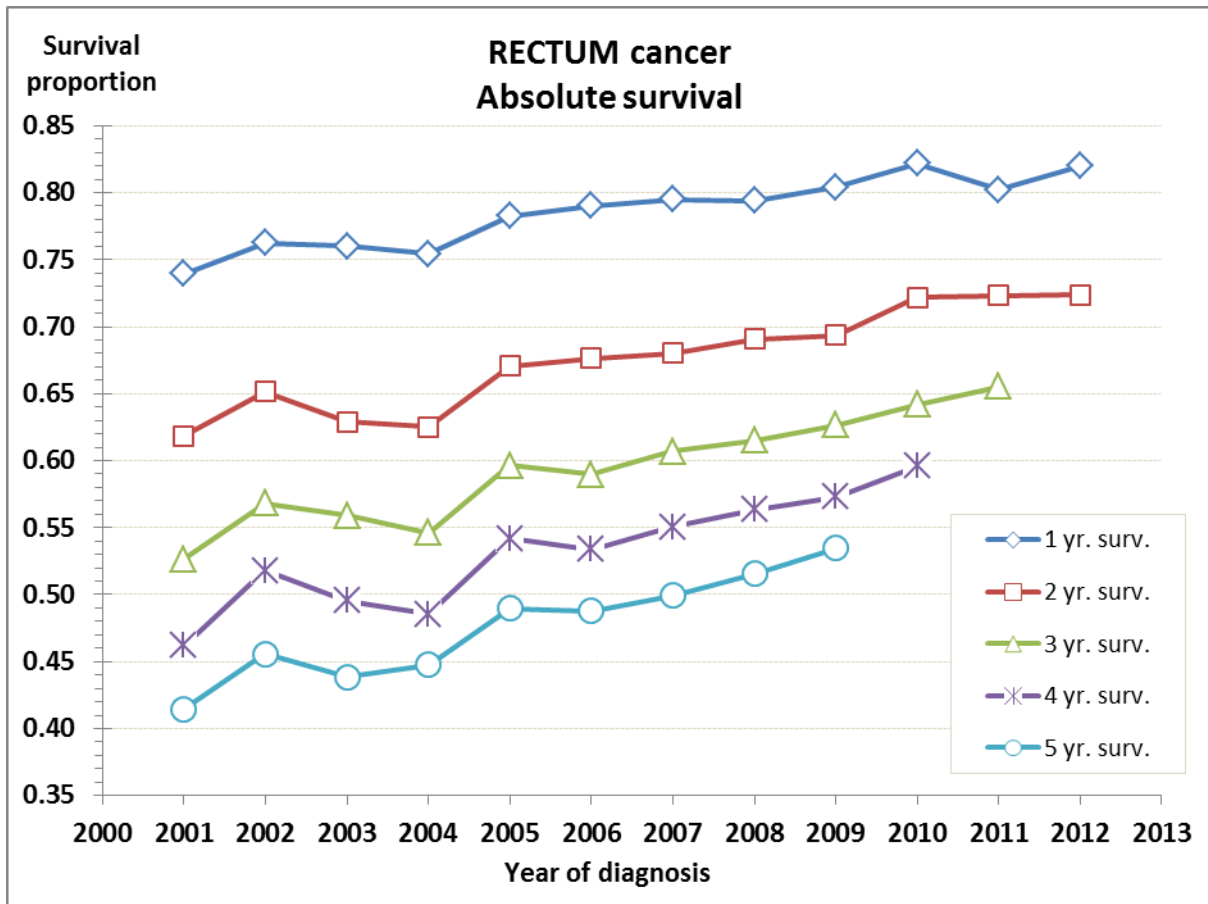


Figure 4 Absolute survival for rectum cancer





## Tables: Colon Cancer

**Table 1a** Distribution of colon cancer by age group, gender, comorbidity, cancer stage and priority of surgery (2001-2012)

	Year	Total Period	Calendar Period of Colon Cancer Diagnosis		
		N (%)	N (%)		
		2001 <sup>1</sup> -2012	2001 <sup>1</sup> -2004	2005-2008	2009-2012
<b>Total</b>	0-1 year	29,385 (100)	8,413 (100)	10,245 (100)	10,727 (100)
	0-5 year	19,670 (100)	8,413 (100)	10,245 (100)	1,012 (100)
Median Age (years)		72	72	72	72
<b>Age Group</b>					
<45 years	0-1 year	576 (2)	165 (2)	220 (2)	191 (2)
	0-5 year	410 (2)	165 (2)	220 (2)	25 (3)
45-54 years	0-1 year	1,805 (6)	546 (7)	637 (6)	622 (6)
	0-5 year	1,243 (6)	546 (7)	637 (6)	60 (6)
55-64 years	0-1 year	5,399 (18)	1,540 (18)	1,917 (19)	1,942 (18)
	0-5 year	3,658 (19)	1,540 (18)	1,917 (19)	201 (20)
65-74 years	0-1 year	9,132 (31)	2,519 (30)	3,089 (30)	3,524 (33)
	0-5 year	5,915 (30)	2,519 (30)	3,089 (30)	307 (30)
≥75 years	0-1 year	12,473 (42)	3,643 (43)	4,382 (43)	4,448 (42)
	0-5 year	8,444 (43)	3,643 (43)	4,382 (43)	419 (41)
<b>Gender</b>					
Men	0-1 year	14,372 (49)	4,095 (49)	5,005 (49)	5,272 (49)
	0-5 year	9,609 (49)	4,095 (49)	5,005 (49)	509 (50)
Women	0-1 year	15,013 (51)	4,318 (51)	5,240 (51)	5,455 (51)
	0-5 year	10,061 (51)	4,318 (51)	5,240 (51)	503 (50)
<b>Comorbidity Index</b>					
CCI=0 (None)	0-1 year	20,900 (71)	6,851 (81)	7,142 (70)	6,907 (64)
	0-5 year	14,682 (75)	6,851 (81)	7,142 (70)	689 (68)
CCI=1 (Low)	0-1 year	3,963 (14)	833 (10)	1,465 (14)	1,665 (16)
	0-5 year	2,448 (12)	833 (10)	1,465 (14)	150 (15)
CCI=2 (Medium)	0-1 year	3,661 (13)	627 (8)	1,341 (13)	1,693 (16)
	0-5 year	2,101 (11)	627 (8)	1,341 (13)	133 (13)
CCI≥3 (High)	0-1 year	861 (3)	102 (1)	297 (3)	462 (4)
	0-5 year	439 (2)	102 (1)	297 (3)	40 (4)
<b>Cancer Stage</b>					
Non-metastatic, M0	0-1 year	19,440 (66)	5,675 (68)	6,743 (66)	7,022 (66)
	0-5 year	13,073 (67)	5,675 (68)	6,743 (66)	655 (65)
Metastatic, M1	0-1 year	8,209 (28)	2,121 (25)	2,989 (29)	3,099 (29)
	0-5 year	5,407 (28)	2,121 (25)	2,989 (29)	297 (29)
Unknown, Mx	0-1 year	1,736 (6)	617 (7)	513 (5)	606 (6)

	0-5 year	1,190 (6)	617 (7)	513 (5)	60(6)
<b>UICC Cancer Stage</b>					
I	0-1 year	2,910 (10)	834 (10)	975 (10)	1,101 (10)
	0-5 year	1,913 (10)	834 (10)	975 (10)	104 (10)
II	0-1 year	9,412 (32)	2,796 (33)	3,194 (31)	3,422 (32)
	0-5 year	6,314 (32)	2,796 (33)	3,194 (31)	324 (32)
III	0-1 year	7,118 (24)	2,045 (24)	2,574 (25)	2,499 (23)
	0-5 year	4,846 (25)	2,045 (24)	2,574 (25)	227 (22)
IV	0-1 year	8,209 (28)	2,121 (25)	2,989 (29)	3,099 (29)
	0-5 year	5,407 (28)	2,121 (25)	2,989 (29)	297 (29)
Unknown	0-1 year	1,736 (6)	617 (7)	513 (5)	606 (6)
	0-5 year	1,190 (6)	617 (7)	513 (5)	60 (6)
<b>Priority of Surgery</b>					
Elective	0-1 year	20,823 (71)	5,971 (71)	7,331 (72)	7,521 (70)
	0-5 year	14,018 (71)	5,971 (71)	7,331 (72)	716 (71)
Emergency/Acute	0-1 year	5,037 (17)	1,760 (21)	1,637 (16)	1,640 (15)
	0-5 year	3,548 (18)	1,760 (21)	1,637 (16)	151 (15)
No Surgery	0-1 year	3,525 (12)	682 (8)	1,277 (13)	1,566 (15)
	0-5 year	2,104 (11)	682 (8)	1,277 (13)	145 (14)

<sup>1</sup> The calendar year 2001 includes May-December, both included.

Abbreviations: CCI, Charlson Comorbidity Index; UICC, UICC, Union for International Cancer Control

**Table 2a** 1-year and 5-year age-adjusted mortality rate for colon cancer. Overall estimates and stratified by gender, comorbidity, cancer stage and priority of surgery (2001-2012)

Mortality Rate, per 100 Patient-Year (95% CI)	Year	Calendar Period of Colon Cancer Diagnosis				P-value
		Total Period 2001 <sup>1</sup> -2012	2001 <sup>1</sup> -2004	2005-2008	2009-2012	P
<b>Total</b>	0-1 year	29 (28 - 30)	32 (31 - 34)	30 (29 - 31)	26 (25 - 27)	0.0000
	0-5 year	16 (16 - 17)	17 (17 - 18)	16 (15 - 16)	15 (13 - 16)	0.0000
<b>Gender</b>						
<b>Men</b>	0-1 year	31 (30 - 32)	35 (33 - 37)	31 (29 - 33)	26 (25 - 28)	0.0000
	0-5 year	18 (17 - 18)	19 (18 - 20)	17 (16 - 17)	16 (14 - 18)	0.0000
<b>Women</b>	0-1 year	27 (26 - 28)	29 (28 - 31)	28 (27 - 30)	25 (23 - 26)	0.0000
	0-5 year	15 (15 - 15)	15 (15 - 16)	15 (14 - 15)	14 (12 - 15)	0.0578
<b>Comorbidity Index</b>						
<b>CCI=0 (None)</b>	0-1 year	26 (26 - 27)	30 (28 - 31)	27 (26 - 28)	22 (21 - 23)	0.0000
	0-5 year	15 (15 - 15)	16 (16 - 17)	14 (14 - 15)	13 (12 - 15)	0.0000
<b>CCI=1 (Low)</b>	0-1 year	32 (31 - 34)	44 (39 - 50)	31 (28 - 35)	29 (26 - 31)	0.0000
	0-5 year	19 (18 - 20)	22 (20 - 24)	17 (15 - 18)	20 (15 - 24)	0.0000
<b>CCI=2 (Medium)</b>	0-1 year	37 (34 - 39)	45 (39 - 52)	40 (36 - 44)	32 (29 - 35)	0.0000
	0-5 year	21 (20 - 22)	23 (21 - 26)	21 (20 - 23)	16 (12 - 21)	0.1022
<b>CCI≥3 (High)</b>	0-1 year	58 (52 - 65)	66 (48 - 90)	62 (51 - 74)	55 (47 - 64)	0.2566
	0-5 year	39 (35 - 43)	42 (33 - 52)	35 (30 - 40)	39 (25 - 58)	0.2647
<b>Cancer Stage</b>						
<b>Non-metastatic, M0</b>	0-1 year	12 (11 - 12)	14 (13 - 15)	13 (12 - 14)	9 (8 - 10)	0.0000
	0-5 year	9 (9 - 9)	10 (9 - 10)	8 (8 - 9)	7 (6 - 8)	0.0000
<b>Metastatic, M1</b>	0-1 year	81 (78 - 83)	97 (92 - 102)	81 (77 - 85)	72 (68 - 76)	0.0000
	0-5 year	62 (61 - 64)	71 (68 - 75)	58 (56 - 60)	57 (50 - 65)	0.0000
<b>Unknown, Mx</b>	0-1 year	49 (45 - 53)	53 (47 - 60)	45 (38 - 52)	51 (44 - 58)	0.6045
	0-5 year	19 (17 - 20)	22 (19 - 24)	16 (14 - 18)	21 (14 - 31)	0.4996
<b>UICC Cancer sStage</b>						
<b>I</b>	0-1 year	7 (6 - 8)	10 (8 - 12)	8 (6 - 10)	5 (4 - 6)	0.0001
	0-5 year	5 (4 - 5)	5 (5 - 6)	5 (4 - 5)	4 (2 - 6)	0.0521
<b>II</b>	0-1 year	10 (9 - 11)	12 (11 - 13)	11 (9 - 12)	8 (7 - 9)	0.0000
	0-5 year	7 (7 - 8)	8 (7 - 8)	7 (6 - 7)	7 (5 - 8)	0.0029
<b>III</b>	0-1 year	16 (15 - 17)	19 (17 - 21)	18 (16 - 19)	12 (11 - 13)	0.0000
	0-5 year	13 (13 - 14)	15 (14 - 16)	12 (11 - 13)	11 (9 - 14)	0.0000
<b>IV</b>	0-1 year	81 (78 - 83)	97 (92 - 102)	81 (77 - 85)	72 (68 - 76)	0.0000
	0-5 year	62 (61 - 64)	71 (68 - 75)	58 (56 - 60)	57 (50 - 65)	0.0000
<b>Unknown</b>	0-1 year	49 (47 - 51)	53 (50 - 57)	45 (42 - 48)	51 (48 - 54)	0.6045
	0-5 year	19 (18 - 19)	22 (20 - 23)	16 (15 - 17)	21 (18 - 25)	0.4996

<b>Priority of Surgery</b>						
Elective	0-1 year	17 (17 - 18)	23 (22 - 24)	19 (18 - 20)	12 (11 - 13)	0.0000
	0-5 year	12 (12 - 12)	13 (13 - 14)	11 (11 - 12)	9 (8 - 11)	0.0000
Emergency/Acute	0-1 year	53 (50 - 55)	55 (51 - 60)	54 (50 - 58)	49 (45 - 53)	0.0161
	0-5 year	30 (29 - 31)	30 (29 - 32)	30 (28 - 32)	32 (26 - 38)	0.5257
No Surgery	0-1 year	96 (92 - 100)	88 (80 - 98)	90 (84 - 97)	106 (99-113)	0.3015
	0-5 year	46 (44 - 49)	41 (38 - 45)	48 (45 - 51)	67 (55 - 80)	0.0012

<sup>1</sup> The calendar year 2001 includes May-December, both included.

Abbreviations: CCI, Charlson Comorbidity Index; UICC, UICC, Union for International Cancer Control

**Table 3a** 1-year and 5-year age-adjusted absolute survival for colon cancer. Overall estimates and stratified by gender, comorbidity, cancer stage and priority of surgery (2001-2012)

Absolute Survival % (95% CI)	Year	Total Period	Calendar Period of Colon Cancer Diagnosis				P-value
		2001 <sup>1</sup> -2012	2001 <sup>1</sup> -2004	2005-2008	2009-2012	P	
<b>Total</b>	1 year	76 (75-77)	73 (72-75)	75 (73-77)	78 (76-80)	0.0000	
	5 year	49 (48-50)	47 (45-48)	50 (48-51)	52 (48-57)	0.0000	
<b>Gender</b>							
Men	1 year	75 (73-76)	72 (69-74)	74 (72-77)	78 (75-78)	0.0000	
	5 year	46 (44-47)	43 (41-45)	48 (46-50)	50 (44-57)	0.0000	
Women	1 year	77 (75-78)	75 (73-78)	76 (74-79)	79 (76-81)	0.0000	
	5 year	51 (50-53)	51 (49-53)	52 (50-54)	55 (48-62)	0.0901	
<b>Comorbidity Index</b>							
CCI=0 (None)	1 year	78 (76-79)	75 (73-77)	77 (75- 79)	81 (79-83)	0.0000	
	5 year	51 (50-52)	49 (47-50)	53 (51- 54)	55 (50-61)	0.0000	
CCI=1 (Low)	1 year	74 (71-76)	68 (62-73)	75 (70-79)	76 (72-81)	0.0000	
	5 year	45 (43-48)	43 (38-47)	49 (45-53)	49 (39-62)	0.0028	
CCI=2 (Medium)	1 year	71 (68-74)	67 (61-74)	70 (65-74)	74 (70-78)	0.0001	
	5 year	41 (38-43)	40 (35-45)	42 (38-45)	56 (44-71)	0.0880	
CCI≥3 (High)	1 year	60 (55-65)	59 (45-76)	61 (53-71)	61 (54-69)	0.4598	
	5 year	26 (22-32)	26 (17-38)	32 (26-39)	41 (23-66)	0.2511	
<b>Cancer Stage</b>							
Non-metastatic, M0	1 year	89 (88-91)	87 (85-90)	88 (86-90)	92 (90-94)	0.0000	
	5 year	65 (64-67)	63 (61-65)	67 (65-69)	71 (64-78)	0.0000	
Metastatic, M1	1 year	47 (45-48)	41 (38-43)	47 (45-50)	50 (48-53)	0.0000	
	5 year	10 (9-11)	8 (6-9)	12 (11-13)	13 (9-17)	0.0000	
Unknown, Mx	1 year	64 (60-68)	62 (56-68)	67 (60-75)	64 (58-71)	0.6864	
	5 year	47 (43-51)	42 (37-47)	53 (47-59)	55 (38-77)	0.6039	
<b>UICC Cancer Stage</b>							
I	1 year	93 (90-97)	91 (85-98)	92 (86-99)	95 (90-100)	0.0001	
	5 year	79 (75-83)	78 (72-84)	80 (74-85)	84 (67-100)	0.0674	
II	1 year	91 (89-93)	89 (86-93)	90 (87-94)	93 (89-96)	0.0000	
	5 year	71 (69-73)	69 (66-72)	72 (69-75)	74 (65-84)	0.0036	
III	1 year	86 (83-88)	83 (79-87)	84 (81-88)	89 (85-93)	0.0000	
	5 year	54 (52-56)	49 (46-52)	57 (54-60)	61 (51-72)	0.0000	
IV	1 year	47 (45-48)	41 (38-43)	47 (45-50)	50 (48- 53)	0.0000	
	5 year	10 (9-11)	8 (6-9)	12 (11-13)	13 (9-17)	0.0000	
Unknown	1 year	64 (62-66)	62 (58-65)	67 (64-70)	64 (62-67)	0.6864	
	5 year	47 (45-48)	42 (39-45)	53 (50-55)	55 (47-64)	0.6039	

<b>Priority of Surgery</b>						
Elective	1 year	84 (83-86)	80 (78-83)	83 (81-86)	89 (87-91)	0.0000
	5 year	57 (56-58)	54 (52-56)	59 (57-61)	64 (58-71)	0.0000
Emergency/Acute	1 year	62 (59-64)	60 (57-64)	61 (57-65)	64 (60-68)	0.0599
	5 year	30 (28-32)	30 (27-32)	30 (28-33)	32 (24-42)	0.6830
No Surgery	1 year	42 (40-44)	46 (41-52)	45 (41-49)	38 (35-41)	0.0399
	5 year	21 (19-23)	24 (21-28)	20 (18-23)	19 (13-28)	0.0724

<sup>1</sup> The calendar year 2001 includes May-December, both included.

Abbreviations: CCI, Charlson Comorbidity Index; UICC, UICC, Union for International Cancer Control

**Table 4a** 1-year and 5-year age-adjusted relative survival for colon cancer. Overall estimates and stratified by gender, comorbidity, cancer stage and priority of surgery (2001-2012)

Relative Survival % (95% CI)	Year	Total Period	Calendar Period of Colon Cancer Diagnosis				P-value
		2001 <sup>1</sup> -2012	2001 <sup>1</sup> -2004	2005-2008	2009-2012	P	
<b>Total</b>	1 year	78 (77 - 79)	76 (74 - 78)	78 (76 - 79)	80 (79 - 82)	0.0000	
	5 year	60 (58 - 61)	58 (56 - 60)	61 (59 - 62)	63 (58 - 69)	0.0002	
<b>Gender</b>							
Men	1 year	78 (76 - 79)	75 (72 - 77)	77 (75 - 80)	80 (78 - 83)	0.0000	
	5 year	58 (56 - 60)	55 (52 - 58)	60 (58 - 63)	62 (55 - 71)	0.0000	
Women	1 year	79 (77 - 80)	78 (75 - 80)	78 (76 - 81)	81 (78 - 83)	0.0000	
	5 year	61 (59 - 63)	61 (58 - 63)	61 (59 - 63)	64 (57 - 73)	0.0615	
<b>Comorbidity Index</b>							
CCI=0 (None)	1 year	80 (79 - 81)	78 (76 - 80)	80 (77 - 82)	83 (81 - 85)	0.0000	
	5 year	62 (61 - 64)	60 (58 - 62)	64 (62 - 66)	67 (60 - 74)	0.0000	
CCI=1 (Low)	1 year	76 (73 - 79)	70 (64 - 76)	77 (73 - 82)	79 (74 - 83)	0.0000	
	5 year	55 (52 - 59)	53 (48 - 59)	60 (56 - 64)	60 (47 - 75)	0.0012	
CCI=2 (Medium)	1 year	73 (71 - 76)	70 (63 - 77)	72 (67 - 77)	76 (72 - 81)	0.0001	
	5 year	50 (46 - 53)	49 (43 - 56)	51 (47 - 55)	68 (54 - 86)	0.1211	
CCI≥3 (High)	1 year	62 (57 - 67)	61 (47 - 79)	63 (55 - 73)	63 (56 - 71)	0.4664	
	5 year	32 (27 - 39)	32 (21 - 47)	39 (31 - 47)	49 (28 - 79)	0.2086	
<b>Cancer Stage</b>							
Non-metastatic, M0	1 year	92 (91 - 93)	90 (88 - 93)	91 (89 - 93)	94 (92 - 97)	0.0000	
	5 year	80 (78 - 82)	77 (75 - 80)	82 (79 - 84)	85 (78 - 93)	0.0000	
Metastatic, M1	1 year	48 (47 - 50)	42 (39 - 45)	49 (46 - 51)	52 (49 - 55)	0.0000	
	5 year	12 (11 - 13)	9 (8 - 11)	14 (13 - 16)	15 (11 - 21)	0.0000	
Unknown, Mx	1 year	66 (62 - 70)	64 (58 - 71)	69 (62 - 77)	66 (60 - 73)	0.7392	
	5 year	58 (53 - 63)	52 (46 - 59)	65 (57 - 73)	67 (46 - 94)	0.2404	
<b>UICC Cancer Stage</b>							
I	1 year	96 (92 - 100)	94 (88 - 101)	95 (89 - 102)	98 (92 - 103)	0.0000	
	5 year	96 (92 - 101)	96 (89 - 103)	97 (90 - 104)	101 (81 - 120)	0.1446	
II	1 year	94 (92 - 96)	92 (89 - 96)	93 (90 - 97)	95 (92 - 99)	0.0000	
	5 year	87 (84 - 89)	85 (82 - 89)	87 (84 - 91)	89 (78 - 101)	0.0006	
III	1 year	88 (86 - 91)	86 (82 - 90)	87 (83 - 91)	92 (88 - 95)	0.0000	
	5 year	66 (64 - 69)	61 (57 - 65)	69 (66 - 73)	73 (62 - 87)	0.0000	
IV	1 year	48 (47 - 50)	42 (39 - 45)	49 (46 - 51)	52 (49 - 55)	0.0000	
	5 year	12 (11 - 13)	9 (8 - 11)	14 (13 - 16)	15 (11 - 21)	0.0000	
Unknown	1 year	66 (64 - 68)	64 (61 - 68)	69 (66 - 73)	66 (64 - 69)	0.7392	
	5 year	58 (55 - 60)	52 (49 - 56)	65 (61 - 68)	67 (57 - 78)	0.2404	

<b>Priority of Surgery</b>						
Elective	1 year	87 (86 - 88)	83 (81 - 85)	86 (84 - 88)	92 (89 - 94)	0.0000
	5 year	69 (68 - 71)	67 (64 - 69)	71 (69 - 73)	77 (70 - 84)	0.0000
Emergency/Acute	1 year	64 (61 - 66)	63 (59 - 67)	63 (59 - 67)	66 (62 - 70)	0.0714
	5 year	37 (34 - 39)	37 (33 - 40)	37 (34 - 40)	39 (28 - 51)	0.7641
No Surgery	1 year	43 (41 - 45)	48 (43 - 54)	46 (42 - 50)	39 (36 - 42)	0.0268
	5 year	25 (23 - 28)	30 (26 - 35)	25 (22 - 28)	23 (15 - 33)	0.0380

<sup>1</sup> The calendar year 2001 includes May-December, both included.

Abbreviations: CCI, Charlson Comorbidity Index; UICC, UICC, Union for International Cancer Control



## Tables: Rectum Cancer

**Table 1b** Distribution of rectal cancer by age group, gender, comorbidity, cancer stage and priority of surgery (2001-2012)

	Year	Total Period	Calendar Period of Rectal Cancer Diagnosis		
		N (%)	N (%)		
		2001 <sup>1</sup> -2012	2001 <sup>1</sup> -2004	2005-2008	2009-2012
<b>Total</b>	0-1 year	15,213 (100)	4,545 (100)	5,240 (100)	5,428 (100)
	0-5 year	10,305 (100)	4,545 (100)	5,240 (100)	520 (100)
Median age (years)		69	70	69	68
<b>Age Group</b>					
<45 years	0-1 year	344 (2)	95 (2.1)	121 (2)	128 (2)
	0-5 year	228 (2)	95 (2.1)	121 (2)	12 (2)
45-54 years	0-1 year	1317 (9)	384 (8)	476 (9)	457 (8)
	0-5 year	908 (9)	384 (8.4)	476 (9)	48 (9)
55-64 years	0-1 year	3,493 (23)	1,042 (23)	1,249 (24)	1,202 (22)
	0-5 year	2,418 (24)	1,042 (23)	1,249 (24)	127 (24)
65-74 years	0-1 year	4,875 (32)	1,403 (31)	1,611 (31)	1,861 (34)
	0-5 year	3,176 (31)	1,403 (31)	1,611 (31)	162 (31)
≥75 years	0-1 year	5,184 (34)	1,621 (36)	1,783 (34)	1,780 (33)
	0-5 year	3,575 (35)	1,621 (36)	1,783 (34)	171 (33)
<b>Gender</b>					
Men	0-1 year	9,100 (60)	2,670 (59)	3,104 (59)	3,326 (61)
	0-5 year	6,110 (59)	2,670 (59)	3,104 (59)	336 (65)
Women	0-1 year	6,113 (40)	1,875 (41)	2,136 (41)	2,102 (39)
	0-5 year	4,195 (41)	1,875 (41)	2,136 (41)	184 (35)
<b>Comorbidity Index</b>					
CCI=0 (None)	0-1 year	11,694 (77)	3,914 (86)	3,935 (75)	3,845 (71)
	0-5 year	8,237 (80)	3,914 (86)	3,935 (75)	388 (75)
CCI=1 (Low)	0-1 year	1,744 (12)	346 (8)	660 (13)	738 (14)
	0-5 year	1,066 (10)	346 (8)	660 (13)	60 (12)
CCI=2 (Medium)	0-1 year	1,441 (10)	239 (5)	526 (10)	676 (13)
	0-5 year	825 (8)	239 (5)	526 (10)	60 (12)
CCI≥3 (High)	0-1 year	334 (2)	46 (1)	119 (2)	169 (3)
	0-5 year	177 (2)	46 (1)	119 (2)	12 (2)
<b>Cancer Stage</b>					
Non-metastatic, M0	0-1 year	9,858 (65)	2,903 (63.9)	3,422 (65.3)	3,533 (65.1)
	0-5 year	6,654 (65)	2,903 (63.9)	3,422 (65.3)	329 (63.3)
Metastatic, M1	0-1 year	3,729 (25)	1,030 (22.7)	1,333 (25.4)	1,366 (25.2)
	0-5 year	2,514 (24)	1,030 (22.7)	1,333 (25.4)	151 (29.0)
Unknown, Mx	0-1 year	1,626 (11)	612 (13.5)	485 (9.3)	529 (9.7)
	0-5 year	1,137 (11)	612 (13.5)	485 (9.3)	40 (7.7)

<b>UICC Cancer Stage</b>					
I	0-1 year	2,804 (18)	737 (16)	958 (18)	1,109 (20)
	0-5 year	1,798 (17)	737 (16)	958 (18)	103 (20)
II	0-1 year	3,547 (23)	1,072 (24)	1,228 (23)	1,247 (23)
	0-5 year	2,420 (24)	1,072 (24)	1,228 (23)	120 (23)
III	0-1 year	3,507 (23)	1,094 (24)	1,236 (24)	1,177 (22)
	0-5 year	2,436 (24)	1,094 (24)	1,236 (24)	106 (20)
IV	0-1 year	3,729 (25)	1,030 (23)	1,333 (25)	1,366 (25)
	0-5 year	2,514 (24)	1,030 (23)	1,333 (25)	151 (29)
Unknown	0-1 year	1,626 (11)	612 (14)	485 (9)	529 (10)
	0-5 year	1,137 (11)	612 (14)	485 (9)	40 (8)
<b>Priority of Surgery</b>					
Elective	0-1 year	12,321 (81)	3,824 (84)	4,208 (80)	4,289 (79)
	0-5 year	8,442 (82)	3,824 (84)	4,208 (80)	410 (79)
Emergency/Acute	0-1 year	412 (3)	150 (3)	132 (3)	130 (2)
	0-5 year	293 (3)	150 (3)	132 (3)	11 (2)
No Surgery	0-1 year	2,480 (16)	571 (13)	900 (17)	1,009 (19)
	0-5 year	1,570 (15)	571 (13)	900 (17)	99 (19)

<sup>1</sup> The calendar year 2001 includes May-December, both included.

Abbreviations: CCI, Charlson Comorbidity Index; UICC, UICC, Union for International Cancer Control

**Table 2b** 1-year and 5-year age-adjusted mortality rate for rectal cancer. Overall estimates and stratified by gender, comorbidity, cancer stage and priority of surgery (2001-2012)

Mortality Rate, per 100 Patient-Year (95% CI)	Year	Calendar Period of Rectal Cancer Diagnosis				P-value
		Total Period 2001 <sup>1</sup> -2012	2001 <sup>1</sup> -2004	2005-2008	2009-2012	P
<b>Total</b>	0-1 year	22 (21 - 23)	26 (24 - 27)	22 (20 - 23)	19 (18 - 21)	0.0000
	0-5 year	15 (15 - 15)	16 (16 - 17)	14 (13 - 14)	14 (12 - 16)	0.0000
<b>Gender</b>						
Men	0-1 year	23 (22 - 24)	26 (24 - 28)	22 (20 - 24)	20 (18 - 22)	0.0000
	0-5 year	16 (15 - 16)	17 (16 - 18)	15 (14 - 16)	15 (13 - 17)	0.0000
Women	0-1 year	21 (20 - 22)	25 (23 - 27)	21 (19 - 23)	19 (17 - 20)	0.0001
	0-5 year	14 (13 - 14)	16 (15 - 17)	12 (12 - 13)	13 (10 - 16)	0.0000
<b>Comorbidity Index</b>						
CCI=0 (None)	0-1 year	20 (19 - 21)	23 (22 - 25)	19 (18 - 21)	17 (15 - 18)	0.0000
	0-5 year	14 (13 - 14)	15 (15 - 16)	12 (12 - 13)	13 (11 - 15)	0.0000
CCI=1 (Low)	0-1 year	24 (22 - 27)	32 (25 - 39)	25 (21 - 29)	22 (18 - 26)	0.0013
	0-5 year	18 (17 - 20)	22 (20 - 26)	17 (16 - 19)	17 (11 - 25)	0.0059
CCI=2 (Medium)	0-1 year	35 (32 - 39)	50 (40 - 61)	32 (27 - 38)	32 (27 - 37)	0.0000
	0-5 year	22 (20 - 24)	29 (25 - 34)	20 (18 - 23)	17 (11 - 25)	0.0006
CCI≥3 (High)	0-1 year	51 (43 - 61)	100 (64 - 149)	55 (40 - 74)	45 (34 - 59)	0.0069
	0-5 year	37 (31 - 44)	53 (37 - 75)	36 (29 - 45)	41 (9 - 115)	0.1493
<b>Cancer Stage</b>						
Non-metastatic, M0	0-1 year	9 (8 - 9)	10 (9 - 11)	9 (8 - 10)	7 (6 - 8)	0.0000
	0-5 year	8 (8 - 9)	9 (9 - 10)	8 (7 - 8)	6 (5 - 8)	0.0000
Metastatic, M1	0-1 year	61 (58 - 64)	72 (66 - 78)	61 (56 - 66)	55 (50 - 59)	0.0000
	0-5 year	52 (50 - 54)	58 (54 - 62)	49 (46 - 52)	44 (36 - 52)	0.0000
Unknown, Mx	0-1 year	39 (36 - 43)	48 (42 - 55)	33 (27 - 39)	37 (31 - 43)	0.0100
	0-5 year	22 (20 - 24)	27 (24 - 30)	16 (14 - 18)	21 (13 - 32)	0.0002
<b>UICC Cancer Stage</b>						
I	0-1 year	6 (5 - 7)	8 (6 - 10)	5 (3 - 6)	6 (4 - 8)	0.0176
	0-5 year	5 (4 - 5)	5 (5 - 6)	4 (4 - 5)	5 (3 - 7)	0.0167
II	0-1 year	8 (7 - 9)	9 (7 - 11)	10 (8 - 12)	6 (5 - 8)	0.0003
	0-5 year	7 (7 - 8)	8 (7 - 9)	7 (7 - 8)	7 (5 - 10)	0.0688
III	0-1 year	11 (10 - 12)	14 (12 - 16)	11 (10 - 14)	9 (7 - 11)	0.0080
	0-5 year	13 (12 - 14)	15 (13 - 16)	12 (11 - 13)	9 (6 - 13)	0.0000
IV	0-1 year	61 (58 - 64)	72 (66 - 78)	61 (56 - 66)	55 (50 - 59)	0.0000
	0-5 year	52 (50 - 54)	58 (54 - 62)	49 (46 - 52)	44 (36 - 52)	0.0000
Unknown	0-1 year	39 (37 - 41)	48 (43 - 53)	33 (29 - 36)	37 (33 - 41)	0.0100
	0-5 year	22 (21 - 23)	27 (25 - 29)	16 (15 - 17)	21 (17 - 26)	0.0002

<b>Priority of Surgery</b>						
Elective	0-1 year	14 (13 - 15)	19 (17 - 20)	13 (12 - 15)	10 (9 - 11)	0.0000
	0-5 year	12 (11 - 12)	14 (13 - 14)	10 (10 - 11)	9 (8 - 11)	0.0000
Emergency/Acute	0-1 year	91 (80 - 104)	92 (73 - 115)	108 (86 - 135)	76 (58 - 97)	0.0467
	0-5 year	55 (49 - 63)	49 (41 - 59)	63 (51 - 75)	91 (21 - 247)	0.3900
No Surgery	0-1 year	71 (67 - 75)	84 (75 - 94)	70 (63 - 77)	69 (63 - 75)	0.0119
	0-5 year	52 (50 - 55)	58 (53 - 64)	49 (45 - 52)	65 (52 - 81)	0.0033

<sup>1</sup> The calendar year 2001 includes May-December, both included.

Abbreviations: CCI, Charlson Comorbidity Index, UICC, UICC, Union for International Cancer Control

**Table 3b** 1-year and 5-year age-adjusted absolute survival for rectal cancer. Overall estimates and stratified by gender, comorbidity, cancer stage and priority of surgery (2001-2012)

Absolute Survival % (95% CI)	Year	Calendar Period of Rectal Cancer Diagnosis				P-value
		Total Period 2001 <sup>1</sup> -2012	2001 <sup>1</sup> -2004	2005-2008	2009-2012	P
<b>Total</b>	1 year	81 (79 - 82)	78 (75 - 81)	81 (78 - 83)	83 (80 - 85)	0.0000
	5 year	50 (49 - 51)	47 (45 - 49)	53 (51 - 55)	53 (47 - 60)	0.0000
<b>Gender</b>						
Men	1 year	80 (78 - 82)	77 (74 - 81)	80 (77 - 84)	82 (79 - 85)	0.0000
	5 year	48 (46 - 50)	46 (43 - 49)	50 (48 - 53)	52 (44 - 60)	0.0001
Women	1 year	81 (79 - 83)	79 (75 - 83)	81 (78 - 85)	83 (79 - 87)	0.0003
	5 year	53 (51 - 55)	49 (46 - 53)	56 (53 - 59)	56 (45 - 68)	0.0001
<b>Comorbidity Index</b>						
CCI=0 (None)	1 year	82 (81 - 84)	80 (77 - 82)	83 (80 - 86)	85 (82 - 88)	0.0000
	5 year	53 (51 - 54)	49 (47 - 51)	56 (54 - 58)	56 (49 - 64)	0.0000
CCI=1 (Low)	1 year	79 (75 - 84)	75 (66 - 85)	79 (72 - 86)	82 (75 - 89)	0.0026
	5 year	43 (39 - 47)	40 (33 - 47)	45 (40 - 51)	53 (36 - 75)	0.0399
CCI=2 (Medium)	1 year	71 (67 - 76)	64 (55 - 75)	74 (67 - 82)	74 (67 - 80)	0.0000
	5 year	39 (34 - 43)	34 (27 - 42)	41 (36 - 47)	59 (41 - 82)	0.0148
CCI≥3 (High)	1 year	63 (55 - 72)	47 (30 - 72)	62 (49 - 78)	69 (57 - 82)	0.0244
	5 year	27 (20 - 35)	29 (16 - 50)	27 (18 - 38)	72 (32 - 100)	0.3650
<b>Cancer Stage</b>						
Non-metastatic, M0	1 year	92 (90 - 94)	90 (87 - 94)	92 (88 - 95)	93 (90 - 97)	0.0000
	5 year	66 (64 - 68)	63 (60 - 66)	68 (65 - 70)	74 (65 - 84)	0.0083
Metastatic, M1	1 year	55 (53 - 58)	50 (46 - 54)	55 (52 - 60)	58 (54 - 63)	0.0000
	5 year	13 (11 - 14)	10 (8 - 13)	14 (12 - 16)	17 (11 - 25)	0.0000
Unknown, Mx	1 year	69 (65 - 73)	64 (57 - 70)	74 (67 - 82)	71 (64 - 79)	0.0127
	5 year	40 (37 - 44)	34 (29 - 39)	51 (45 - 58)	46 (28 - 73)	0.0068
<b>UICC Cancer Stage</b>						
I	1 year	94 (91 - 98)	93 (86 - 100)	96 (89 - 100)	94 (89 - 100)	0.0197
	5 year	79 (75 - 83)	77 (71 - 83)	80 (75 - 86)	81 (64 - 100)	0.0240
II	1 year	92 (89 - 96)	92 (86 - 98)	91 (86 - 96)	94 (89 - 99)	0.0004
	5 year	69 (66 - 73)	68 (63 - 73)	70 (65 - 75)	73 (58 - 90)	0.0498
III	1 year	89 (86 - 93)	87 (82 - 93)	89 (84 - 95)	91 (86 - 97)	0.0072
	5 year	53 (50 - 56)	49 (45 - 53)	56 (52 - 60)	66 (52 - 84)	0.0001
IV	1 year	55 (53 - 58)	50 (46 - 54)	55 (52 - 60)	58 (54 - 63)	0.0000
	5 year	13 (11 - 14)	10 (8 - 13)	14 (12 - 16)	17 (11 - 25)	0.0083
Unknown	1 year	69 (67 - 72)	64 (59 - 69)	74 (69 - 79)	71 (67 - 76)	0.0127
	5 year	40 (38 - 43)	34 (30 - 38)	51 (47 - 55)	46 (36 - 59)	0.0068

<b>Priority of Surgery</b>						
Elective	1 year	87 (86 - 89)	83 (80 - 86)	88 (85 - 90)	90 (88 - 93)	0.0000
	5 year	57 (55 - 58)	52 (50 - 55)	60 (58 - 62)	64 (57 - 73)	0.0000
Emergency/Acute	1 year	45 (39 - 52)	45 (35 - 58)	40 (30 - 52)	51 (40 - 65)	0.1872
	5 year	17 (13 - 23)	21 (14 - 30)	17 (10 - 25)	67 (27 - 100)	0.4232
No Surgery	1 year	51 (48 - 54)	46 (41 - 52)	52 (48 - 57)	51 (47 - 56)	0.0353
	5 year	15 (13 - 17)	15 (12 - 18)	17 (14 - 19)	18 (11 - 29)	0.0367

<sup>1</sup> The calendar year 2001 includes May-December, both included.

Abbreviations: CCI, Charlson Comorbidity Index; UICC, UICC, Union for International Cancer Control

**Table 4b** 1-year and 5-year age-adjusted relative survival for rectal cancer. Overall estimates and stratified by gender, comorbidity, cancer stage and priority of surgery (2001-2012)

Relative Survival % (95% CI)	Year	Total Period	Calendar Period of Rectal Cancer Diagnosis				P-value
		2001 <sup>1</sup> -2012	2001 <sup>1</sup> -2004	2005-2008	2009-2012	P	
<b>Total</b>	1 year	83 (82 - 85)	81 (78 - 84)	84 (81 - 86)	85 (83 - 88)	0.0000	
	5 year	62 (60 - 64)	59 (56 - 61)	64 (62 - 67)	65 (57 - 73)	0.0000	
<b>Gender</b>							
Men	1 year	83 (81 - 85)	81 (77 - 84)	84 (80 - 87)	85 (82 - 88)	0.0000	
	5 year	61 (59 - 63)	59 (55 - 62)	63 (60 - 66)	64 (55 - 75)	0.0039	
Women	1 year	83 (81 - 86)	81 (77 - 85)	84 (80 - 88)	85 (81 - 89)	0.0004	
	5 year	63 (60 - 65)	59 (55 - 63)	66 (62 - 70)	65 (53 - 79)	0.0000	
<b>Comorbidity Index</b>							
CCI=0 (None)	1 year	85 (83 - 87)	83 (80 - 86)	86 (83 - 89)	87 (84 - 91)	0.0000	
	5 year	65 (63 - 67)	61 (58 - 64)	69 (66 - 72)	68 (59 - 77)	0.0000	
CCI=1 (Low)	1 year	82 (78 - 87)	78 (69 - 88)	82 (75 - 89)	84 (78 - 91)	0.0027	
	5 year	53 (49 - 58)	49 (42 - 58)	55 (49 - 62)	65 (44 - 92)	0.0301	
CCI=2 (Medium)	1 year	74 (69 - 79)	67 (57 - 78)	77 (69 - 85)	76 (69 - 83)	0.0000	
	5 year	48 (42 - 53)	42 (33 - 52)	51 (44 - 58)	72 (50 - 99)	0.0087	
CCI≥3 (High)	1 year	65 (57 - 75)	49 (31 - 75)	64 (50 - 80)	71 (58 - 85)	0.0176	
	5 year	33 (24 - 43)	36 (20 - 62)	33 (22 - 46)	81 (36 - 113)	0.3022	
<b>Cancer Stage</b>							
Non-metastatic, M0	1 year	95 (93 - 97)	94 (90 - 97)	95 (91 - 98)	96 (93 - 100)	0.0000	
	5 year	81 (78 - 83)	78 (74 - 82)	82 (79 - 86)	89 (78 - 101)	0.0000	
Metastatic, M1	1 year	57 (55 - 59)	52 (47 - 56)	57 (53 - 62)	60 (56 - 65)	0.0000	
	5 year	15 (14 - 17)	13 (11 - 16)	18 (15 - 20)	20 (13 - 30)	0.0114	
Unknown, Mx	1 year	72 (68 - 76)	66 (60 - 73)	77 (69 - 85)	74 (67 - 82)	0.0075	
	5 year	50 (46 - 55)	43 (37 - 49)	63 (55 - 71)	57 (34 - 89)	0.0018	
<b>UICC Cancer Stage</b>							
I	1 year	98 (94 - 101)	96 (89 - 104)	99 (93 - 103)	97 (92 - 103)	0.0028	
	5 year	97 (92 - 102)	95 (88 - 104)	98 (91 - 105)	98 (78 - 121)	0.0078	
II	1 year	96 (92 - 99)	95 (89 - 101)	94 (88 - 100)	97 (91 - 102)	0.0000	
	5 year	85 (81 - 89)	84 (78 - 91)	85 (79 - 91)	88 (71 - 109)	0.0758	
III	1 year	92 (89 - 96)	91 (85 - 97)	92 (87 - 98)	94 (89 - 100)	0.0043	
	5 year	65 (62 - 69)	61 (56 - 66)	68 (63 - 73)	80 (62 - 101)	0.0000	
IV	1 year	57 (55 - 59)	52 (47 - 56)	57 (53 - 62)	60 (56 - 65)	0.0000	
	5 year	15 (14 - 17)	13 (11 - 16)	18 (15 - 20)	20 (13 - 30)	0.0114	
Unknown	1 year	72 (69 - 75)	66 (61 - 71)	77 (72 - 82)	74 (69 - 79)	0.0075	
	5 year	50 (47 - 53)	43 (38 - 47)	63 (58 - 68)	57 (44 - 71)	0.0018	

<b>Priority of Surgery</b>						
Elective	1 year	90 (88 - 92)	86 (83 - 89)	91 (88 - 94)	93 (90 - 96)	0.0000
	5 year	70 (68 - 72)	65 (62 - 68)	73 (71 - 76)	78 (69 - 88)	0.0000
Emergency/Acute	1 year	46 (40 - 54)	47 (37 - 60)	41 (31 - 54)	53 (41 - 67)	0.2099
	5 year	22 (16 - 28)	26 (18 - 37)	20 (13 - 31)	71 (29 - 106)	0.3270
No Surgery	1 year	52 (50 - 55)	48 (42 - 54)	54 (49 - 59)	53 (49 - 58)	0.0564
	5 year	18 (16 - 21)	18 (14 - 23)	20 (17 - 24)	22 (13 - 35)	0.0357

<sup>1</sup> The calendar year 2001 includes May-December, both included.

Abbreviations: CCI, Charlson Comorbidity Index; UICC, UICC, Union for International Cancer Control



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## Chapter 4: Ovarian Cancer 1995-2012

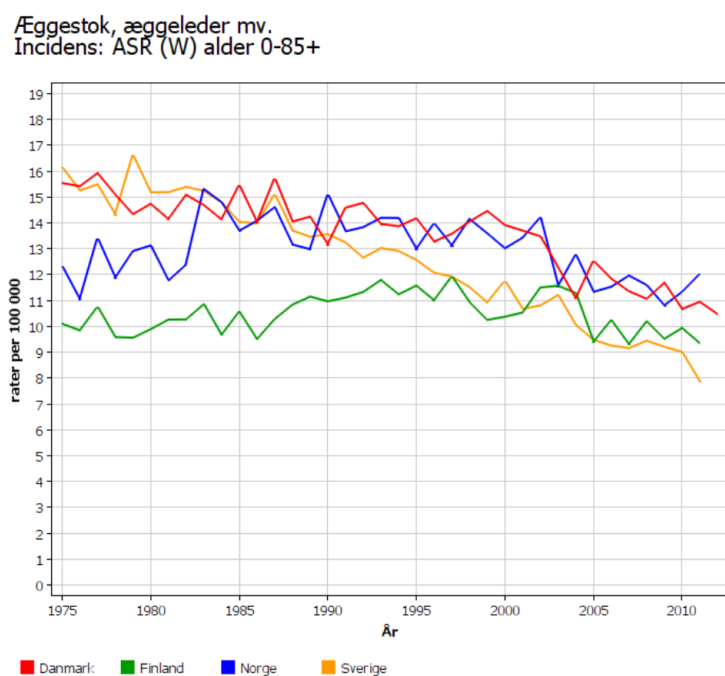
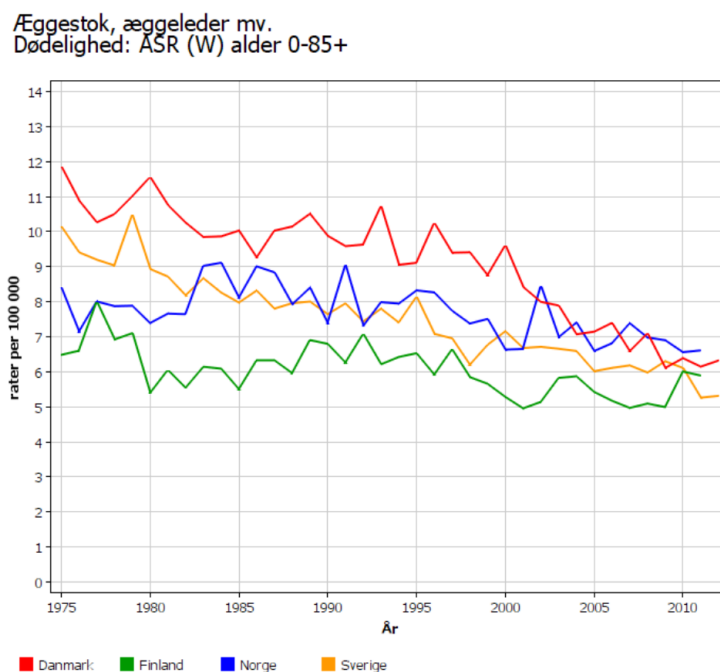
**Danish Multidisciplinary Cancer Groups (DMCG.dk)**  
**Dansk Gynaekological Cancer Group (DGCG)**



**databasernes  
fællessekretariat**  
regionernes kliniske kvalitetsudviklingsprogram

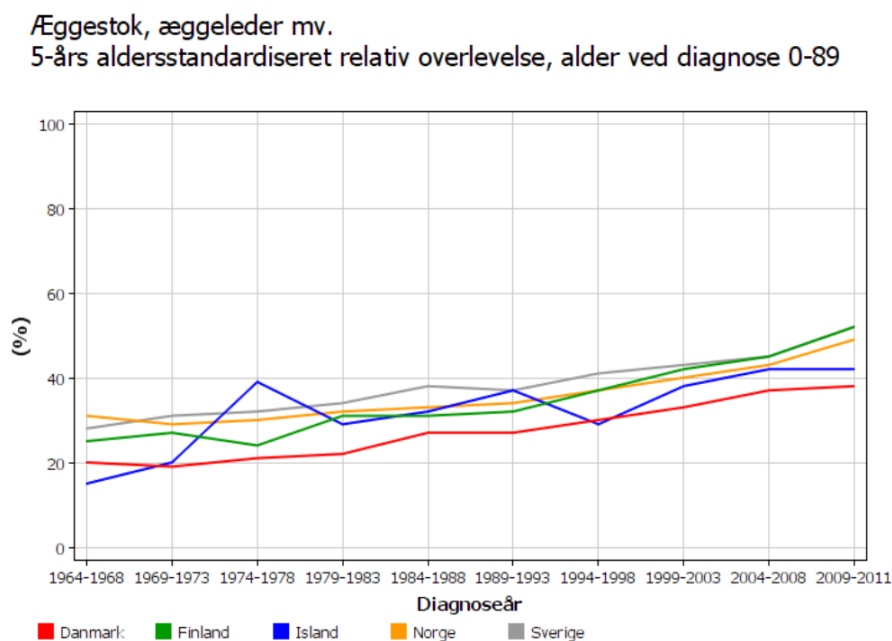
## Chapter 4: Ovarian Cancer

**Figure 1** Age-standardized mortality and incidence from NORDCAN<sup>1</sup>



Reference: Nordcan A. The NORDCAN project.

<http://www-depiarcfr/NORDCAN/English/frameasp 2014>

**Figure 2** 5-year relative survival from NORDCAN

NORDCAN © Association of the Nordic Cancer Registries (21.10.2014)

	Danmark	Finland	Island	Norge	Sverige
1964-1968	20	25	15	31	28
1969-1973	19	27	20	29	31
1974-1978	21	24	39	30	32
1979-1983	22	31	29	32	34
1984-1988	27	31	32	33	38
1989-1993	27	32	37	34	37
1994-1998	30	37	29	37	41
1999-2003	33	42	38	40	43
2004-2008	37	45	42	43	45
2009-2011	38	52	42	49	52

NORDCAN © 2009-2010 Association of the Nordic Cancer Registries - Alle rettigheder re

Reference: Nordcan A. The NORDCAN project.

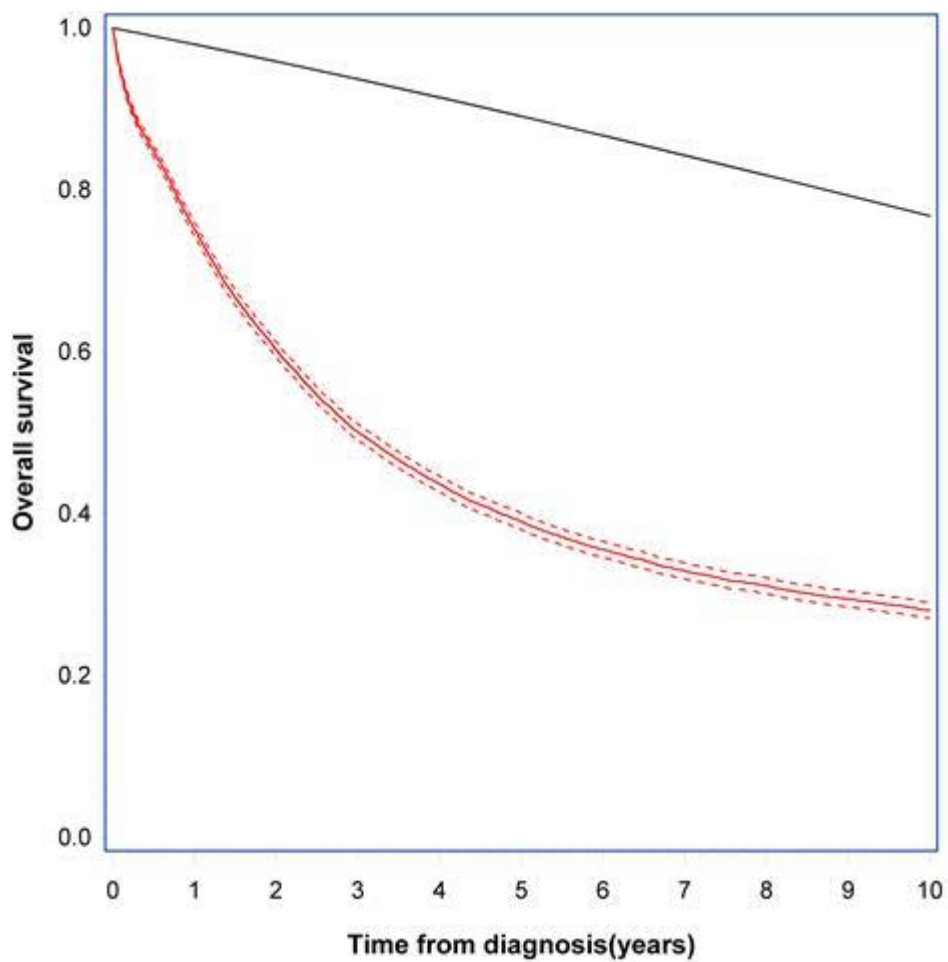
[http://www-depiarcfr/NORDCAN/English/frameasp\\_2014](http://www-depiarcfr/NORDCAN/English/frameasp_2014)

**Figure 3** Overview of ovarian cancer and borderline tumor – changes in diagnosis 1971-2007

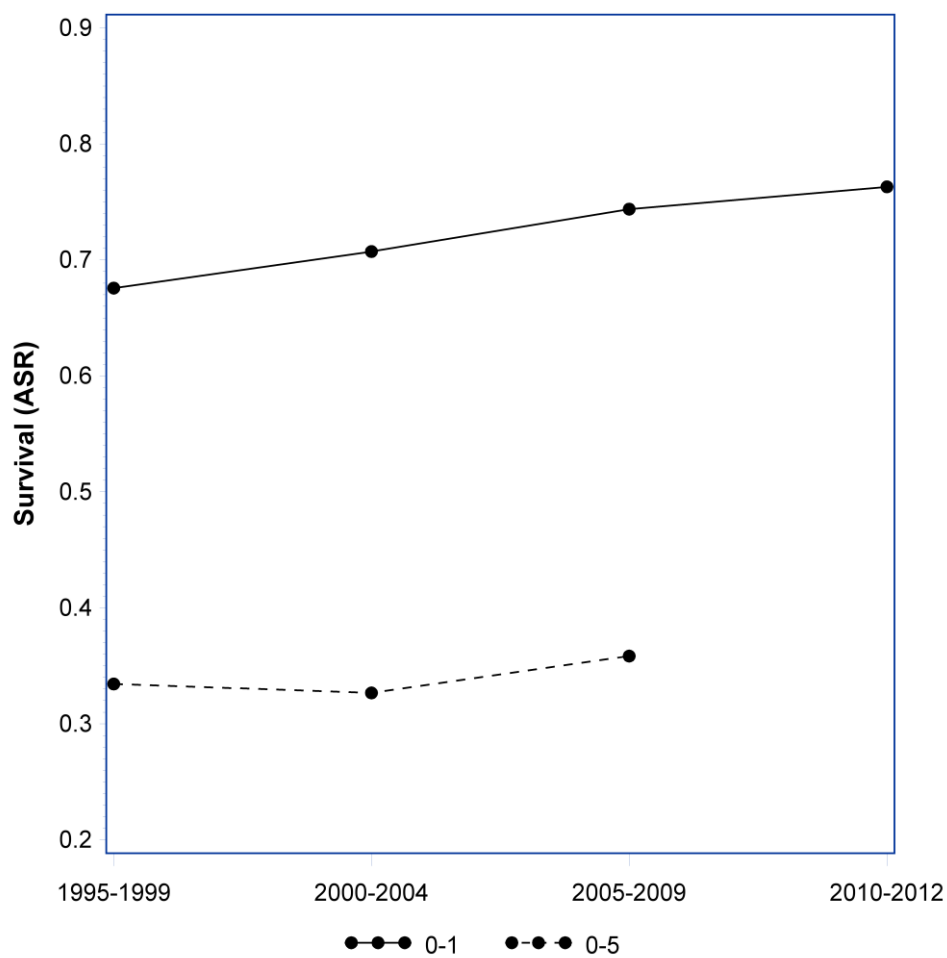
	International Classification of Diseases. Eighth Revision (ICD-8)			The ICD-10 Classification of Mental and Behavioural Disorders (ICD-10)				
	1.4.1971- 31.12.1993	1.1.1987- 31.12.1993	31.12.1993	1.1.1994- 31.12.2005	31.5.1995- 31.12.2005	1.1.2001- 30.6.2005	1.7.2005- 31.3.2007	1.4.2007-
<i>Kodetekster</i>								
Neoplasma malignum ovarii aliud definitum . . . . .		18308						
Neoplasma malignum ovarii uden specifikation . . . . .	18309			DC56	DC569 <sup>a</sup>			
Neoplasma malignum ovarii, tubaeuterinae et ligamentalati, pars non specificatum . . . . .	18399							
Neoplasma malignum ovarii, stadium 1 . . . . .		18300		DC560				
Neoplasma malignum ovarii, stadium 2 . . . . .		18301		DC561				
Neoplasma malignum ovarii, stadium 3 . . . . .		18302		DC562				
Neoplasma malignum ovarii, stadium 4 . . . . .		18303		DC563				
<i>Borderline-kodetekster</i>								
Neoplasma non specificatum ovariorum ( <i>borderline</i> ) . . . . .			23.599					
Ovarietumor af <i>borderline</i> -type . .						DD391A		DD391A
Neoplasma malignum ovarii uden specifikation + <i>borderline</i> - morfologi . . . . .							DC569 + ZM99990 eller ZM8xxx1	

Reference: Petri A.L., Hogdall C. and Lidegaard O. (2009). *Ugeskrift for Læger* 171, 408-411

**Figure 4** Expected survival and observed survival with 95% confidence limits (CI. Kaplan-Meier estimates of overall (absolute) survival.



Expected survival = black line ———— Observed = red line ————,  
95% CI = red dotted lines ..... ,

**Figure 5** Age-standardized relative 1-year and 5-year survival

## Tables: Ovarian Cancer

**Table 1** Distribution of ovarian cancer by age group, comorbidity and cancer stage (1995-2012)

	Total Period	Calendar Period of Ovarian Cancer Diagnosis			
	N	N			
	1995-2012	1995-1999	2000-2004	2005-2009	2010-2012
<b>Total</b>	9972	2678	2906	2779	1609
Median age	64	62	62	64	66
(min-max years)	(16-103)	(16-94)	(16-103)	(17-94)	(16-99)
<b>Age Group</b>					
<45 years	886	285	270	211	120
45-54 years	1851	598	572	443	238
55-64 years	2605	624	788	794	399
65-74 years	2733	694	738	799	502
≥75 years	1897	477	538	532	350
<b>Comorbidity Index</b>					
CCI=0 (None)	7669	2229	2226	2050	1164
CCI=1 (Low)	869	184	259	297	129
CCI=2 (Medium)	1025	217	301	300	207
CCI≥3 (High)	409	48	120	132	109
<b>FIGO Cancer Stage</b>					
I	2183	632	576	656	319
II	755	217	201	215	122
III	3906	896	1136	1186	688
IV	1570	354	426	473	317
Unknown	1558	579	567	249	163

Abbreviations: CCI, Charlson Comorbidity Index, FIGO, International Federation of Gynecology and Obstetrics

**Table 2** 1-year and 5-year age-adjusted mortality rate for ovarian cancer. Overall estimates and stratified by age group, comorbidity and cancer stage (1995-2012)

Mortality Rate, per 100 Patient-Year (95% CI)	Calendar Period of Ovarian Cancer Diagnosis												
	1995-1999			2000-2004			2005-2009			2010-2012			
	Year	Rate	Upper 95% CI	Lower 95% CI	Rate	Upper 95% CI	Lower 95% CI	Rate	Upper 95% CI	Lower 95% CI	Rate	Upper 95% CI	Lower 95% CI
<b>Total</b>	0-1 year	42.84	40.29	45.55	37.97	35.72	40.38	31.91	29.89	34.07	28.26	25.88	30.87
	0-5 year	28.24	27.03	29.51	27.95	26.82	29.12	23.94	22.95	24.97	.	.	.
<b>Age Group</b>													
	<45 years												
	0-1 year	15.15	13.19	17.40	14.86	12.87	17.17	8.41	6.80	10.40	7.76	5.79	10.39
	0-5 year	9.15	8.39	9.98	8.27	7.53	9.08	6.06	5.38	6.83	.	.	.
	45-54 years												
	0-1 year	13.99	12.67	15.45	17.26	15.74	18.92	11.56	10.19	13.12	10.22	8.51	12.27
	0-5 year	14.25	13.54	15.00	14.51	13.78	15.28	11.97	11.25	12.74	.	.	.
	55-64 years												
	0-1 year	25.69	23.86	27.66	20.53	19.09	22.09	20.77	19.33	22.32	18.09	16.24	20.15
	0-5 year	20.62	19.72	21.57	19.41	18.64	20.21	18.53	17.80	19.30	.	.	.
	65-74 years												
	0-1 year	41.05	38.75	43.48	35.41	33.35	37.60	28.93	27.17	30.80	26.49	24.42	28.73
	0-5 year	27.07	26.01	28.18	27.14	26.12	28.21	22.63	21.77	23.52	.	.	.
	≥75 years												
	0-1 year	82.18	77.82	86.79	73.65	69.83	77.69	58.82	55.49	62.35	46.76	43.26	50.54
	0-5 year	47.85	45.78	50.02	47.26	45.35	49.26	38.14	36.55	39.80	.	.	.
<b>Comorbidity Index</b>													
	CCI=0 (None)												
	0-1 year	39.13	36.47	41.98	32.58	30.21	35.15	25.29	23.22	27.55	21.13	18.77	23.81
	0-5 year	26.74	25.45	28.09	25.52	24.30	26.80	20.83	19.79	21.93	.	.	.
	CCI=1 (Low)												
	0-1 year	61.60	51.17	74.36	51.60	43.87	60.83	42.16	35.97	49.56	34.29	26.76	44.35
	0-5 year	33.23	28.76	38.43	34.78	30.89	39.18	29.75	26.62	33.27	.	.	.



CCI=2 (Medium)	0-1 year	54.56	44.88	66.45	51.93	43.99	61.40	51.86	44.04	61.13	43.80	35.69	53.90
	0-5 year	36.21	31.33	41.87	33.60	29.78	37.93	36.28	32.25	40.83	.	.	.
CCI≥3 (High)	0-1 year	95.52	70.22	130.53	77.88	62.66	97.08	73.52	59.94	90.33	77.00	61.85	96.21
	0-5 year	56.60	43.71	73.38	49.78	41.93	59.18	43.25	36.73	51.01	.	.	.
<b>FIGO Cancer Stage</b>													
I	0-1 year	9.49	7.32	12.36	10.58	8.30	13.60	8.53	6.69	10.96	8.45	5.89	12.25
	0-5 year	7.79	6.73	9.01	7.97	6.88	9.23	5.89	5.08	6.83	.	.	.
II	0-1 year	26.93	20.78	35.14	14.20	9.99	20.45	14.34	10.41	20.06	17.16	11.61	25.61
	0-5 year	20.45	17.14	24.40	13.70	11.28	16.66	13.35	11.13	16.03	.	.	.
III	0-1 year	39.10	35.09	43.59	36.54	33.19	40.25	31.30	28.43	34.50	22.90	19.86	26.45
	0-5 year	38.54	35.95	41.32	35.85	33.76	38.07	31.73	29.97	33.59	.	.	.
IV	0-1 year	91.26	80.78	103.19	70.13	61.94	79.47	57.69	50.96	65.37	41.87	35.53	49.46
	0-5 year	69.42	62.86	76.67	51.90	47.29	56.97	45.95	42.12	50.14	.	.	.
Unknown	0-1 year	67.56	60.68	75.25	60.19	53.56	67.68	91.80	78.52	107.41	97.60	82.05	116.25
	0-5 year	33.04	30.29	36.03	34.13	31.19	37.35	41.10	35.87	47.11	.	.	.

Abbreviations: CCI, Charlson Comorbidity Index; CI, confidence interval; FIGO, International Federation of Gynecology and Obstetrics

**Table 3a** 1-year and 5-year age-adjusted absolute survival for ovarian cancer. Overall estimates and stratified by age group, comorbidity and cancer stage (2001-2012)

Absolute Survival % (95% CI)	Calendar Period of Ovarian Cancer Diagnosis												
	1995-1999			2000-2004			2005-2009			2010-2012			
	Year	Survival %	Upper 95% CI	Lower 95% CI	Survival %	Upper 95% CI	Lower 95% CI	Survival %	Upper 95% CI	Lower 95% CI	Survival %	Upper 95% CI	Lower 95% CI
<b>Total</b>	1 year	68	66	69	71	69	72	74	73	76	76	74	78
	5 year	33	32	35	33	31	34	36	34	38	.	.	.
<b>Age Group</b>													
<45 years	1 year	86	81	90	86	82	90	92	87	95	93	86	96
	5 year	64	58	69	67	61	73	74	68	80	.	.	.
45-54 years	1 year	87	84	89	84	81	87	89	86	92	90	86	93
	5 year	51	47	55	50	46	54	55	50	60	.	.	.
55-64 years	1 year	77	74	80	82	79	84	81	78	84	83	79	87
	5 year	39	35	43	40	37	43	41	37	44	.	.	.
65-74 years	1 year	67	63	70	71	68	74	76	72	78	77	73	80
	5 year	31	27	34	30	26	33	35	32	39	.	.	.
≥75 years	1 year	46	41	50	50	46	54	58	53	62	64	58	69
	5 year	18	15	21	17	14	20	21	17	24	.	.	.
<b>Comorbidity Index</b>													
CCI=0 (None)	1 year	70	68	72	74	72	76	79	77	81	82	79	84
	5 year	35	33	37	35	33	37	39	37	42	.	.	.
CCI=1 (Low)	1 year	56	49	63	64	58	70	69	63	74	72	63	79
	5 year	29	22	36	28	22	33	29	24	35	.	.	.

CCI=2 (Medium)	1 year	61	54	68	63	57	69	63	57	68	67	59	73
	5 year	26	20	32	29	24	34	26	21	32	.	.	.
CCI≥3 (High)	1 year	44	29	57	50	41	59	52	43	60	48	38	57
	5 year	17	08	29	16	10	23	23	16	30	.	.	.
<b>FIGO Cancer Stage</b>													
I	1 year	91	88	93	90	87	93	92	90	94	92	88	95
	5 year	70	66	74	70	66	74	76	73	80	.	.	.
II	1 year	79	72	84	88	82	92	87	82	91	85	77	90
	5 year	46	39	52	54	47	61	57	49	63	.	.	.
III	1 year	69	66	72	71	68	74	75	72	77	80	76	83
	5 year	20	17	22	22	19	24	23	20	25	.	.	.
IV	1 year	45	39	50	57	52	61	60	55	64	68	63	73
	5 year	11	08	15	14	11	18	14	11	18	.	.	.
Unknown	1 year	55	50	59	58	54	62	48	42	55	44	36	52
	5 year	31	27	34	30	26	34	.	.	.	.	.	.

Abbreviations: CCI, Charlson Comorbidity Index; CI, confidence interval; FIGO, International Federation of Gynecology and Obstetrics

**Table 3b** 1-year and 5-year age-adjusted absolute survival for ovarian cancer by entry year

Entry Year	Total	Number Failed	Number Censored	1-year Survival			5-year Survival		
					Lower 95% CI	Upper 95% CI		Lower 95% CI	Upper 95% CI
1995	519	404	115	0.744	0.704	0.779	0.407	0.364	0.448
1996	513	407	106	0.702	0.660	0.739	0.398	0.355	0.440
1997	512	413	99	0.715	0.674	0.752	0.369	0.327	0.411
1998	535	425	110	0.697	0.656	0.734	0.378	0.337	0.419
1999	599	472	127	0.743	0.706	0.776	0.374	0.335	0.413
2000	605	454	151	0.727	0.690	0.761	0.395	0.356	0.434
2001	573	441	132	0.766	0.729	0.799	0.372	0.332	0.411
2002	618	477	141	0.728	0.691	0.761	0.350	0.312	0.387
2003	580	422	158	0.759	0.722	0.791	0.378	0.338	0.417
2004	530	392	138	0.719	0.679	0.755	0.383	0.342	0.424
2005	575	404	171	0.765	0.728	0.798	0.374	0.334	0.413
2006	544	380	164	0.783	0.746	0.815	0.399	0.358	0.440
2007	570	382	188	0.746	0.708	0.779	0.404	0.363	0.444
2008	535	342	193	0.778	0.740	0.810	0.400	0.358	0.441
2009	555	311	244	0.789	0.753	0.821	0.434	0.391	0.476
2010	537	297	240	0.782	0.745	0.815	.	.	.
2011	534	246	288	0.790	0.753	0.822	.	.	.
2012	538	191	347	0.792	0.755	0.824	.	.	.

Abbreviation: CI, confidence interval

**Table 4** 1-year and 5-year age-adjusted relative survival for ovarian cancer. Overall estimates and stratified by age group, comorbidity and cancer stage (1995-2012)

Relative Survival % (95% CI)	Year	Calendar Period of Ovarian Cancer Diagnosis											
		1995-1999			2000-2004			2005-2009			2010-2012		
		Relative survival	Upper 95% CI	Lower 95% CI	Relative survival	Upper 95% CI	Lower 95% CI	Relative survival	Upper 95% CI	Lower 95% CI	Relative survival	Upper 95% CI	Lower 95% CI
<b>Total</b>	1 year	69	67	71	72	70	74	76	74	78	78	76	80
	5 year	34	32	36	33	32	35	37	35	38	.	.	.
<b>Age Group</b>													
<45 years	1 year	86	81	90	86	82	90	92	87	95	93	86	96
	5 year	64	58	70	67	62	73	74	68	80	.	.	.
45-54 years	1 year	87	84	90	84	81	87	89	86	92	91	86	94
	5 year	51	47	55	50	46	54	55	51	60	.	.	.
55-64 years	1 year	78	75	81	82	79	85	82	79	85	84	80	87
	5 year	40	36	43	40	37	44	41	38	44	.	.	.
65-74 years	1 year	68	65	72	73	69	76	77	74	80	78	74	82
	5 year	32	28	35	30	27	34	36	33	39	.	.	.
≥75 years	1 year	49	44	54	53	49	58	61	57	66	68	62	73
	5 year	19	16	23	18	14	21	22	18	26	.	.	.
<b>Comorbidity Index</b>													
CCI=0 (None)	1 year	71	69	73	75	73	77	80	78	82	83	81	85
	5 year	36	34	38	36	33	38	40	38	42	.	.	.
CCI=1(Low)	1 year	58	50	65	66	60	72	71	65	76	74	65	81
	5 year	30	23	37	29	23	34	30	25	36	.	.	.

CCI=2 (Medium)	1 year	63	55	69	65	59	70	64	58	70	68	61	74
	5 year	27	21	33	29	24	35	27	22	32	.	.	.
CCI≥3 (High)	1 year	45	30	59	52	42	61	53	44	62	49	39	59
	5 year	18	08	30	16	10	24	23	16	31	.	.	.
<b>FIGO Cancer Stage</b>													
I	1 year	93	90	95	92	89	94	94	91	96	94	90	96
	5 year	72	67	75	71	67	75	77	74	81	.	.	.
II	1 year	81	74	86	89	84	93	89	83	93	87	79	93
	5 year	47	39	53	55	48	62	58	51	65	.	.	.
III	1 year	71	67	74	72	70	75	76	73	79	81	78	84
	5 year	20	17	23	22	20	25	23	21	26	.	.	.
IV	1 year	46	40	51	58	53	63	61	56	65	70	64	75
	5 year	12	08	15	14	11	18	14	11	18	.	.	.
Unknown	1 year	56	52	60	60	55	64	49	43	56	45	37	53
	5 year	31	27	35	30	26	34	.	.	.	.	.	.

Abbreviations: CCI, Charlson Comorbidity Index; CI, confidence interval; FIGO, International Federation of Gynecology and Obstetrics

**End of Report**

