

## Carcinoma of the Corpus Uteri

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### STAGING

#### Anatomy

##### Primary site

The upper two-thirds of the uterus above the level of the internal cervical os is called the corpus. The Fallopian tubes enter at the upper lateral corners of a pear-shaped body. The portion of the muscular organ that is above a line joining the tubouterine orifices is often referred to as the fundus.

##### Nodal stations

The major lymphatic trunks are the utero-ovarian (infundibulo-pelvic), parametrial and presacral, which drain into the hypogastric, external iliac, common iliac, pre-sacral and para-aortic nodes.

##### Metastatic sites

The vagina and lungs are the common metastatic sites.

#### Rules for classification

The FIGO Committee on Gynecologic Oncology, following its meeting in 1988, recommended that endometrial cancer be surgically staged. There should be histologic verification of grading and extent of the tumor.

#### Staging classification

##### Notes about the staging

##### Histopathology – degree of differentiation:

Cases of carcinoma of the corpus should be grouped

with regard to the degree of differentiation of the adenocarcinoma as follows:

- G1:  $\leq 5\%$  of a nonsquamous or nonmorular solid growth pattern
- G2: 6–50% of a nonsquamous or nonmorular solid growth pattern
- G3:  $>50\%$  of a nonsquamous or nonmorular solid growth pattern

##### Notes on pathologic grading:

- Notable nuclear atypia, inappropriate for the architectural grade, raises the grade of a Grade 1 or Grade 2 tumor by 1.
- In serous and clear cell adenocarcinomas, nuclear grading takes precedent.
- Adenocarcinomas with squamous differentiation are graded according to the nuclear grade of the glandular component.

##### Rules related to staging:

- Corpus cancer is now surgically staged, therefore procedures previously used for determination of stages are no longer applicable (e.g. the findings of fractional curettage to differentiate between Stage I and Stage II).
- It is appreciated that there may be a small number of patients with corpus cancer who will be treated primarily with radiation therapy. In these cases, the clinical staging adopted by FIGO in 1971 would still apply, but designation of that staging system would be noted.
- Ideally, width of the myometrium should be measured along with the depth of tumor invasion.

Table 1

Carcinoma of the corpus uteri: **Surgical staging classification** (FIGO nomenclature, Rio de Janeiro, 1988)

Stage Ia*	Tumor limited to the endometrium
Stage Ib*	Invasion to less than half of the myometrium
Stage Ic*	Invasion equal to or more than half of the myometrium
Stage IIa*	Endocervical glandular involvement only
Stage IIb*	Cervical stromal invasion
Stage IIIa*	Tumor invades the serosa of the corpus uteri and/or adnexae and/or positive cytological findings
Stage IIIb*	Vaginal metastases
Stage IIIc*	Metastases to pelvic and/or para-aortic lymph nodes
Stage IVa*	Tumor invasion of bladder and/or bowel mucosa
Stage IVb*	Distant metastases, including intra-abdominal metastasis and/or inguinal lymph nodes

\* Either G1, G2 or G3. See section on Rules for classification.

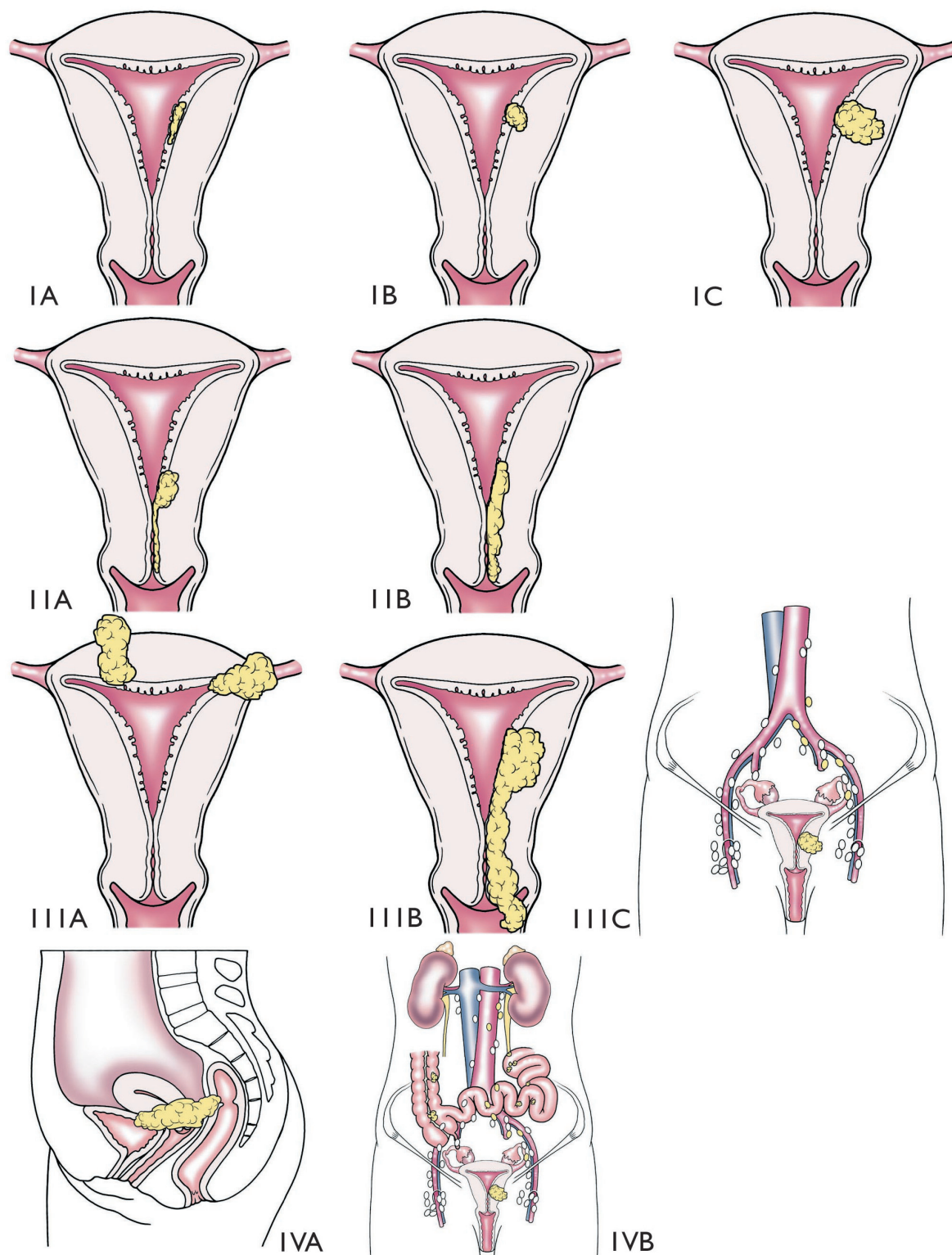


Fig. 1. Carcinoma of the corpus uteri. Staging uterine cancer. Primary tumor and metastases (FIGO).

Table 2  
Carcinoma of the corpus uteri: Stage grouping for corpus uteri

FIGO stage	UICC		
	T	N	M
0	Tis	N0	M0
Ia	T1a	N0	M0
Ib	T1b	N0	M0
Ic	T1c	N0	M0
IIa	T2a	N0	M0
IIb	T2b	N0	M0
IIIa	T3a	N0	M0
IIIb	T3b	N0	M0
IIIc	T1	N1	M0
	T2	N1	M0
	T3a	N1	M0
	T3b	N1	M0
IVa	T4	any N	M0
IVb	any T	any N	M1

**Histopathology (according to WHO/ISGP<sup>1</sup> classification)**

All tumors are to be microscopically verified. The histopathologic types are:

- Endometrioid carcinoma
  - Adenocarcinoma
  - Adenoacanthoma (adenocarcinoma with squamous metaplasia)
  - Adenosquamous carcinoma (mixed adenocarcinoma and squamous cell carcinoma)
- Mucinous adenocarcinoma
- Papillary serous adenocarcinoma
- Clear cell adenocarcinoma
- Adenosquamous carcinoma

- Undifferentiated carcinoma
- Mixed carcinoma

*Histopathologic grade (G)*

- GX: Grade cannot be assessed
- G1: Well differentiated
- G2: Moderately differentiated
- G3: Poorly or undifferentiated

**DEFINITIONS OF TREATMENTS**

Treatment definitions are given in Table 4.

**DATA ANALYSIS**

**Summary and comments**

The 25<sup>th</sup> Volume of the Annual Report (AR) noted a total of 8790 patients with corpus cancer submitted for analysis. This is a substantial increase over the last two volumes as the number of reporting institutions have also increased. The reported data note that the continued acceptance of the 1988 FIGO staging has changed reporting from clinical to surgical staging. Volume 21 was the first Annual Report after the staging change and only 43% were surgically staged compared with 92% for this year (5% clinically staged and 2% with missing data). It is appreciated that a small number of patients may not be completely staged due to obesity or comorbidities, but that number is very small considering the patient population normally seen with this malignancy. As previously documented, most (72%) patients with endometrial cancer have Stage I disease when surgically staged compared with only 59% clinically staged (Fig. 2). Because the number of patients

Table 3  
Carcinoma of the corpus uteri: **Clinical staging classification (1971) (no longer adopted for FIGO classification)**

Stage 0	Atypical endometrial hyperplasia. Carcinoma <i>in situ</i>
Stage Ia	The carcinoma is confined to the corpus and the length of the uterine cavity is ≤8 cm
Stage Ib	The carcinoma is confined to the corpus and the length of the uterine cavity is >8 cm
Stage II	The carcinoma has involved the corpus and the cervix, but has not extended outside the uterus
Stage III	The carcinoma has extended outside the uterus, but not outside the true pelvis
Stage IVa	The carcinoma has extended outside the uterus and involves the mucosa of the bladder or rectum (a bullous edema as such does not permit the case to be allotted to Stage IV)
Stage IVb	The carcinoma has extended outside the true pelvis and spreads to distant organs

<sup>1</sup> ISGP, International Society of Gynecological Pathology

Table 4  
Carcinoma of the corpus uteri: Definitions of treatments

Treatment	Definition
None	No treatment
Surgery alone	Surgery as first therapy and no other therapy(ies) within 90 days from the date of surgery. Subsequently, patients can be given any further treatment.
Radiotherapy alone	External radiotherapy and/or intracavitary irradiation as first therapy(ies) and no other therapy(ies) within 90 days from the end of teletherapy/brachytherapy. Subsequently, patients can be given any further treatment.
Radio-surgery	Intracavitary irradiation and/or external radiotherapy as first therapy(ies) and then surgery within 60 days from the end of brachytherapy/teletherapy. Subsequently, patients can be given any further treatment.
Surgery + adjuvant radiotherapy	Surgery as first therapy and then external radiotherapy and/or intracavitary irradiation within 90 days from the date of surgery. Subsequently, patients can be given any further treatment.
Surgery + adjuvant chemotherapy	Surgery as first therapy and then chemotherapy within 90 days from the date of surgery.
Adjuvant hormonal therapy	Surgery or radiotherapy or chemo-radiotherapy as first therapy and then hormonal therapy within 90 days from the end of surgery/radiotherapy/chemo-radiotherapy. Subsequently, patients can be given any further treatment.

with clinical staging is very small, further references will mainly refer to those who were surgically staged.

Multiple factors are again appreciated to be important prognostically. Age increases with stage. Those patients clinically staged were considerably older than those surgically staged which may explain the reason for clinical staging only in the older population. This almost decade difference in age per stage is also present in the data from Volume 24.

Grade, and in particular myometrial invasion, appeared to be related to stage as these prognostic factors increase with age (Tables 12 and 14). Whether or not this is a time sequence in progression of disease or just a later age occurrence is unknown.

Endometrioid carcinoma histotype is present in 85% of patients reported (Table 17). Poor prognostic cell types (papillary and clear cell) represent only 6% of surgically staged patients, although the 501 reported cases probably represent the largest reported number of these histotypes. Of all endometrioid types, 86% are early stage (I or II) compared with 57% for papillary and 70% with clear cell types.

Age has been appreciated as an important prognostic factor. Younger patients at each stage have a considerably better prognosis than those who are older with the greatest difference in those who are 80 years of age or older (Table 18). The one exception is Stage IV in which the numbers are small, but even there an age difference is present.

In regards to treatment, the data suggest that as stage increases adjunctive therapy in addition to surgery is used (Tables 19, 20). It is interesting to note that

the use of postoperative radiation and chemotherapy remains relatively constant between data from Volumes 24 and 25. Whether or not this will remain the same subsequently, in view of the recent GOG data which note that chemotherapy appears to be more effective than radiation therapy, remains to be seen.

Since the classic surgical staging studies done in the 1970s and 1980s, lymph node metastasis has been a major factor in staging and subsequent treatment in patients with endometrial cancer. Nodal metastasis both to the pelvic and para-aortic area are related to depth of the invasion and grade. Volume 25 data suggests that those patients with early disease (G1 endometrium only) may have metastasis to the pelvic nodes in 3.5% of cases where previous reports suggested it may be essentially zero. As grade and depth of invasion increases, the chance of pelvic and para-aortic node metastasis also increases in a linear fashion (3.4% for G1, endometrium only, to 28% in G3 deep muscle invasion) for pelvic nodes and a similar situation with para-aortic nodes but to a lesser degree (Tables 22–26).

Survival is obviously stage related. This is true even within a given stage (Fig. 7) as those with Stage Ia have a 91% 5-year survival compared with 81% for Stage Ic. The importance of surgical staging is again noted in comparison with clinical staging (Fig. 8). Stage I patients had a 5-year survival of 88% compared with only 51% of those clinically staged. This strongly suggests that those who are clinically staged have occult disease not appreciated clinically. Well known data suggests that about 25% of clinical Stage I patients have disease extant to the uterus. This is also true for a grade within a given

Table 5  
Carcinoma of the corpus uteri: patients treated in 1996–98. Distribution of patients by center and stage

		All	Not available	Stage I	Stage II	Stage III	Stage IV
All centres		8790	707	5823	963	1068	229
South Africa	Pretoria (G Lindeque)	36	4	22	4	5	1
Argentina	Buenos Aires (R Testa)	33	–	19	8	5	1
	Neuquén (GH Focaccia)	9	–	7	1	1	–
	Santa Fe (A Ellena)	8	–	2	1	3	2
Brazil	Porto Alegre (G Py Gomez da Silveira)	14	1	10	3	–	–
Canada	Montreal (GW Stanimir)	6	1	4	–	1	–
Chile	Santiago (E Suarez)	34	–	22	5	6	1
	Temuco (I Capurro)	16	1	6	4	5	–
Peru	Arequipa (L Medina Fernandez)	5	–	1	3	–	1
USA	Baltimore MA (F Montz, RE Bristow)	78	7	45	6	12	8
	Columbus OH (J Fowler)	181	1	119	20	28	13
	Jacksonville FL (BU Sevin)	55	–	38	4	10	3
	Nashville TN (HW Jones)	102	2	60	17	15	8
	New York NY (R Barakat)	177	123	40	5	6	3
	Orange CA (PJ DiSaia)	53	5	31	3	8	6
Uruguay	Montevideo (G Arribeltz)	8	2	3	2	1	–
China	Hong Kong (HYS Ngan)	126	2	87	17	14	6
	Hong Kong (VSY Yu)	35	1	22	5	7	–
India	Bangalore (KU Devi)	10	1	6	1	1	1
Indonesia	Medan (M Fauzie Sahil)	8	2	4	2	–	–
Israel	Holon (J Menczer)	51	19	28	–	4	–
Japan	Kumamoto (H Okamura)	57	–	38	6	12	1
	Nagasaki (T Ishimaru)	39	4	19	3	9	4
	Osaka (A Suzuki)	89	–	56	16	16	1
	Tokyo (K Kinoshita)	51	1	39	4	7	–
	Sagamihara (H Kuramoto)	113	–	69	8	33	3
Korea	Seoul (HP Lee)	54	2	43	2	4	3
	Seoul (JE Mok)	53	3	36	6	7	1
Philippines	Manila (IB Benitez)	33	–	24	2	5	2
	Manila (AM Manalo)	103	11	45	13	34	–
Thailand	Bangkok (V Linasmita)	77	2	43	13	16	3
	Songkhla (V Wootipoom)	79	6	42	10	14	7
Austria	Graz (R Winter)	120	3	87	10	13	7
	Innsbruck (C Marth)	165	9	121	10	18	7
Croatia	Zagreb (S Jukić)	183	3	135	20	17	8
Czech Republic	Brno (A Dörr)	230	29	154	28	18	1
	Prague (E Kmonícková)	232	16	160	28	24	4
Finland	Jyväskylä (H Sundström)	70	3	49	7	8	3
	Turku (T Salmi)	204	3	156	21	13	11

*continued on next page*

Table 5, *continued*

		All	Not available	Stage I	Stage II	Stage III	Stage IV
France	Bordeaux (ML Campo)	41	3	34	1	3	–
	Grenoble (P Bernard)	17	–	10	3	4	–
	Lille (E Leblanc)	51	12	17	11	7	4
	Rennes (JF Laurent)	107	9	64	9	17	8
Germany	Berlin (W Lichtenegger)	116	7	78	10	18	3
	Hannover (H Kühnle)	135	3	96	16	19	1
	Jena (A Schneider)	71	3	51	7	9	1
	Kiel (D Weisner)	80	–	54	3	18	5
	Würzburg (J Dietl)	109	11	70	14	13	1
Greece	Athens (S Michalas)	119	3	87	5	22	2
Italy	Brescia (S Pecorelli)	99	–	73	10	9	7
	Genova (N Ragni)	33	–	27	5	1	–
	Trento (E Arisi)	23	1	14	2	4	2
Poland	Kraków (K Urbanski)	287	18	143	58	68	–
	Łódź (J Sobotkowski)	453	19	309	59	62	4
	Wrocław (J Kornafel, J Błaszczyk)	442	47	290	68	35	2
Portugal	Coimbra (C Freire de Oliveira)	81	2	46	16	14	3
	Coimbra (D Pereira da Silva)	75	5	51	8	8	3
	Coimbra (O Campos)	108	24	48	17	18	1
	Porto (MT Osorio)	187	1	130	18	34	4
Slovakia	Bratislava (J Kállay)	122	8	79	19	13	3
Slovenia	Ljubljana (M Primic Žakelj)	445	65	298	52	25	5
	Maribor (I Takač)	88	6	65	5	5	7
Spain	Barcelona (S Dexeus)	58	2	44	2	10	–
	Barcelona (J Pahisa Fábregas)	74	1	47	9	14	3
	Barcelona (A Gil Moreno)	156	1	84	40	29	2
	Cruces-Baracaldo (FJ Rodríguez Escudero)	99	11	67	11	10	–
	Las Palmas de Gran Canaria (O Falcón Vizcaino)	166	6	103	32	24	1
	Madrid (F Calero Cuerda)	126	14	87	15	10	–
	Madrid (P de La Fuente)	93	–	78	9	4	2
	Madrid (JA Vidart)	45	3	31	3	8	–
Sweden	Gothenburg (G Horvath)	654	36	491	54	59	14
	Örebro (B Sorbe)	390	36	289	23	28	14
	Umeå (K Boman)	333	57	240	17	15	4
Switzerland	Basel (W Holzgreve)	5	–	4	1	–	–
Yugoslavia	Niš (Z Stanojević)	168	12	137	9	10	–
Australia	Carlton (M Quinn)	137	14	95	4	21	3

Table 6  
Carcinoma of the corpus uteri: patients treated in 1996–98. Distribution of patients (%) by country and treatment (Stage I), *n* = 5823

Country	Number of patients	First line of treatment (%)							
		None	Surgery alone	RT alone	Radio-surgery	Surg + adj RT	Surg + adj CT	Adj horm	Other non-standard
All	5823	0	42	1	1	53	2	0	0
South Africa	22	–	77	–	–	23	–	–	–
Argentina	28	–	75	–	–	25	–	–	–
Brazil	10	–	50	–	–	50	–	–	–
Canada	4	–	75	–	–	25	–	–	–
Chile	28	–	21	–	–	79	–	–	–
Peru	1	–	100	–	–	–	–	–	–
USA	333	–	75	1	1	18	3	2	0
Uruguay	3	–	100	–	–	–	–	–	–
China	109	–	72	–	–	17	10	1	–
India	6	–	17	–	–	83	–	–	–
Indonesia	4	–	25	–	–	25	50	–	–
Israel	28	–	68	–	–	32	–	–	–
Japan	221	–	76	–	–	8	15	–	0
Korea	79	–	78	–	–	19	1	1	–
Philippines	69	–	65	1	–	29	4	–	–
Thailand	85	–	58	1	1	39	1	–	–
Austria	208	–	41	–	3	52	2	1	1
Croatia	135	–	19	4	7	67	–	1	3
Czech Republic	314	–	16	3	1	78	1	2	0
Finland	205	–	21	–	–	78	1	–	–
France	125	–	26	–	2	53	19	–	–
Germany	349	0	52	1	1	44	1	–	–
Greece	87	–	55	–	–	45	–	–	–
Italy	114	–	86	–	–	12	1	–	1
Poland	742	–	3	0	4	92	–	0	–
Portugal	275	–	19	1	1	76	4	–	–
Slovakia	79	1	14	4	–	80	1	–	–
Slovenia	363	–	47	0	1	51	1	1	–
Spain	541	1	58	0	–	40	1	–	–
Sweden	1020	0	50	3	0	44	1	–	1
Switzerland	4	–	–	–	–	100	–	–	–
Yugoslavia	137	–	–	1	–	99	–	–	–
Australia	95	1	56	1	–	28	3	1	9

stage (Figs. 10–13). The significance of surgical staging should be self evident particularly in early stage disease.

Histotypes of endometrial cancers are well recognized important prognostic factors. Endometrioid tumors have a 5-year survival of 81% compared with 60% for clear cell and 48% for papillary carcinoma (Fig. 14). This is obviously related to a certain degree to the fact that poor histotypes have a more advanced stage.

Even within Stage I there is a difference in survival as endometrioid tumors have an 89% 5-year survival compared with 82% for clear cell and 77% for papillary cancers (Fig. 15). This holds true for all stages.

As previously noted, grade, depth of invasion within a given stage are prognostically important. It appears that grade and depth of invasion are independently important but complement each other. Stage Ia G1 has a 93%

Table 7  
Carcinoma of the corpus uteri: patients treated in 1996–98. Distribution of patients (%) by country and treatment (Stage II), *n*=963

Country	Number of patients	First line of treatment (%)							
		None	Surgery alone	RT alone	Radio-surgery	Surg + adj RT	Surg + adj CT	Adj horm	Other non-standard
All	963	0	11	2	2	80	4	0	0
South Africa	4	–	25	–	–	75	–	–	–
Argentina	10	–	30	–	–	70	–	–	–
Brazil	3	–	–	–	–	67	–	33	–
Chile	9	–	11	–	–	89	–	–	–
Peru	3	–	33	33	–	33	–	–	–
USA	55	2	33	2	4	47	13	–	–
Uruguay	2	–	50	–	–	50	–	–	–
China	22	–	23	–	5	64	9	–	–
India	1	–	–	–	–	100	–	–	–
Indonesia	2	–	–	–	–	50	50	–	–
Japan	37	–	51	–	–	19	30	–	–
Korea	8	–	38	–	13	50	–	–	–
Philippines	15	–	13	–	7	80	–	–	–
Thailand	23	–	4	9	9	78	–	–	–
Austria	20	–	30	5	–	50	15	–	–
Croatia	20	–	–	10	10	80	–	–	–
Czech Republic	56	–	–	7	–	91	2	–	–
Finland	28	–	–	–	–	93	7	–	–
France	24	–	4	–	4	83	8	–	–
Germany	50	2	26	6	–	64	2	–	–
Greece	5	–	–	–	–	100	–	–	–
Italy	17	–	35	–	–	59	–	–	6
Poland	185	–	1	–	1	98	–	–	–
Portugal	59	–	5	–	2	85	8	–	–
Slovakia	19	–	–	5	–	95	–	–	–
Slovenia	57	–	9	–	5	84	–	2	–
Spain	121	1	7	3	5	83	1	–	–
Sweden	94	–	4	1	2	89	1	–	2
Switzerland	1	–	–	–	–	–	100	–	–
Yugoslavia	9	–	–	–	–	100	–	–	–
Australia	4	–	–	–	–	100	–	–	–

five-year survival compared with Stage Ic G1 of 87% but Stage Ia G3 has a 75% survival compared with 66% in those with a Stage Ic G3 cancer (Fig. 19). The relative low survival for Ia G3 may be due to the relative number of patients reported (66) compared to several hundred or even thousand patients in other sub-stages. This is true for all stages (Figs. 20–22). Again, knowing surgical staging is extremely important as it relates to prognosis.

Surgery has served historically, not only for diagnosis

but also for treatment. Adjunctive therapy has been used for indications that have in many instances been ill defined. Historically, radiation therapy has been used both pre- and postoperatively and in some cases routinely. Volume 25 suggests, as do previous volumes, that adjunctive radiation therapy may not be advantageous over surgery alone. In Stages Ia and Ib surgery alone has a better survival than in patients treated with surgery plus radiation; however, in Stage Ic, radiation does appear to



Table 8  
Carcinoma of the corpus uteri: patients treated in 1996–98. Distribution of patients (%) by country and treatment (Stage III), *n* = 1068

Country	Number of patients	First line of treatment (%)							
		None	Surgery alone	RT alone	Radio-surgery	Surg + adj RT	Surg + adj CT	Adj horm	Other non-standard
All	1068	1	11	3	2	61	19	1	3
South Africa	5	–	–	–	–	100	–	–	–
Argentina	9	–	11	11	–	44	33	–	–
Canada	1	–	–	–	–	–	100	–	–
Chile	11	–	9	–	–	91	–	–	–
USA	79	–	25	3	1	28	39	4	–
Uruguay	1	–	100	–	–	–	–	–	–
China	21	5	10	–	5	81	–	–	–
India	1	–	–	–	–	–	–	100	–
Israel	4	–	–	–	–	100	–	–	–
Japan	77	–	12	–	–	16	69	1	3
Korea	11	–	9	–	9	55	27	–	–
Philippines	39	–	33	–	3	51	10	–	3
Thailand	30	–	13	–	–	70	17	–	–
Austria	31	–	19	–	–	26	32	–	23
Croatia	17	–	12	18	6	47	18	–	–
Czech Republic	42	–	2	5	2	74	10	–	7
Finland	21	–	10	–	–	67	24	–	–
France	31	–	6	–	10	48	29	6	–
Germany	77	1	13	5	–	61	14	3	3
Greece	22	–	27	–	–	50	23	–	–
Italy	14	–	21	7	7	29	29	7	–
Poland	165	–	1	1	2	88	8	–	1
Portugal	74	–	3	12	3	58	19	3	3
Slovakia	13	–	15	8	–	77	–	–	–
Slovenia	30	–	13	–	–	70	13	3	–
Spain	109	3	17	3	2	67	6	–	2
Sweden	102	1	2	3	1	78	10	–	5
Yugoslavia	10	–	–	–	–	90	10	–	–
Australia	21	5	5	–	–	52	19	5	14

increase survival, (72% compared with 83%) (Fig. 24). In Stages II–IV, the numbers are too small to draw a conclusion concerning efficacy of radiation over surgery alone.

## CONCLUSIONS

### Stage

This database continues to validate that stage is an extremely important prognostic factor. Grade and depth of invasion also are important factors. The difference in sub-stages particularly in Stage I appear minimal.

Surgical staging Ia G1, Ib G1, Ia G2 and Ib G2 have a 5-year survival of 93.3%, 88.1%, 90.7% and 93%. This is very similar to the data from Volumes 23 and 24. It may be time to combine some of these groups as treatment and survival are the same. This will make staging less cumbersome. Stage Ic, particularly Grades 2 and 3, do carry a worse prognosis and should be sub-staged.

### Age

Multivariant analysis further defines important factors and age continues to be a poor prognostic factor within

Table 9  
Carcinoma of the corpus uteri: patients treated in 1996–98. Distribution of patients (%) by country and treatment (Stage IV), *n* = 229

Country	Number of patients	First line of treatment (%)							
		None	Surgery alone	RT alone	Radio-surgery	Surg + adj RT	Surg + adj CT	Adj horm	Other non-standard
All	229	3	13	6	1	20	41	3	13
South Africa	1	–	100	–	–	–	–	–	–
Argentina	3	–	–	33	–	–	–	–	67
Chile	1	–	–	–	–	–	–	100	–
Peru	1	–	–	100	–	–	–	–	–
USA	41	–	22	–	–	10	61	–	7
China	6	–	67	–	17	–	17	–	–
India	1	–	–	100	–	–	–	–	–
Japan	9	–	–	–	–	–	78	–	22
Korea	4	–	50	–	–	25	25	–	–
Philippines	2	–	–	100	–	–	–	–	–
Thailand	10	–	20	–	–	50	30	–	–
Austria	14	–	14	–	–	7	50	–	29
Croatia	8	13	–	13	–	38	25	13	–
Czech Republic	5	–	–	–	–	40	20	–	40
Finland	14	–	14	–	7	–	71	–	7
France	12	–	17	17	–	33	8	8	17
Germany	11	18	27	18	–	18	9	–	9
Greece	2	–	–	–	–	–	–	100	–
Italy	9	–	11	–	–	–	67	11	11
Poland	6	–	17	17	–	33	33	–	–
Portugal	11	18	–	–	–	45	36	–	–
Slovakia	3	33	–	33	–	–	33	–	–
Slovenia	12	–	–	–	–	42	25	17	17
Spain	8	13	13	13	–	25	25	–	13
Sweden	32	–	–	–	–	28	50	–	22
Australia	3	–	–	–	–	–	67	–	33

a given stage. Those who were 80 years of age or older have a considerably worse prognosis. To a certain degree, this may relate to a lack of surgical staging in these individuals and less aggressive therapy postoperatively. Unfortunately, the data cannot validate this commonly accepted premise.

### Prognostic factors

Multivariate analysis continue to note histotypes, particularly papillary serous and to a lesser extent clear cell cancers, carry a worse prognosis than endometrioid tumor. Grade and depth of invasion continue to be independent prognostic factors in endometrial cancer.

Table 10  
Carcinoma of the corpus uteri: patients treated in 1996–98. Number of patients and 5-year overall survival rates reported in volumes 16–25

Vol.	Year	Patients	Survival (%)
16	1962–68	14506	63.0
17	1969–72	10720	65.4
18	1973–75	11501	66.6
19	1976–78	13581	67.7
20	1979–81	14906	65.1
21	1982–86	19402	69.7
22	1987–89	13040	72.7
23	1990–92	7350	73.4
24	1993–95	6260	76.5
<b>25</b>	<b>1996–98</b>	<b>7496</b>	<b>77.6</b>
<b>Total</b>		<b>118762</b>	

**Therapy**

Surgery remains primary therapy for endometrial cancer although postoperative radiation continues to be used even in early stage disease. The last several volumes would suggest radiation therapy in early stage disease (Stages Ia, Ib G1, G2) does not improve survival. Even in Stage II its benefits appear minimal at best. In the current volume, the number treated with chemotherapy remains small and conclusions regarding its efficacy are inconclusive. At least in one phase-3 study of advanced disease, chemotherapy compared with radiation therapy had a better survival. It will be interesting to note if Volume 26 reflects this new data.

Table 11  
Carcinoma of the corpus uteri: patients treated in 1996–98. Mean age by stage and mode of staging

	Stage	Patients (n)	Mean age (yr)
Missing		238	66.5
Surgical	I	5823	62.5
	II	963	62.9
	III	1068	62.2
	IV	229	64.8
Clinical	0	9	68.3
	I	268	70.9
	II	73	71.2
	III	67	69.5
	IV	52	66.0

Table 12  
Carcinoma of the corpus uteri: patients treated in 1996–98. Mean age by grade of differentiation in surgically staged patients

	Grade	Patients (n)	Mean age (yr)
Surgical	Gx	503	62.9
	G1	3304	61.2
	G2	2961	63.4
	G3	1315	63.9
Total		8083	

Table 13  
Carcinoma of the corpus uteri: patients treated in 1996–98. Mean age by grade of differentiation in clinically staged patients

	Grade	Patients (n)	Mean age (yr)
Clinical	Gx	139	65.6
	G1	118	71.7
	G2	115	72.8
	G3	97	71.6
Total		469	

Table 14  
Carcinoma of the corpus uteri: patients treated in 1996–98. Mean age by myometrial invasion in surgically staged patients

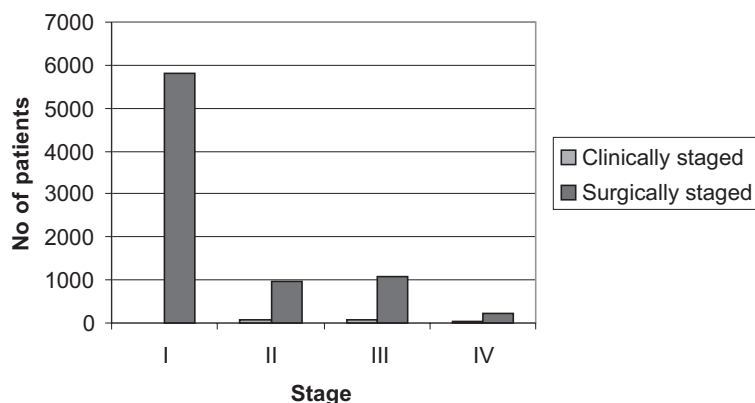
Myometrial invasion	Patients (n)	Mean age (yr)
M0	1042	58.5
M < 50%	2969	61.0
M > 50%	2494	64.2
Total	6505	

Table 15  
Carcinoma of the corpus uteri: patients treated in 1996–98. Distribution of patients by stage and grade of differentiation in surgically staged patients

	Ia	Ib	Ic	IIa	IIb	IIIa	IIIb	IIIc	IVa	IVb
Gx	86	145	63	34	41	60	7	30	8	29
G1	756	1488	529	158	134	143	14	51	7	24
G2	250	1207	621	182	227	254	36	124	16	44
G3	70	308	300	70	117	183	32	134	22	79

Table 16  
Carcinoma of the corpus uteri: patients treated in 1996–98. Mean age by stage and grade of differentiation in surgically staged patients

	Ia	Ib	Ic	IIa	IIb	IIIa	IIIb	IIIc	IVa	IVb
Gx	58.6	62.3	65.3	67.4	63.8	60.7	68.0	66.1	68.9	65.9
G1	57.9	61.5	65.3	61.5	61.2	60.8	64.8	57.7	64.0	64.2
G2	62.4	63.1	65.5	62.9	62.7	61.9	67.8	60.3	64.4	66.6
G3	64.9	63.3	64.7	64.9	64.5	64.6	68.4	60.6	62.0	64.2



	I		II		III		IV		Total		Total in %
	n	%	n	%	n	%	n	%	n	%	
Clinically staged	277 <sup>a</sup>	59.1	73	15.6	67	14.3	52	11.1	469	100.0	5.3
Surgically staged	5823	72.0	963	11.9	1068	13.2	229	2.8	8083	100.0	92.0
Missing data	–	–	–	–	–	–	–	–	238	100.0	2.7
Total	5884		984		1086		241		8790		100.0

<sup>a</sup>Includes nine Stage 0 patients.

Fig. 2. Carcinoma of the corpus uteri: patients treated in 1996–98. Distribution of patients by stage and mode of staging (clinical and surgical).

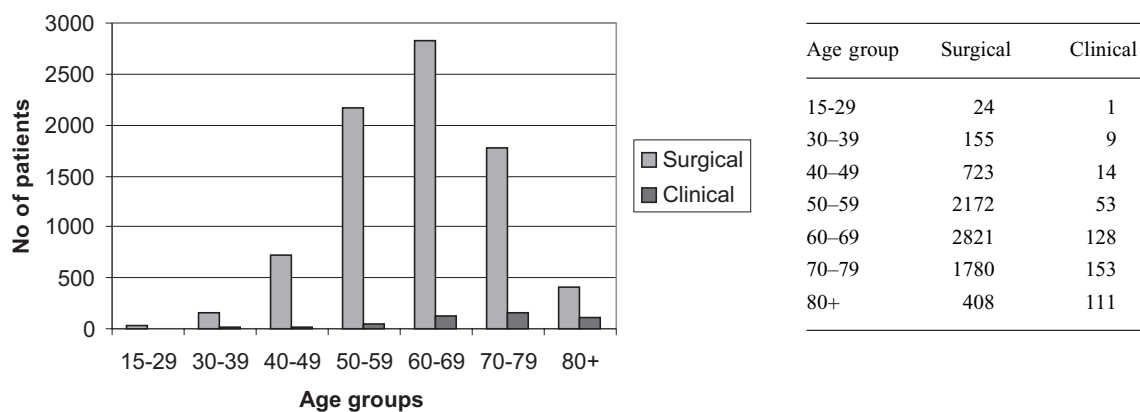


Fig. 3. Carcinoma of the corpus uteri: patients treated in 1996–98. Age distribution by mode of staging.

Table 17  
Carcinoma of the corpus uteri: patients treated in 1996–98. Percentage of histopathological type in early and advanced stages in surgically staged patients

Histotype	Stage I–II	Percentage <sup>a</sup> %	Percentage <sup>b</sup> %	Stage III–IV	Percentage <sup>a</sup> %	Percentage <sup>b</sup> %
Endometrioid	5959	88.11	86.8	909	70.90	13.2
Adenosquamous	269	3.98	76.4	83	6.47	23.6
Mucinous	64	0.95	81.0	15	1.17	19.0
Papillary	176	2.60	56.8	134	0.45	43.2
Clear cell	133	1.97	69.6	58	4.52	30.4
Squamous	24	0.35	72.7	9	0.70	27.3
Other	138	2.04	65.1	74	5.77	34.9

<sup>a</sup> Percentage within the same stage group.

<sup>b</sup> Percentage within the same histological type.

Table 18  
Carcinoma of the corpus uteri: patients treated in 1996–98. 5-year survival by stage/age group/mode of staging

Age group	Surgical staging (%)	Patients (n)	Clinical staging (%)	Patients (n)	Age group	Surgical staging (%)	Patients (n)	Clinical staging (%)	Patients (n)
<b>Stage I</b>					<b>Stage III</b>				
15–29	93.8	15	6.3	1	15–29	100.0	4	–	–
30–39	96.5	109	3.5	4	30–39	93.8	30	6.3	2
40–49	98.6	499	1.4	7	40–49	99.1	106	0.9	1
50–59	97.8	1597	2.2	36	50–59	97.4	298	2.6	8
60–69	96.9	2051	3.1	65	60–69	94.3	350	5.7	21
70–79	93.3	1277	6.7	91	70–79	91.5	215	8.5	20
80+	79.0	275	21.0	73	80+	81.3	65	18.8	15
<b>Stage II</b>					<b>Stage IV</b>				
15–29	100.0	4	–	–	15–29	100.0	1	–	–
30–39	88.9	16	11.1	2	30–39	–	0	100.0	1
40–49	96.2	102	3.8	4	40–49	88.9	16	11.1	2
50–59	98.7	228	1.3	3	50–59	89.1	49	10.9	6
60–69	94.4	336	5.6	20	60–69	79.2	84	20.8	22
70–79	90.2	221	9.8	24	70–79	78.8	67	21.2	18
80+	73.7	56	26.3	20	80+	80.0	12	20.0	3

Table 19  
Carcinoma of the corpus uteri: patients treated in 1996–98. Surgical stage distribution by mode of treatment

	Ia	Ib	Ic	IIa	IIb	IIIa	IIIb	IIIc	IVa	IVb
Surgery alone	837	1419	175	55	49	73	10	33	4	26
Surgery + adj RT	252	1564	1253	354	415	424	45	182	15	30
Surgery + adj CT	14	66	54	17	21	104	12	88	19	76
Adjuvant HT	8	8	3	2	0	9	0	5	3	5
Other	11	9	9	2	1	8	5	15	7	22

Table 20  
Carcinoma of the corpus uteri: patients treated in 1996–98. Percentage of surgically staged patients by mode of treatment

	Ia (%)	Ib (%)	Ic (%)	IIa (%)	IIb (%)	IIIa (%)	IIIb (%)	IIIc (%)	IVa (%)	IVb (%)
Surgery alone	31.22	52.93	6.53	2.05	1.83	2.72	0.37	1.23	0.15	0.97
Surgery + adj RT	5.56	34.49	27.64	7.81	9.15	9.35	0.99	4.01	0.33	0.66
Surgery + adj CT	2.97	14.01	11.46	3.61	4.46	22.08	2.55	18.68	4.03	16.14
Adjuvant HT	18.60	18.60	6.98	4.65	–	20.93	–	11.63	6.98	11.63
Other	12.36	10.11	10.11	2.25	1.12	8.99	5.62	16.85	7.87	24.72

Table 21  
Carcinoma of the corpus uteri: patients treated in 1996–98. Lymphnodal status

	P–A– (%)	P+A– (%)	P–A+ (%)	P+A+ (%)
M0	93.86	4.77	0.91	0.45
M < 50%	90.79	7.03	0.42	1.76
M > 50%	79.81	13.75	1.37	5.07

P–, negative pelvic nodes  
P+, positive pelvic nodes

A–, negative aortic nodes  
A+, positive aortic nodes

M0, no myometrial invasion  
M < 50%, myometrial invasion less than 50%  
M > 50%, myometrial invasion more than 50%

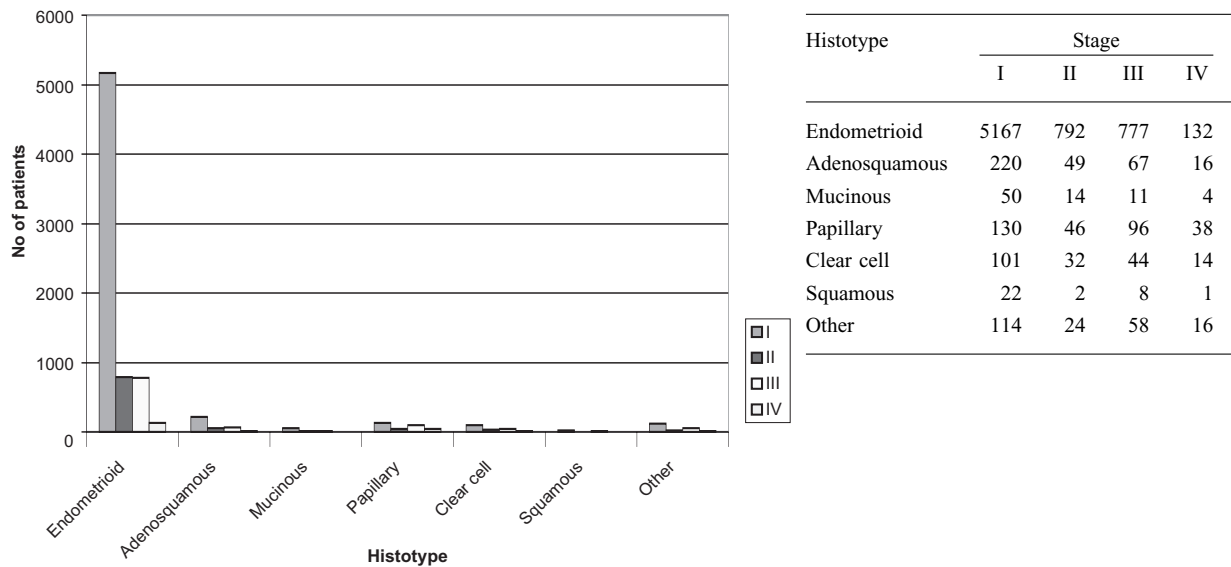


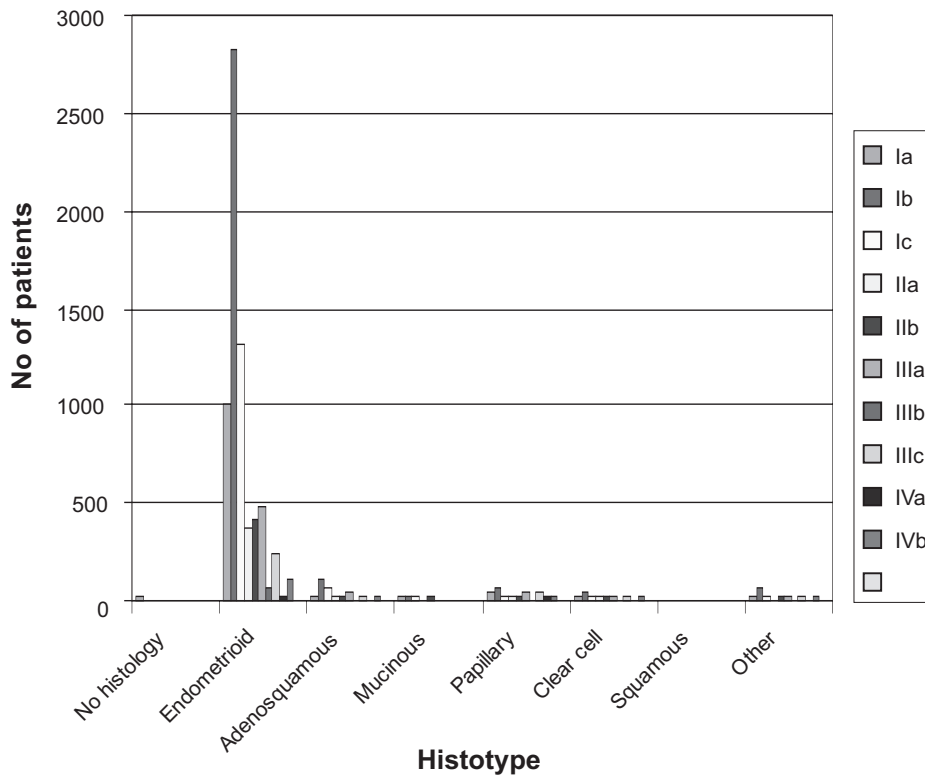
Fig. 4. Carcinoma of the corpus uteri: patients treated in 1996–98. Surgical stage distribution (in percentage) by histopathological type.

Table 22  
Carcinoma of the corpus uteri: patients treated in 1996–98.  
Lymphnodal status in G1 patients

	P-A- (%)	P+A- (%)	P-A+ (%)	P+A+ (%)
M0	96.56	3.44	–	–
M < 50%	94.42	4.81	0.19	0.58
M > 50%	84.26	10.80	0.93	4.01

Table 23  
Carcinoma of the corpus uteri: patients treated in 1996–98.  
Lymphnodal status in G2 patients

	P-A- (%)	P+A- (%)	P-A+ (%)	P+A+ (%)
M0	94.59	3.60	1.80	–
M < 50%	88.29	9.46	0.68	1.58
M > 50%	83.06	12.04	0.82	4.08



Histotype	Ia	Ib	Ic	IIa	IIb	IIIa	IIIb	IIIc	IVa	IVb	Total
No histology	11	5	3	2	3	3	2	2	1	7	38
Endometrioid	1016	2829	1322	381	411	485	61	231	32	100.0	6868
Adenosquamous	25	119	76	18	31	40	4	23	2	14	352
Mucinous	12	23	15	2	12	8	1	2	1	3	79
Papillary	36	62	32	22	24	48	7	41	11	27	310
Clear cell	31	42	28	11	21	24	5	15	1	13	191
Squamous	4	9	9	1	1	2	1	5	0	1	33
Other	27	59	28	7	17	30	8	20	5	11	212

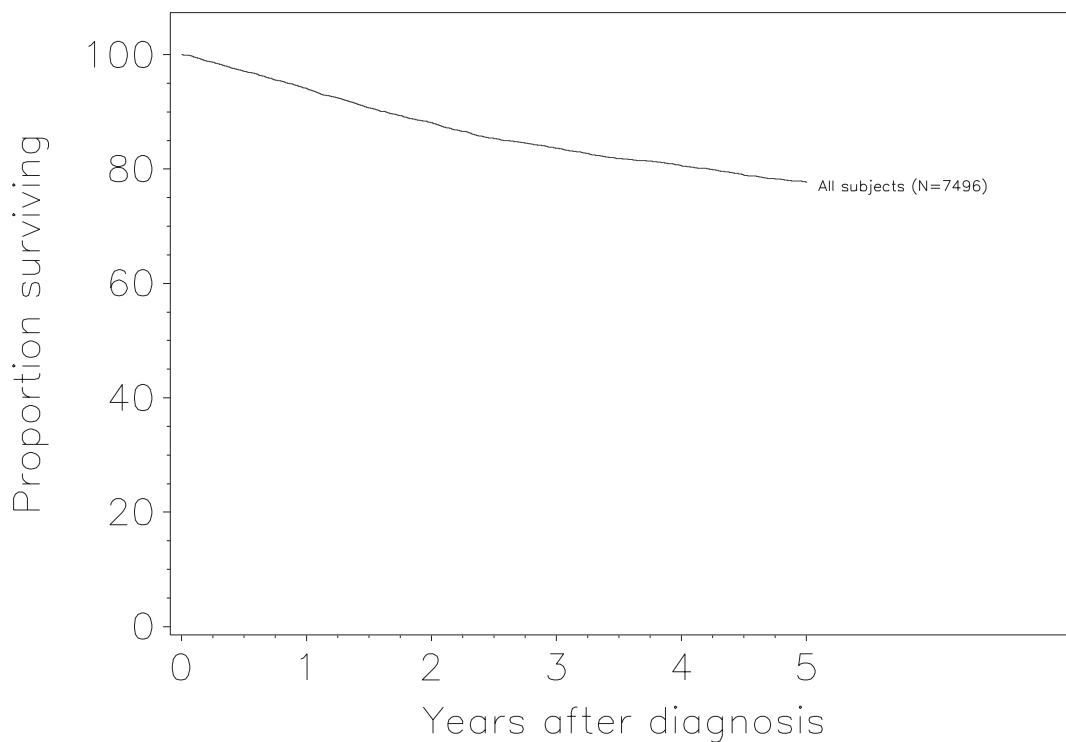
Fig. 5. Carcinoma of the corpus uteri: patients treated in 1996–98. Distribution of patients by histopathological type and surgical stage.

Table 24  
Carcinoma of the corpus uteri: patients treated in 1996–98.  
Lymphnodal status in G3 patients

	P–A– (%)	P+A– (%)	P–A+ (%)	P+A+ (%)
M0	75.68	13.51	5.41	5.41
M < 50%	84.97	8.09	0.58	6.36
M > 50%	69.28	19.93	2.61	8.17

Table 25  
Carcinoma of the corpus uteri: patients treated in 1996–98.  
Percentage of *positive pelvic nodes* by grade and myometrial invasion  
(with both positive and negative aortic nodes)

	G1 (%)	G2 (%)	G3 (%)
M0	3.44	3.60	18.92
M < 50%	5.38	11.04	14.45
M > 50%	14.81	16.12	28.10



	Patients ( <i>n</i> )	Mean age (yr)	Overall survival (%) at				
			1 year	2 years	3 years	4 years	5 years
All subjects	7496	63.5	94.0	88.1	83.6	80.5	77.6

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

Fig. 6. Carcinoma of the corpus uteri: patients treated in 1996–98. Overall survival, *n* = 7496.

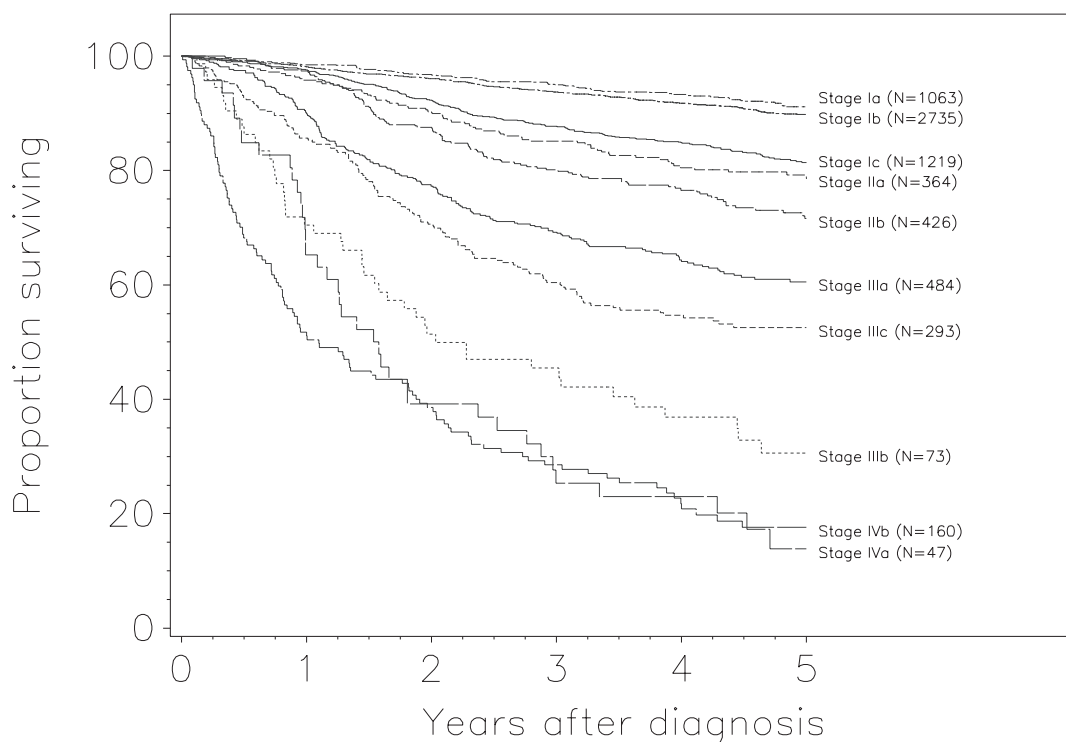


Table 26  
Carcinoma of the corpus uteri: patients treated in 1996–98. Percentage of *positive aortic nodes* by grade and myometrial invasion (with both positive and negative pelvic nodes)

	G1 (%)	G2 (%)	G3 (%)
M0	–	1.80	10.81
M < 50%	0.77	2.25	6.94
M > 50%	4.94	4.90	10.78

Table 27  
Carcinoma of the corpus uteri: patients treated in 1996–98. Outcome of follow-up

Vital status	Patients (n)	Percentage (%)
Alive (NOS)	1447	16.46
Alive disease free	5333	60.67
Alive with disease	348	3.96
Dead	1662	18.91



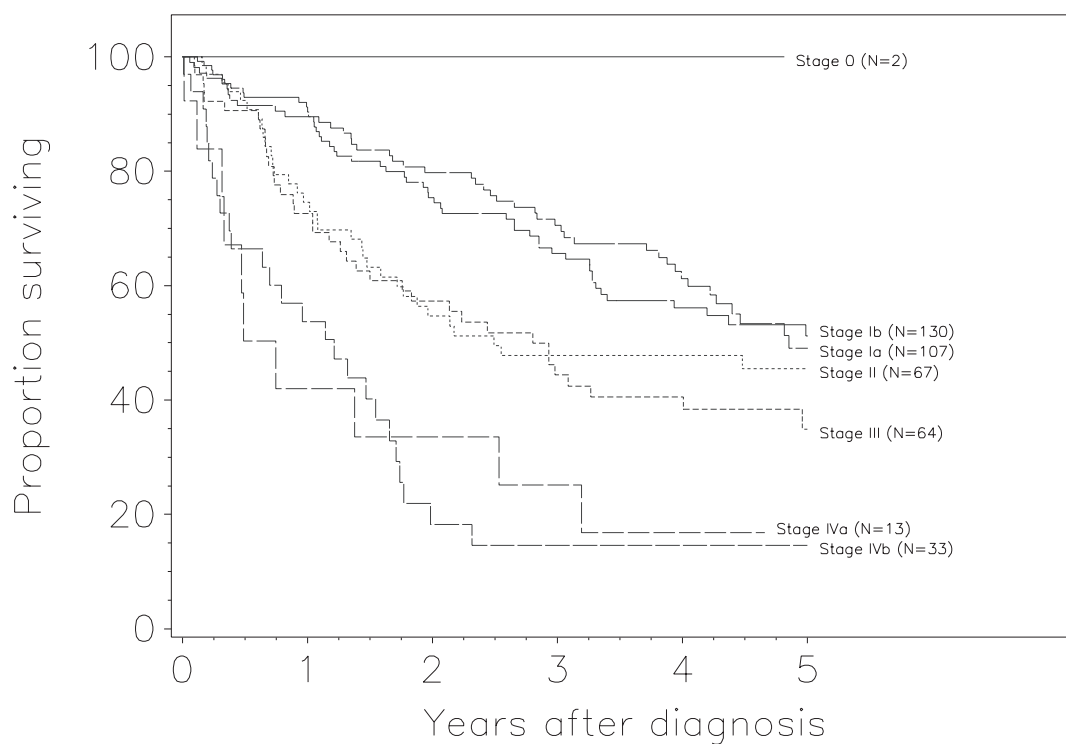
Stage	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Ia	1063	59.7	98.5	96.8	95.0	93.2	91.1	Reference
Ib	2735	62.7	98.2	96.1	93.7	91.7	89.7	1.1 (0.9–1.4)
Ic	1219	65.8	97.6	92.3	87.7	84.7	81.3	1.8 (1.4–2.3)
IIa	364	63.8	95.8	90.3	85.1	80.5	78.7	2.6 (1.9–3.5)
IIb	426	63.4	97.4	87.5	80.1	76.4	71.4	3.2 (2.4–4.2)
IIIa	484	63.1	89.9	77.3	69.2	64.3	60.4	5.6 (4.3–7.3)
IIIb	73	68.9	70.6	51.7	45.5	36.9	30.2	11.2 (7.8–16.0)
IIIc	293	60.8	85.7	70.7	60.4	54.6	52.1	9.2 (7.0–12.2)
IVa	47	64.8	65.6	39.4	25.9	23.4	14.6	18.1 (12.3–26.7)
IVb	160	65.5	51.1	38.6	28.4	21.8	17.0	20.3 (15.3–26.9)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

Fig. 7. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival by FIGO surgical stage, n = 6864.

Table 28  
Carcinoma of the corpus uteri: patients treated in 1996–98. Response to treatment by stage

	Ia	Ib	Ic	IIa	IIb	IIIa	IIIb	IIIc	IVa	IVb
Missing	345	984	387	109	108	172	23	98	10	51
Complete response	761	2051	1052	308	360	363	27	156	10	26
Partial response	6	14	12	0	6	19	8	14	7	15
Stable disease	29	30	11	6	11	22	5	20	9	21
Progressive disease	4	14	17	6	13	33	16	34	14	47
Not assessable	17	55	34	15	21	31	10	17	3	16



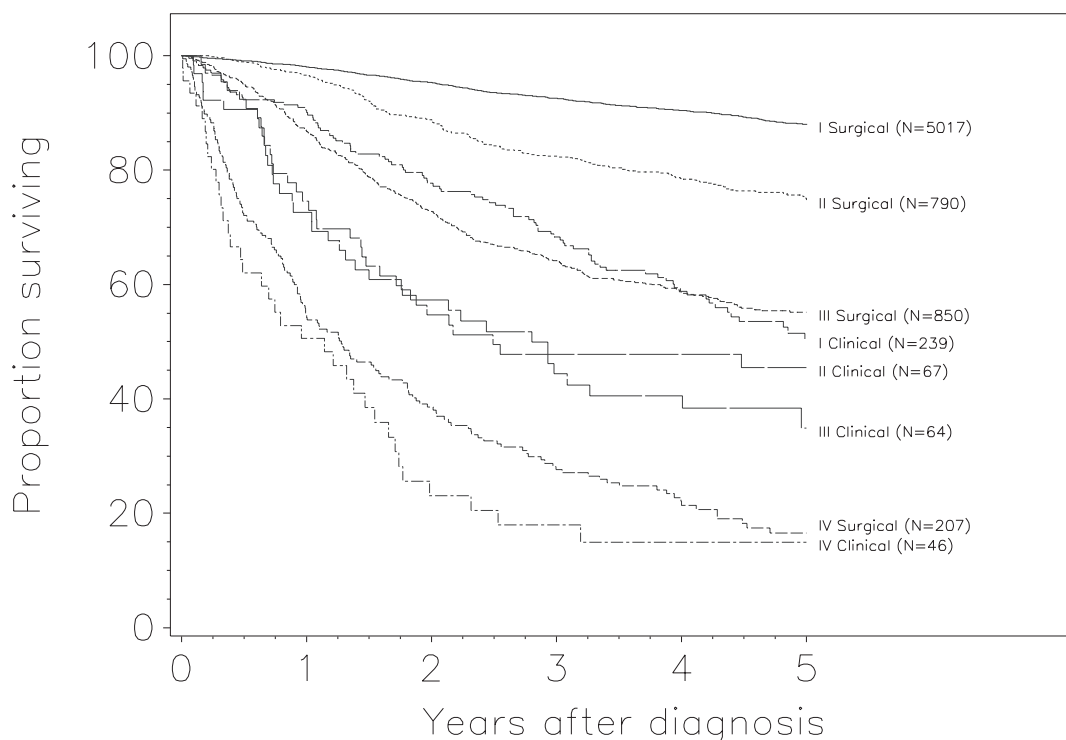
Stage	Patients ( <i>n</i> )	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
0	2	67.5	100.0	100.0	100.0	100.0	–	–
Ia	107	70.6	89.6	79.8	70.6	61.3	49.6	Reference
Ib	130	72.0	91.1	75.3	65.7	55.7	51.0	0.9 (0.6–1.4)
II	67	72.9	75.2	55.1	48.2	48.2	45.8	1.2 (0.8–2.0)
III	64	69.7	72.8	57.4	44.6	40.7	35.4	1.8 (1.1–2.9)
IVa	13	64.8	44.0	35.2	26.4	15.8	–	6.6 (2.7–16.2)
IVb	33	66.1	53.8	20.2	16.2	16.2	16.2	4.4 (2.6–7.4)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

Fig. 8. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival by clinical stage, *n* = 416.

Table 29  
Carcinoma of the corpus uteri: patients treated in 1996–98. Relapses by stage

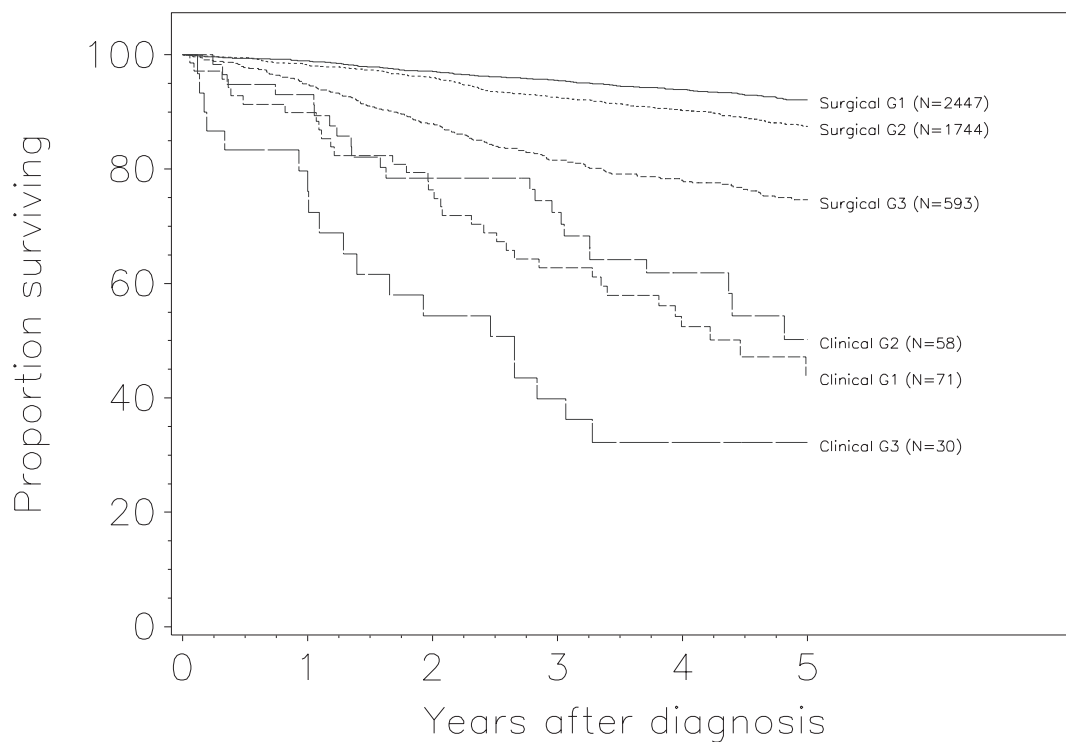
	Ia	Ib	Ic	IIa	IIb	IIIa	IIIb	IIIc	IVa	IVb
Local (regional)	11	43	24	11	19	13	5	11	3	2
Metastatic	8	37	49	18	22	37	6	27	5	9
Local and metastatic	3	8	6	4	7	9	2	11	2	5
Missing site	29	113	85	24	33	43	6	13	3	11
Total	51	201	164	57	81	102	19	62	13	27



Stage	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
I Surgical	5017	62.8	98.1	95.3	92.5	90.4	88.0	Reference
II Surgical	790	63.6	96.7	88.8	82.4	78.3	74.8	2.3 (1.9–2.7)
III Surgical	850	62.8	86.8	72.9	64.2	58.6	55.0	5.6 (4.9–6.4)
IV Surgical	207	65.4	54.5	38.7	27.7	22.2	16.2	15.6 (13.0–18.7)
I Clinical	239	71.3	90.5	77.6	68.3	58.7	50.7	3.2 (2.6–4.0)
II Clinical	67	72.9	75.2	55.1	48.2	48.2	45.8	4.9 (3.5–6.8)
III Clinical	64	69.7	72.8	57.4	44.6	40.7	35.4	5.4 (3.9–7.6)
IV Clinical	46	65.7	51.1	24.3	18.9	15.8	15.8	21.5 (15.3–30.3)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

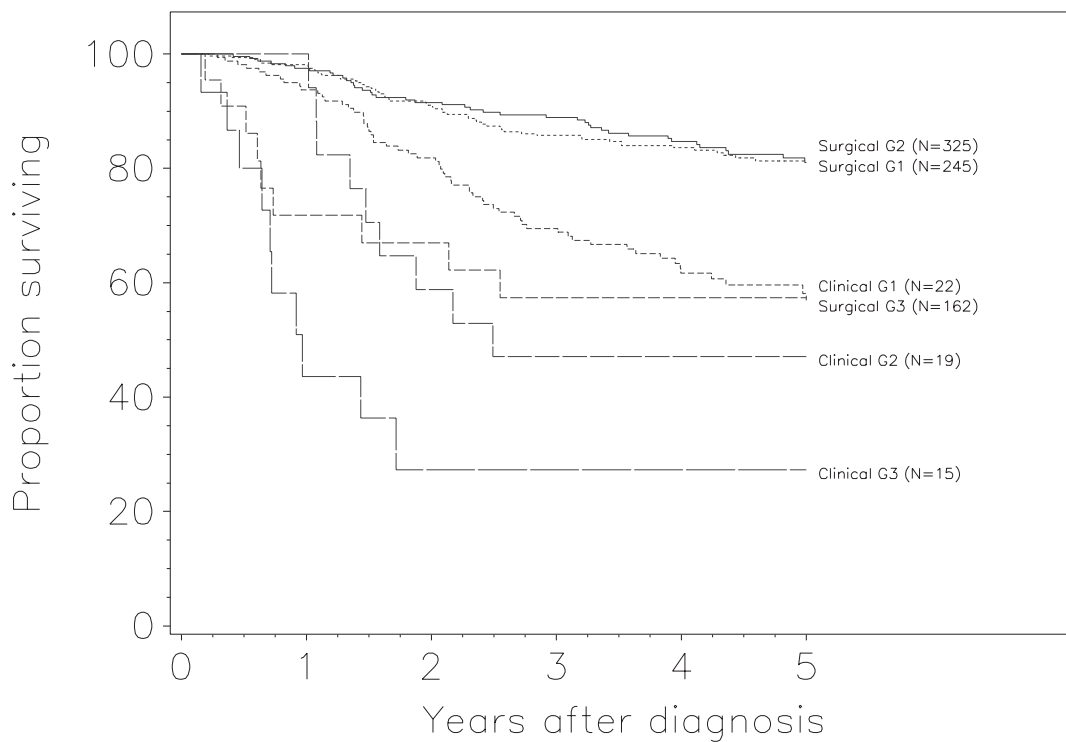
Fig. 9. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival by mode of staging, n = 7280.



Grade	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Surgical G1	2447	61.5	98.9	97.1	95.5	93.8	92.1	Reference
Surgical G2	1744	64.1	98.2	96.0	92.5	90.2	87.5	1.3 (1.1–1.7)
Surgical G3	593	64.5	94.9	87.9	81.6	77.9	74.5	3.0 (2.4–3.7)
Clinical G1	71	74.7	89.9	76.4	62.8	52.6	44.9	4.9 (3.2–7.5)
Clinical G2	58	75.4	92.9	78.2	72.3	60.9	51.0	3.8 (2.4–6.2)
Clinical G3	30	74.0	79.3	54.1	39.7	31.7	31.7	8.3 (4.9–14.2)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

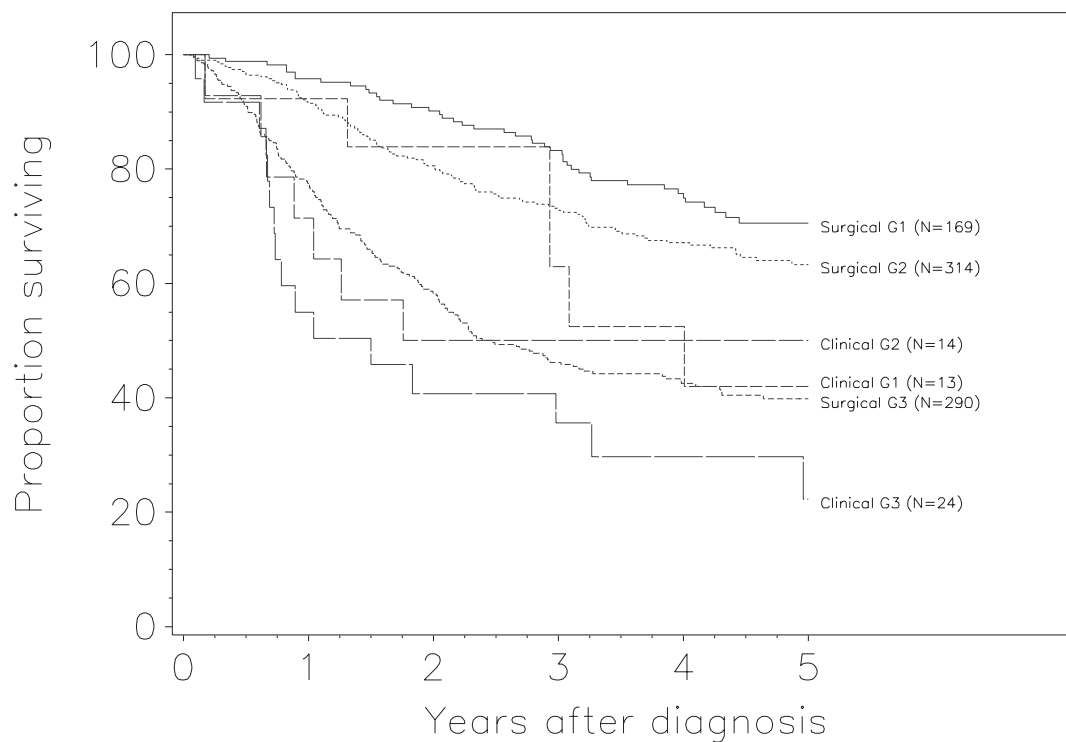
Fig. 10. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage I patients by grade of differentiation and mode of staging,  $n = 4943$ .



Grade	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Surgical G1	245	62.0	97.5	91.6	88.9	84.6	81.0	Reference
Surgical G2	325	63.5	98.1	91.1	85.7	83.5	80.9	1.1 (0.7–1.6)
Surgical G3	162	65.2	93.7	81.9	69.5	61.8	57.3	2.6 (1.7–3.9)
Clinical G1	22	71.9	72.1	67.3	57.7	57.7	57.7	2.4 (1.2–4.8)
Clinical G2	19	73.6	100.0	58.8	47.1	47.1	47.1	2.9 (1.4–6.0)
Clinical G3	15	78.1	44.8	28.5	28.5	28.5	28.5	10.2 (4.8–21.9)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

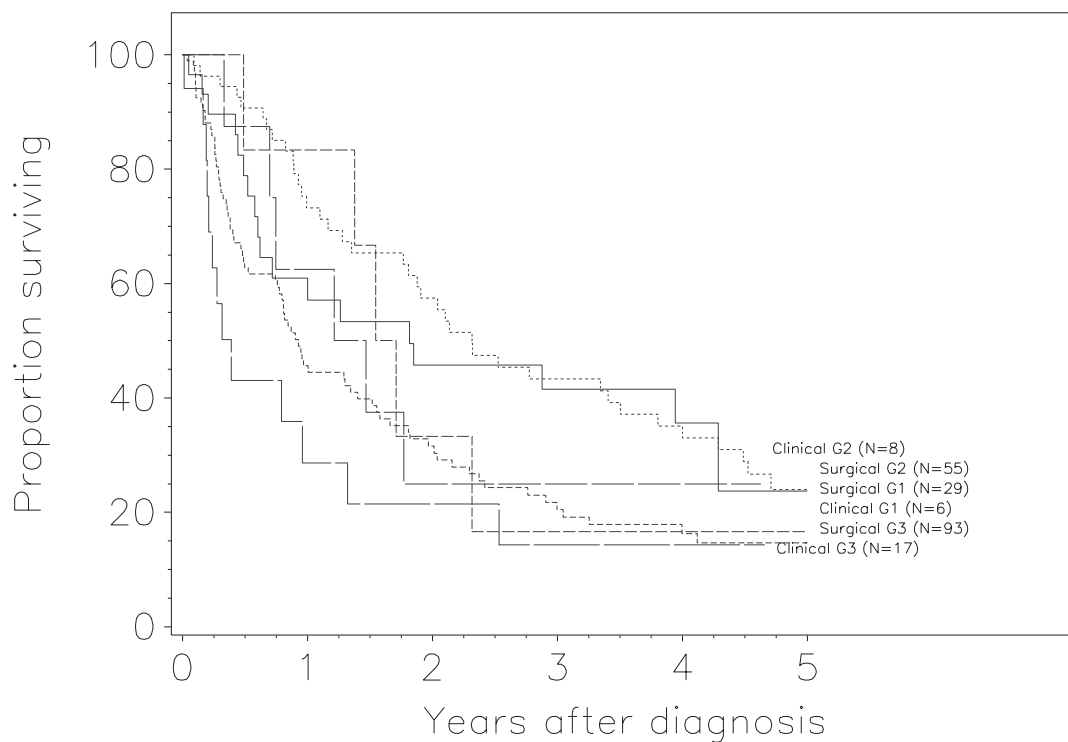
Fig. 11. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage II patients by grade of differentiation and mode of staging, n = 788.



Grade	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Surgical G1	169	60.9	95.8	90.3	83.3	75.5	69.7	Reference
Surgical G2	314	62.6	91.5	80.6	73.1	67.0	63.3	1.2 (0.9–1.8)
Surgical G3	290	64.2	77.2	58.3	46.1	42.4	39.6	2.4 (1.7–3.5)
Clinical G1	13	68.5	92.3	83.9	64.2	53.5	40.1	1.5 (0.6–3.7)
Clinical G2	14	71.6	71.4	50.0	50.0	50.0	50.0	1.8 (0.7–4.2)
Clinical G3	24	70.5	56.5	41.8	36.6	30.9	24.1	3.4 (1.9–6.2)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

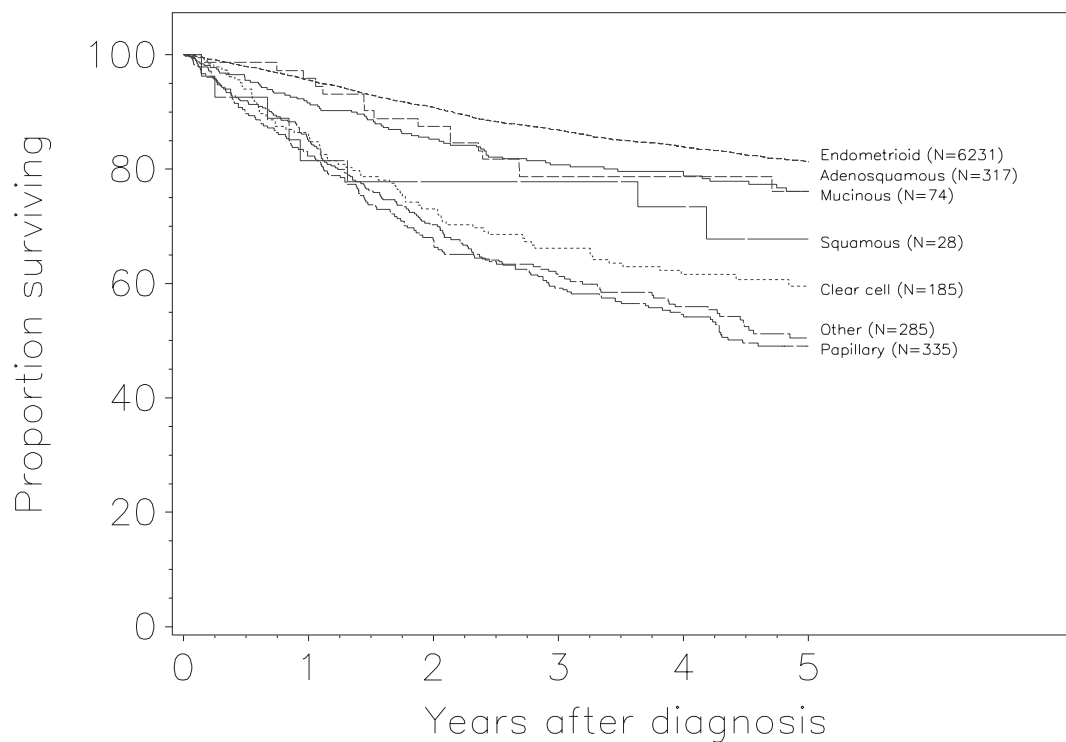
Fig. 12. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage III patients by grade of differentiation and mode of staging,  $n=824$ .



Grade	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Surgical G1	29	64.3	57.1	45.7	41.7	36.5	27.4	Reference
Surgical G2	55	66.1	73.6	57.7	43.5	35.2	22.2	0.8 (0.4–1.5)
Surgical G3	93	64.2	46.2	32.0	20.7	16.4	14.5	1.7 (1.0–3.0)
Clinical G1	6	66.3	83.3	33.3	16.7	16.7	16.7	1.1 (0.4–3.3)
Clinical G2	8	65.9	62.5	25.0	25.0	25.0	–	1.1 (0.4–3.0)
Clinical G3	17	65.5	31.3	23.4	15.6	15.6	–	3.7 (1.5–8.8)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

Fig. 13. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage IV patients by grade of differentiation and mode of staging, n=208.

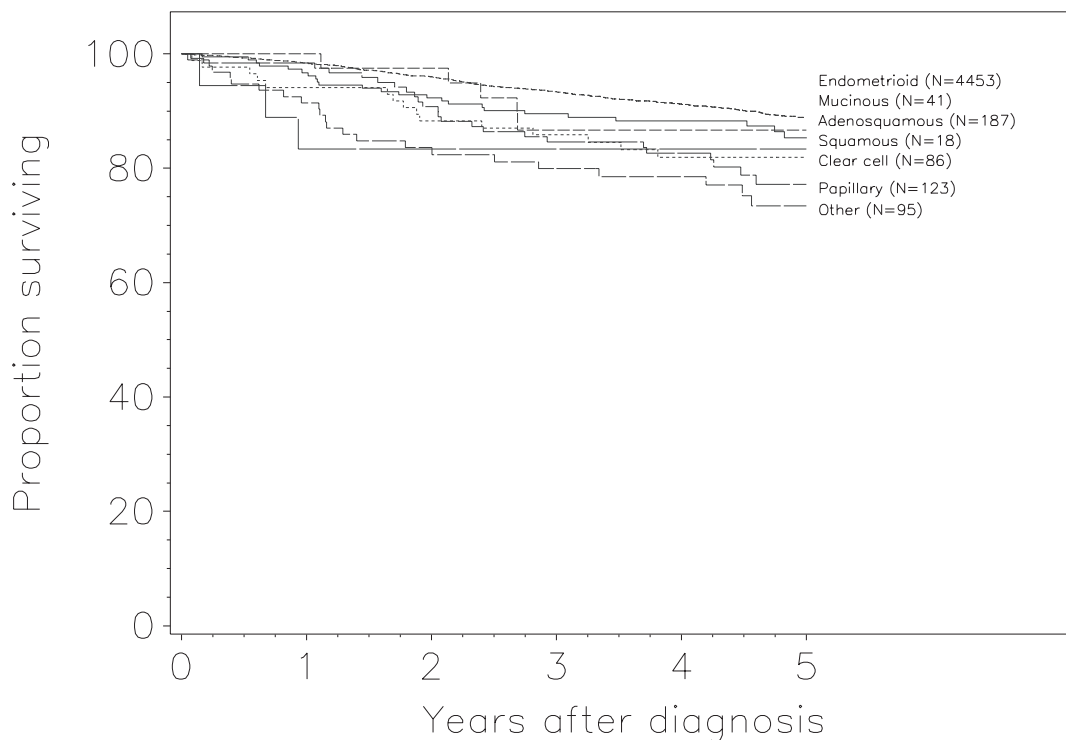


Histotype	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Endometrioid	6231	63.3	95.6	90.8	86.9	83.8	81.2	Reference
Adenosquamous	317	62.9	91.6	85.2	80.7	78.8	76.1	1.1 (0.9–1.4)
Mucinous	74	64.5	95.9	87.5	78.7	78.7	76.2	0.9 (0.6–1.5)
Papillary	335	66.4	84.9	70.2	59.1	54.4	48.4	1.7 (1.4–2.0)
Clear cell	185	67.6	85.9	73.1	66.1	61.5	59.7	1.6 (1.2–2.0)
Squamous	28	62.2	81.8	78.0	78.0	73.4	66.1	1.8 (0.9–3.7)
Other	285	62.4	82.2	67.6	61.2	56.0	50.4	2.0 (1.6–2.4)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

Fig. 14. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival by histological type,  $n = 7455$ .

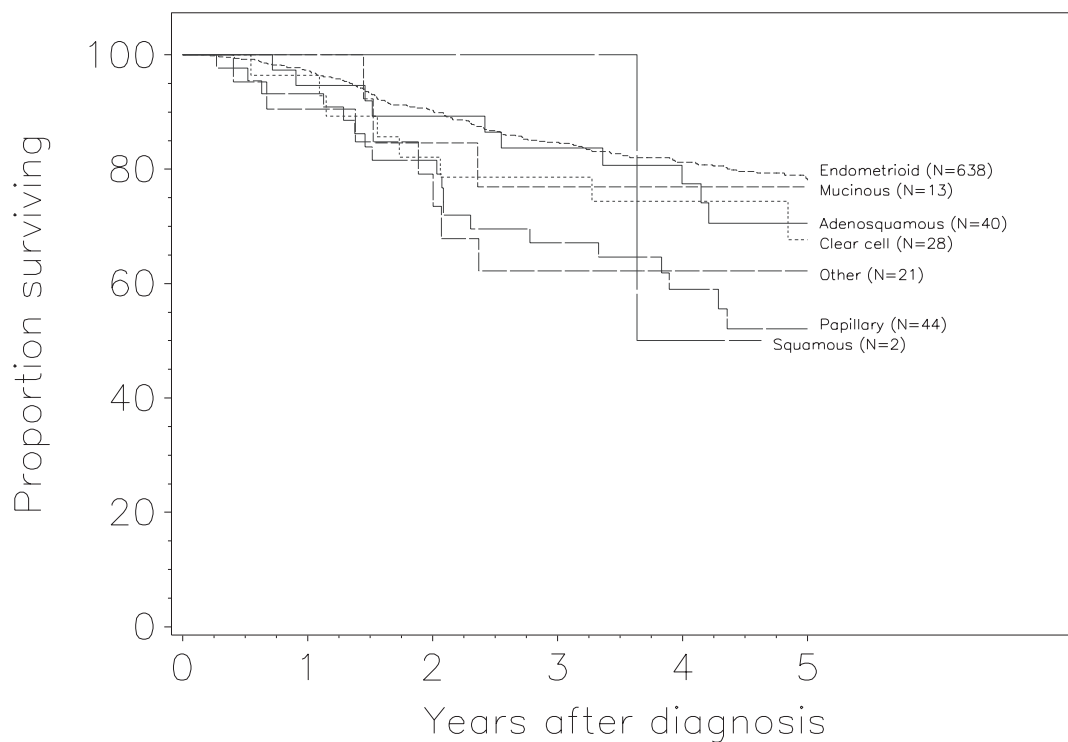




Histotype	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Endometrioid	4453	62.7	98.4	96.0	93.4	91.1	88.8	Reference
Adenosquamous	187	63.2	96.7	92.3	89.5	88.2	85.5	1.4 (0.9–2.1)
Mucinous	41	64.1	100.0	97.5	86.8	86.8	86.8	1.2 (0.5–2.8)
Papillary	123	63.7	98.4	90.7	84.5	82.5	76.8	2.2 (1.4–3.4)
Clear cell	86	66.1	94.2	88.3	85.8	81.9	81.9	1.9 (1.1–3.2)
Squamous	18	61.9	83.3	83.3	83.3	83.3	83.3	2.7 (0.9–8.4)
Other	95	63.3	91.4	83.4	79.7	78.4	72.8	2.8 (1.8–4.3)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

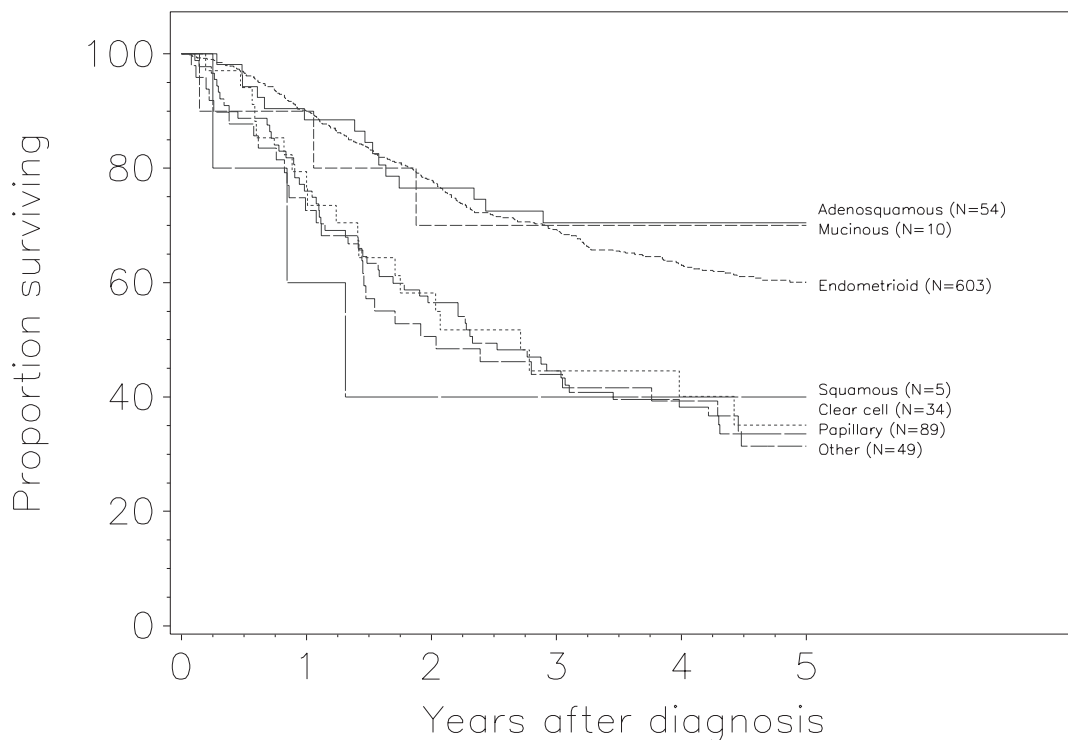
Fig. 15. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage I patients by histological type, n = 5003.



Histotype	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Endometrioid	638	63.1	97.3	90.4	84.7	81.1	78.0	Reference
Adenosquamous	40	60.1	94.8	89.3	83.6	77.6	69.4	1.3 (0.7–2.6)
Mucinous	13	67.2	100.0	84.6	76.9	76.9	76.9	1.1 (0.3–3.8)
Papillary	44	68.4	93.2	81.5	67.1	59.1	50.9	2.4 (1.4–4.0)
Clear cell	28	68.0	96.4	82.1	78.3	74.1	68.6	1.5 (0.7–3.1)
Squamous	2	66.5	100.0	100.0	100.0	50.0	–	1.9 (0.3–13.8)
Other	21	64.4	90.0	79.1	62.1	62.1	62.1	2.3 (1.1–4.6)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

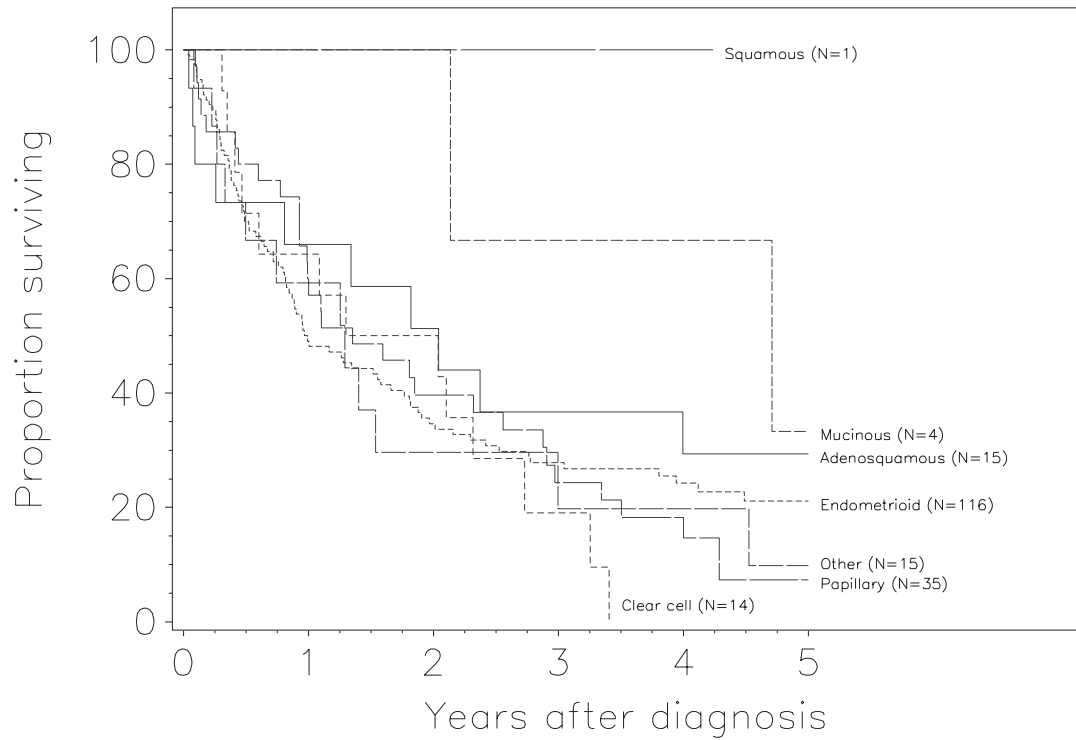
Fig. 16. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage II patients by histological type,  $n = 786$ .



Histotype	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Endometrioid	603	62.0	90.0	77.9	69.4	63.2	59.9	Reference
Adenosquamous	54	61.7	88.6	76.6	70.4	70.4	70.4	0.9 (0.5–1.4)
Mucinous	10	62.5	90.0	70.0	70.0	70.0	70.0	0.9 (0.3–3.0)
Papillary	89	65.3	76.1	56.4	44.4	37.9	33.1	1.9 (1.4–2.6)
Clear cell	34	66.7	76.5	58.1	44.4	40.4	35.0	1.4 (0.9–2.3)
Squamous	5	60.4	60.0	40.0	40.0	40.0	40.0	2.8 (0.8–9.3)
Other	49	66.0	72.6	50.6	43.9	39.3	31.7	2.0 (1.4–2.9)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

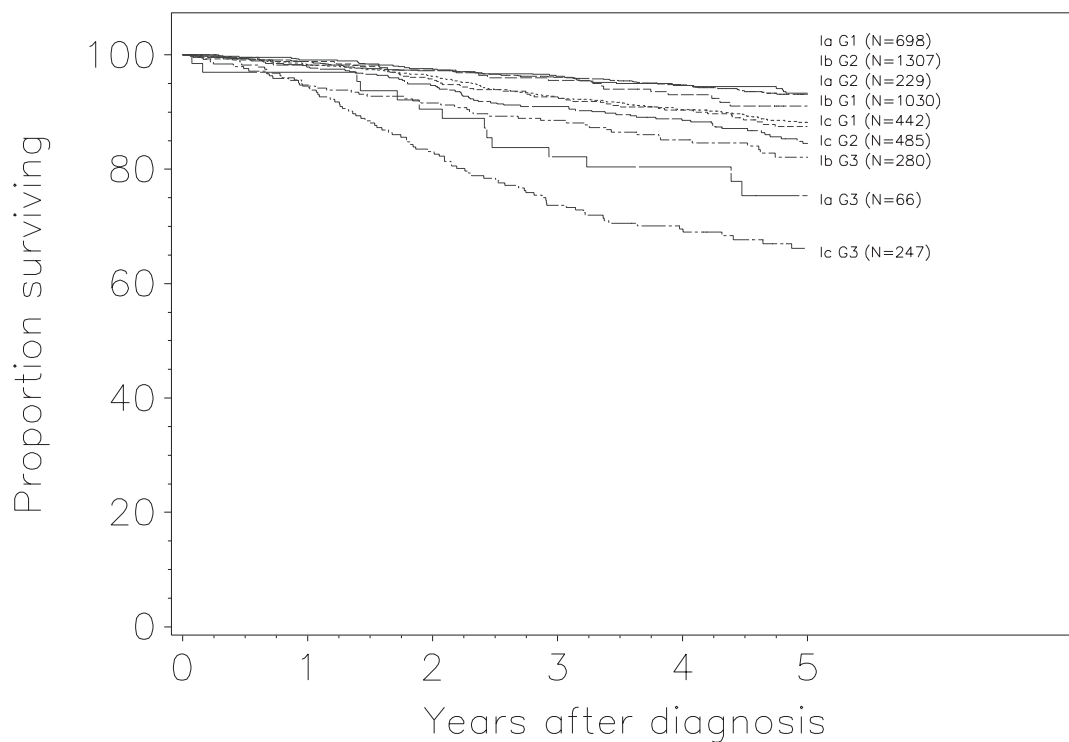
Fig. 17. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage III patients by histological type, n=844.



Histotype	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Endometrioid	116	64.7	49.3	35.0	28.0	24.5	20.8	Reference
Adenosquamous	15	64.6	65.5	51.0	36.4	29.1	29.1	0.7 (0.3–1.5)
Mucinous	4	67.5	100.0	100.0	66.7	66.7	33.3	0.6 (0.2–2.2)
Papillary	35	68.4	57.1	39.6	24.3	17.9	6.0	1.2 (0.8–2.0)
Clear cell	14	65.7	64.3	50.0	19.2	–	–	1.3 (0.7–2.4)
Squamous	1	48.0	100.0	100.0	100.0	100.0	–	–
Other	15	62.7	58.6	27.4	18.2	18.2	9.1	1.7 (0.9–3.4)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

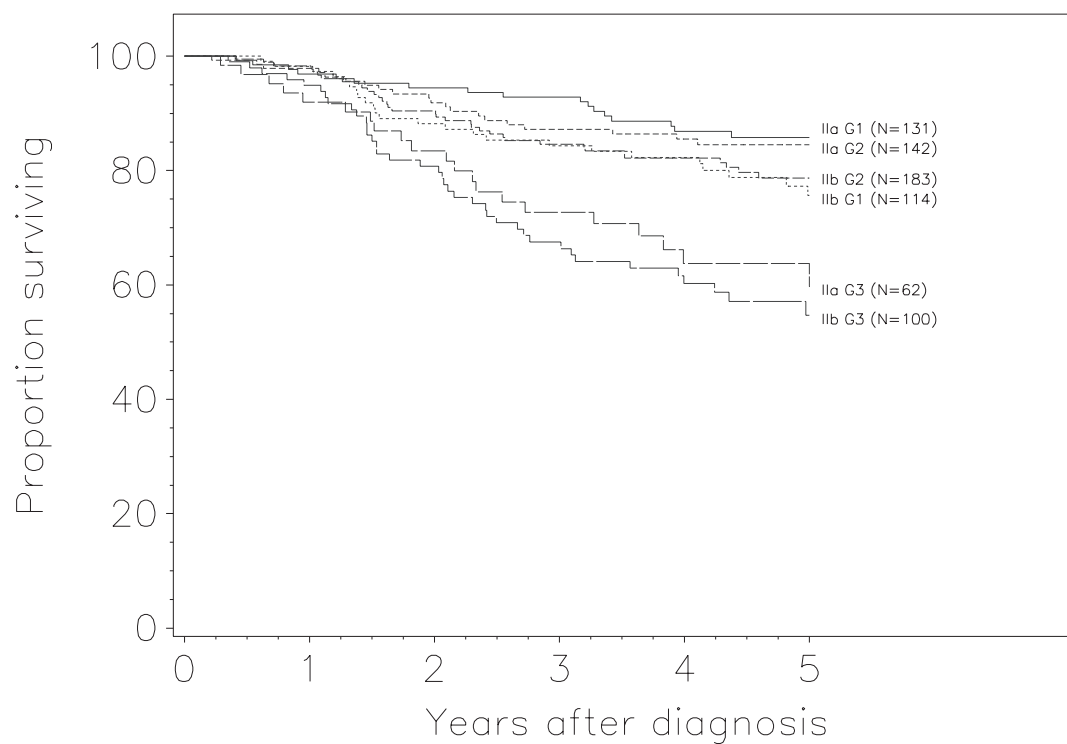
Fig. 18. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage IV patients by histological type,  $n=200$ .



Stage/Grade	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Ia G1	698	58.2	99.1	97.6	96.3	94.6	93.3	Reference
Ib G1	1030	63.6	98.3	96.2	92.6	90.4	88.1	1.5 (1.0–2.1)
Ic G1	442	65.7	98.9	95.8	92.6	90.2	87.3	1.4 (0.9–2.1)
Ia G2	229	62.8	98.2	97.4	95.5	92.9	90.7	1.0 (0.6–1.7)
Ib G2	1307	61.8	98.8	97.3	96.0	94.7	93.0	0.9 (0.6–1.3)
Ic G2	485	66.0	97.9	94.7	90.9	88.4	84.4	1.7 (1.2–2.5)
Ia G3	66	65.2	96.9	90.5	82.2	80.3	74.8	3.4 (1.8–6.2)
Ib G3	280	63.6	94.6	91.6	88.5	85.0	82.0	2.4 (1.6–3.6)
Ic G3	247	65.4	94.7	83.1	73.7	69.4	66.2	4.6 (3.1–6.7)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

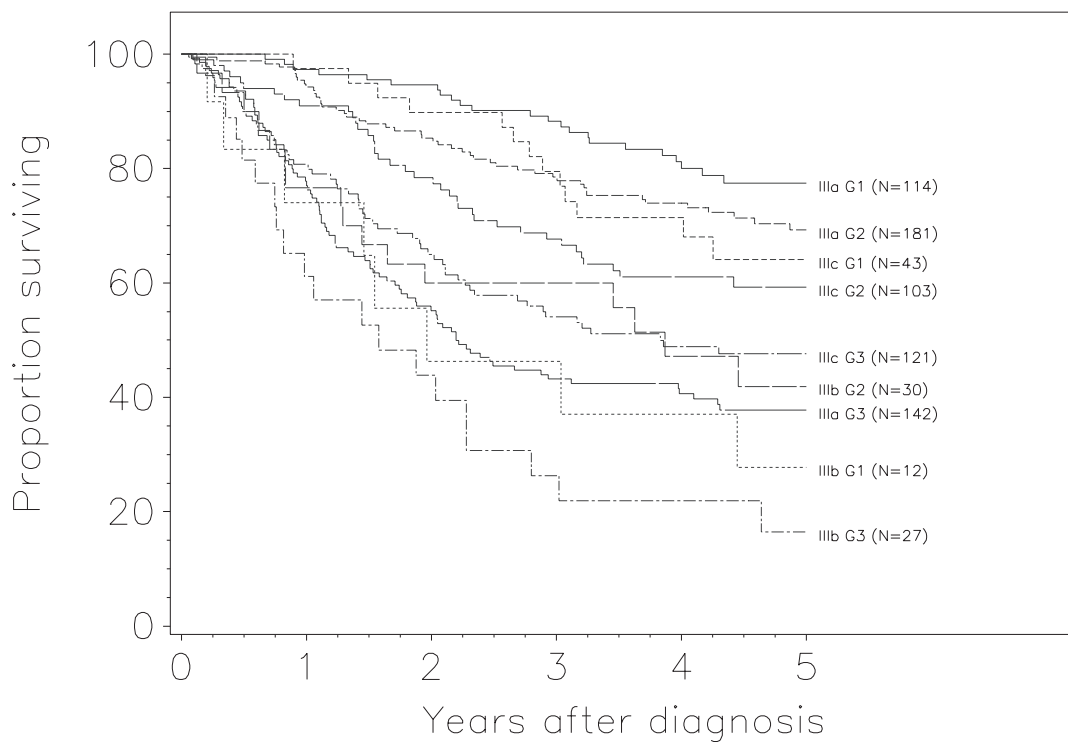
Fig. 19. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage I patients by surgical stage and grade of differentiation, n=4784.



Stage/Grade	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
IIa G1	131	62.2	96.9	94.5	92.9	86.8	85.6	Reference
IIb G1	114	61.9	98.2	88.2	84.3	82.2	75.7	1.4 (0.8–2.6)
IIa G2	142	63.7	97.9	91.9	87.2	85.5	84.3	1.1 (0.6–2.1)
IIb G2	183	63.2	98.3	90.4	84.6	81.9	78.3	1.3 (0.7–2.3)
IIa G3	62	65.2	91.9	83.5	72.6	64.2	61.1	2.8 (1.5–5.2)
IIb G3	100	65.2	94.9	80.9	67.6	60.3	54.9	3.4 (2.0–6.0)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

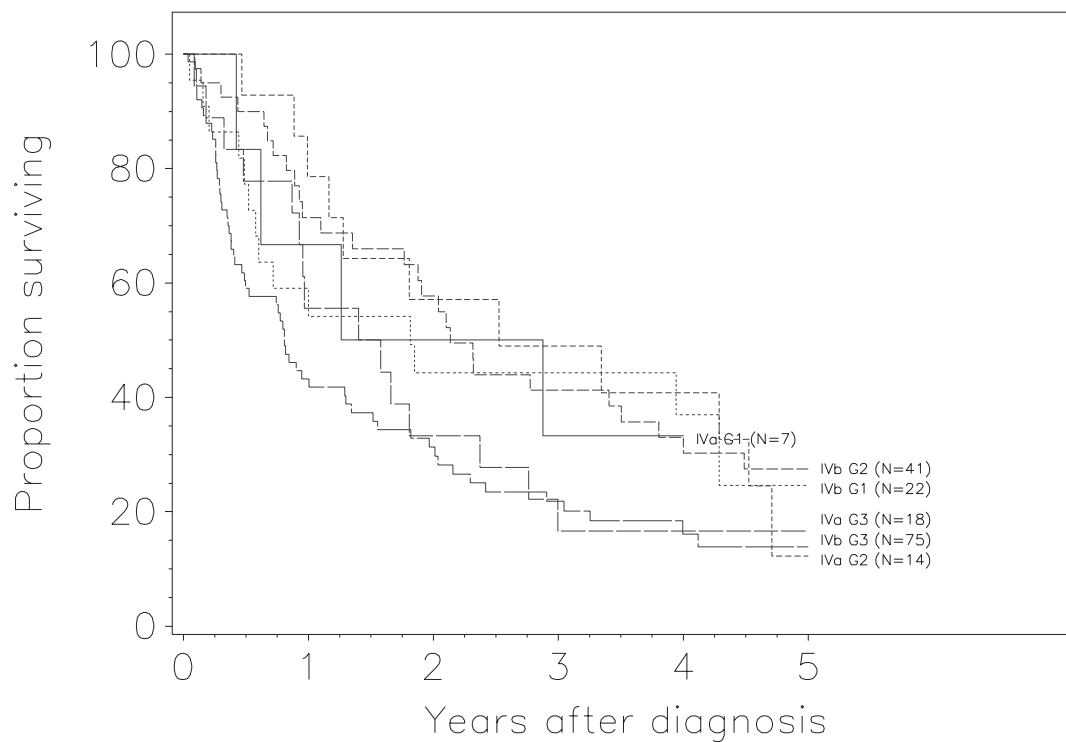
Fig. 20. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage II patients by surgical stage and grade of differentiation,  $n = 732$ .



Stage/Grade	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
IIIa G1	114	61.6	97.4	94.7	88.2	81.0	76.9	Reference
IIIb G1	12	65.3	73.9	46.2	46.2	37.0	24.6	5.6 (2.4–12.8)
IIIc G1	43	58.0	97.6	90.0	79.6	70.7	62.1	2.1 (1.0–4.1)
IIIa G2	181	62.7	94.3	85.4	78.5	73.8	69.4	1.3 (0.8–2.2)
IIIb G2	30	69.6	76.7	60.0	60.0	48.0	42.7	2.9 (1.5–5.5)
IIIc G2	103	60.4	91.0	78.5	67.7	60.7	59.0	2.6 (1.6–4.3)
IIIa G3	142	65.6	77.1	55.1	43.0	40.6	37.5	3.7 (2.3–5.8)
IIIb G3	27	69.5	61.5	44.6	26.7	22.3	17.3	5.2 (2.8–9.6)
IIIc G3	121	61.4	80.8	65.0	54.0	48.9	47.4	3.5 (2.2–5.6)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

Fig. 21. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage III patients by surgical stage and grade of differentiation, n=773.

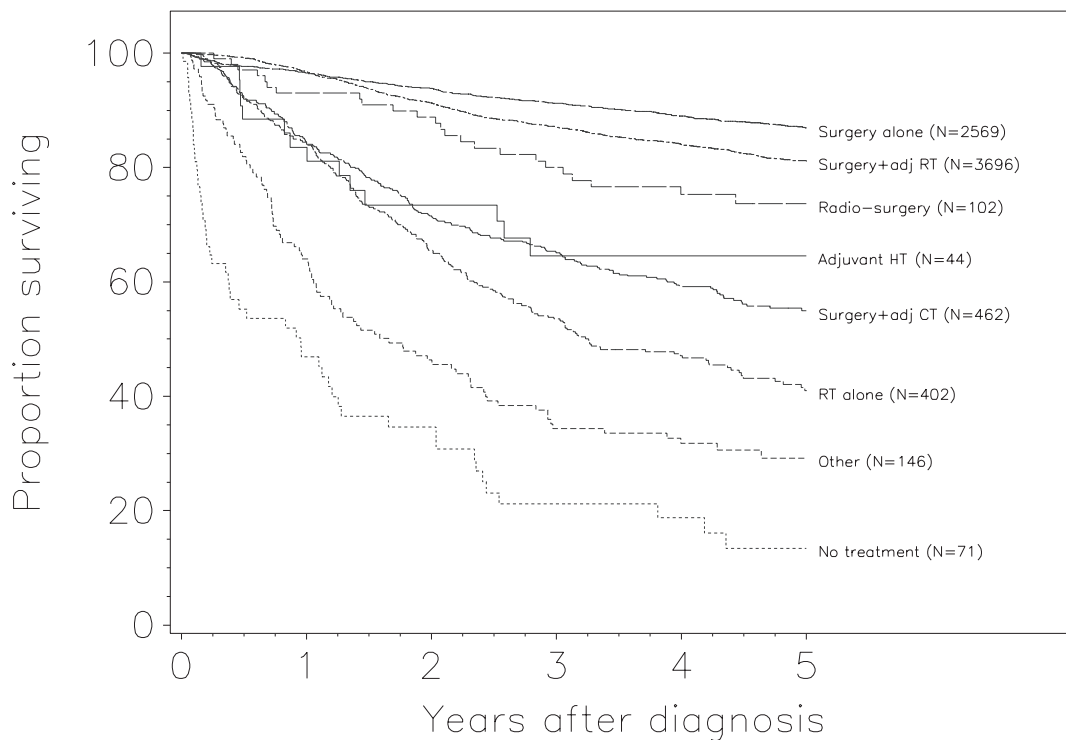


Stage/Grade	Patients ( <i>n</i> )	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
IVa G1	7	64.0	69.2	51.9	34.6	34.6	–	Reference
IVb G1	22	64.4	53.5	43.8	43.8	37.0	26.5	1.2 (0.4–3.8)
IVa G2	14	64.6	78.6	57.1	49.5	41.3	13.8	0.7 (0.2–3.0)
IVb G2	41	66.6	71.8	58.0	41.4	33.1	25.8	0.9 (0.3–2.8)
IVa G3	18	63.5	55.6	33.3	16.7	16.7	16.7	1.6 (0.5–5.4)
IVb G3	75	64.4	43.8	31.7	22.0	16.2	13.3	2.0 (0.6–6.0)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

Fig. 22. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage IV patients by surgical stage and grade of differentiation, *n* = 177.

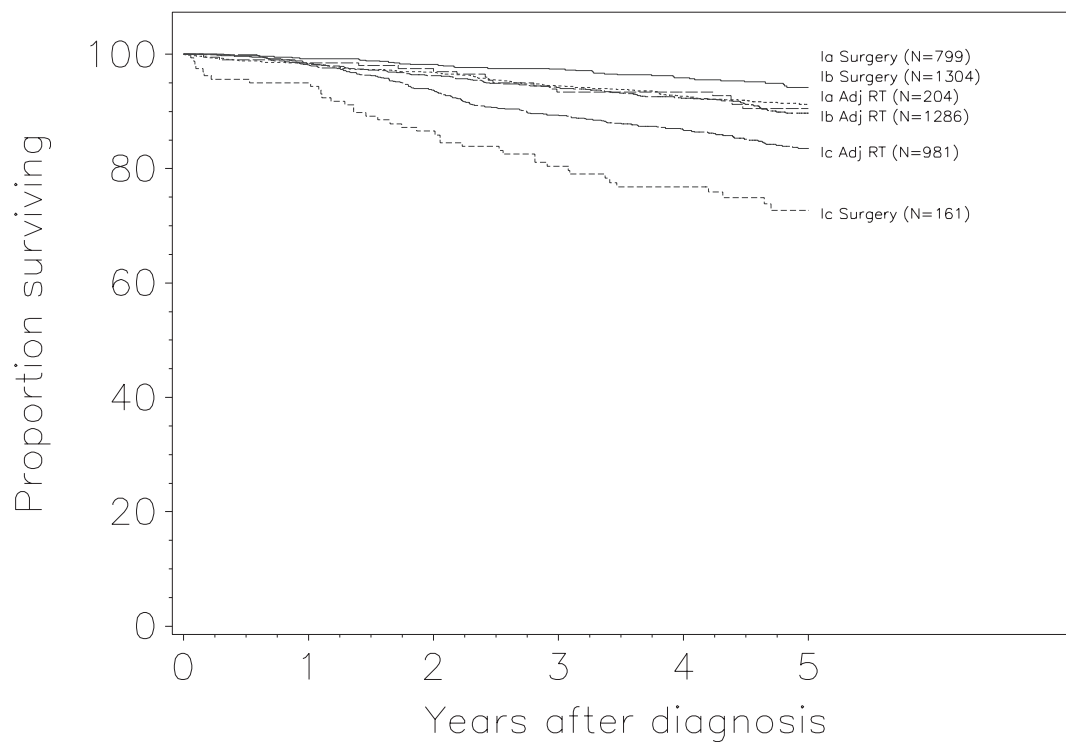




Treatment	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
No treatment	71	73.2	47.8	35.1	21.5	19.3	12.9	5.5 (4.0–7.7)
Surgery alone	2569	62.0	96.5	93.8	91.2	88.9	86.9	Reference
RT alone	402	73.6	84.6	65.7	53.5	46.8	40.9	1.6 (1.2–2.0)
Radio-surgery	102	61.8	93.0	88.7	79.9	75.0	73.2	1.1 (0.7–1.7)
Surgery + adj RT	3696	63.7	96.8	91.3	87.1	84.0	81.0	0.8 (0.7–1.0)
Surgery + adj CT	462	59.6	84.0	71.5	65.1	59.2	54.9	1.4 (1.2–1.8)
Adjuvant HT	44	65.7	83.5	73.1	64.3	64.3	64.3	1.2 (0.7–2.1)
Other	146	65.9	64.3	46.5	34.7	32.1	29.8	3.0 (2.3–3.9)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

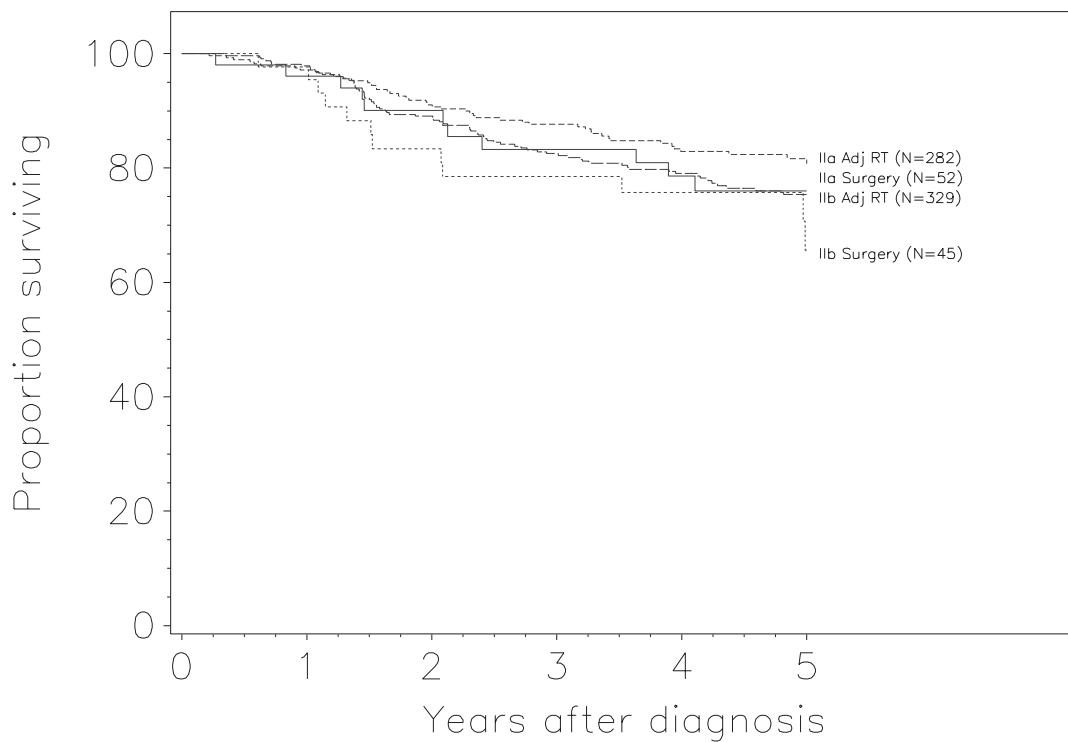
Fig. 23. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival by mode of treatment, n = 7492.



Stage/Treatment	Patients ( <i>n</i> )	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Ia Surgery	799	58.4	99.2	98.2	97.4	95.9	94.2	Reference
Ib Surgery	1304	62.8	98.3	96.8	94.5	92.7	91.2	1.5 (1.0–2.1)
Ic Surgery	161	69.2	94.9	86.5	80.3	76.5	72.4	3.4 (2.2–5.2)
Ia Adj RT	204	62.4	98.5	97.5	93.4	93.4	90.1	1.5 (0.8–2.6)
Ib Adj RT	1286	62.6	98.5	96.2	94.2	92.3	89.8	1.6 (1.1–2.3)
Ic Adj RT	981	65.4	98.1	93.7	89.4	86.7	83.4	2.4 (1.7–3.5)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

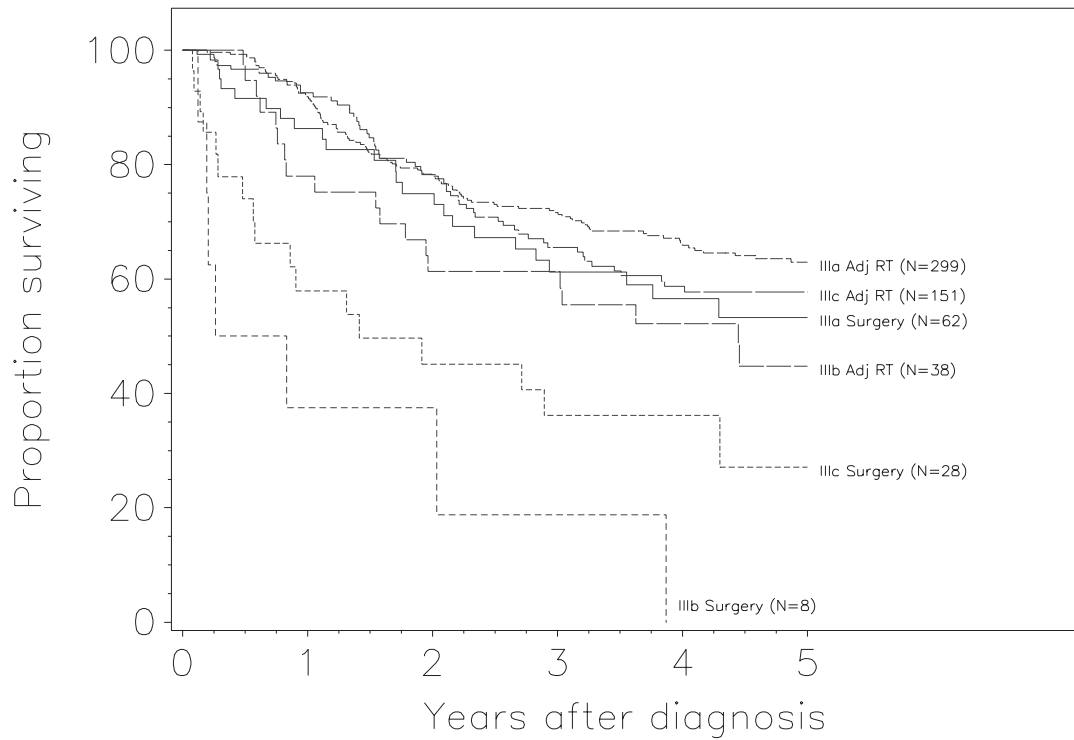
Fig. 24. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage I patients by surgical stage and mode of treatment,  $n = 4735$ .



Stage/Treatment	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
IIa Surgery	52	62.8	96.1	89.8	83.2	78.5	75.8	Reference
IIb Surgery	45	66.3	97.8	83.6	78.6	75.7	68.2	1.0 (0.5–2.1)
IIa Adj RT	282	63.8	97.1	91.1	87.6	82.9	81.2	0.7 (0.4–1.4)
IIb Adj RT	329	63.1	97.9	89.0	82.5	78.9	74.9	0.9 (0.5–1.7)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age and country.

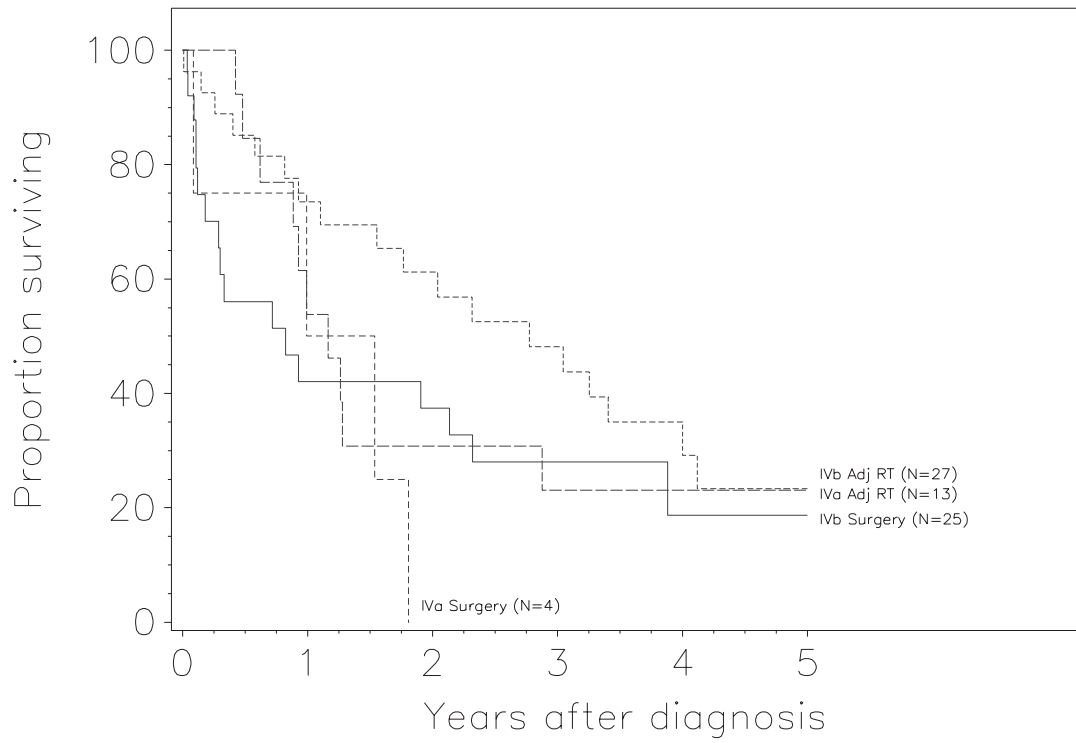
Fig. 25. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage II patients by surgical stage and mode of treatment, *n* = 708.



Stage/Treatment	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
IIIa Surgery	62	66.8	86.4	75.3	61.4	57.0	53.9	Reference
IIIb Surgery	8	70.3	37.5	37.5	18.8	—	—	4.7 (1.9–11.6)
IIIc Surgery	28	63.6	58.5	45.5	36.4	36.4	28.3	3.3 (1.7–6.4)
IIIa Adj RT	299	63.8	91.9	78.0	71.6	66.2	62.7	0.7 (0.5–1.2)
IIIb Adj RT	38	69.2	78.4	61.6	61.6	52.3	44.6	1.1 (0.6–2.0)
IIIc Adj RT	151	62.0	92.6	78.3	65.5	58.7	57.4	1.0 (0.6–1.6)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age and country.

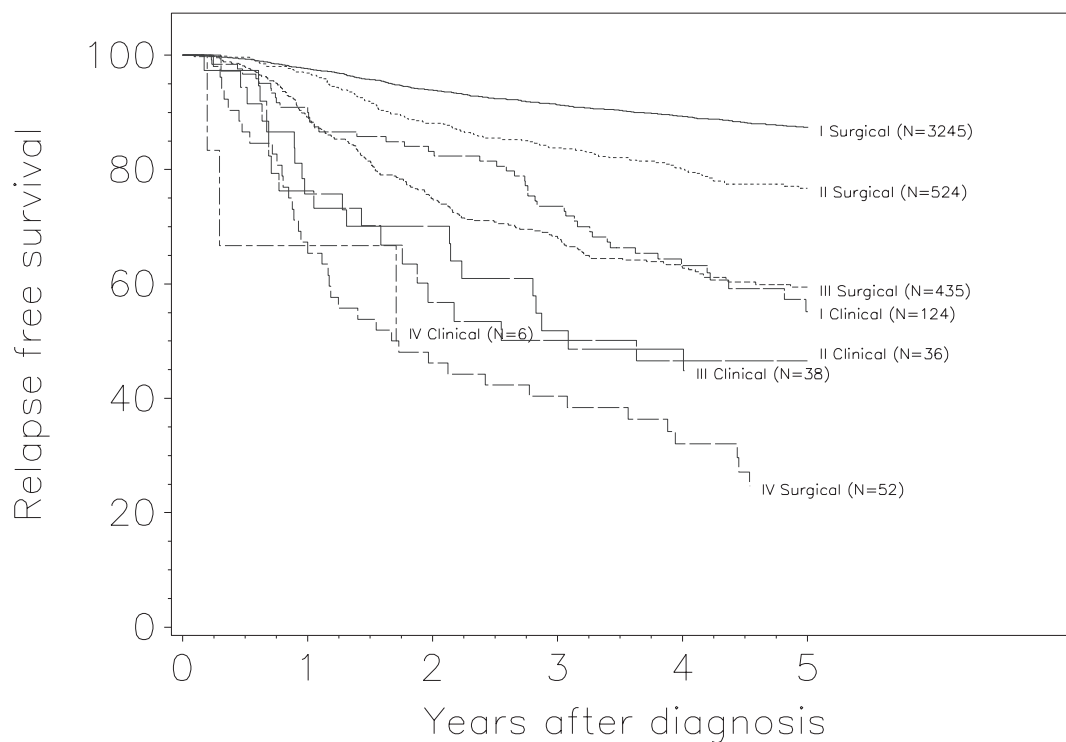
Fig. 26. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage III patients by surgical stage and mode of treatment,  $n = 586$ .



Stage/Treatment	Patients (n)	Mean age (yr)	Overall survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
IVa Surgery	4	66.3	50.0	–	–	–	–	Reference
IVb Surgery	25	66.2	44.7	39.7	28.4	18.9	18.9	0.8 (0.2–3.6)
IVa Adj RT	13	63.3	53.8	30.8	23.1	23.1	23.1	0.9 (0.2–4.9)
IVb Adj RT	27	66.8	73.1	60.5	47.6	33.3	18.5	0.4 (0.1–1.9)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age and country.

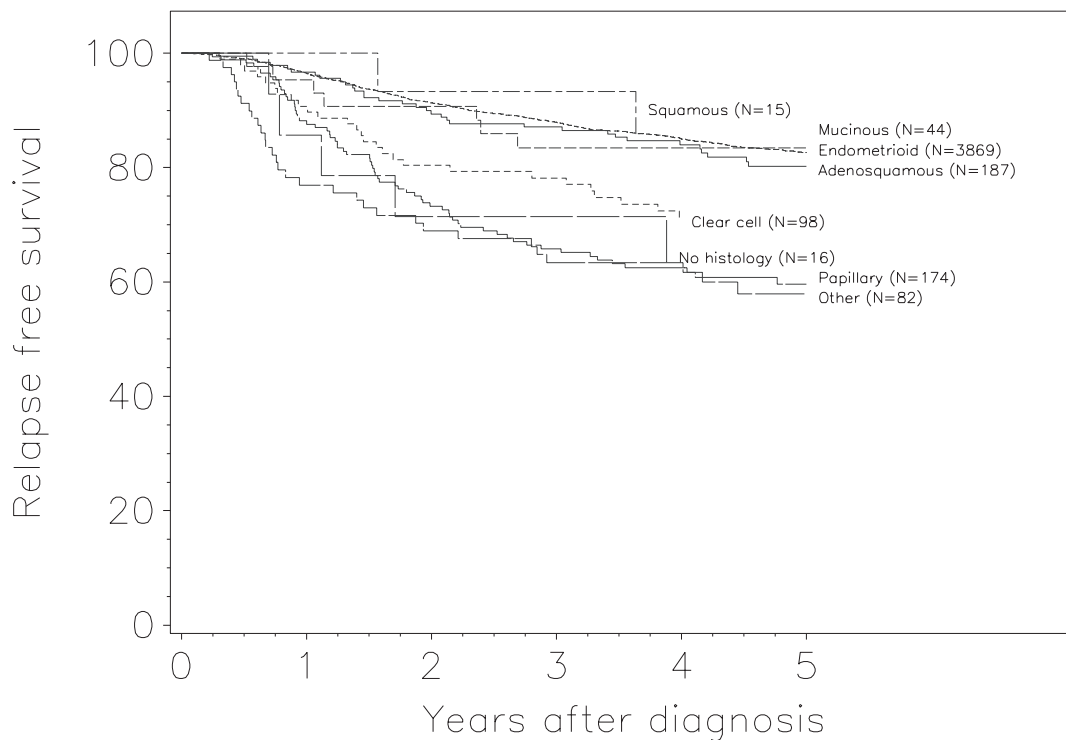
Fig. 27. Carcinoma of the corpus uteri: patients treated in 1996–98. Survival in Stage IV patients by surgical stage and mode of treatment, n = 69.



Stage/Treatment	Patients (n)	Mean age (yr)	Relapse-free survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
I Surgical	3245	62.4	97.6	93.9	91.4	89.2	87.3	Reference
II Surgical	524	63.2	96.9	88.1	83.8	80.0	76.4	2.0 (1.6–2.5)
III Surgical	435	62.0	89.2	75.0	68.3	62.9	59.1	4.6 (3.8–5.6)
IV Surgical	52	63.1	65.4	46.2	40.3	31.8	23.1	11.9 (8.4–16.9)
I Clinical	124	72.7	90.9	83.2	73.7	63.0	55.6	2.3 (1.7–3.2)
II Clinical	36	71.9	76.8	57.6	50.8	47.2	47.2	4.9 (3.0–7.9)
III Clinical	38	67.9	76.0	70.4	52.4	49.0	44.4	3.7 (2.3–6.0)
IV Clinical	6	62.2	66.7	50.0	50.0	50.0	50.0	7.7 (2.4–24.1)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

Fig. 28. Carcinoma of the corpus uteri: patients treated in 1996–98. Relapse-free survival by mode of staging,  $n=4460$ .



Histotype	Patients (n)	Mean age (yr)	Relapse-free survival (%) at					Hazards ratio <sup>a</sup> (95% CI)
			1 year	2 years	3 years	4 years	5 years	
Endometrioid	3869	62.7	96.5	91.4	87.9	85.0	82.5	Reference
Adenosquamous	187	62.7	96.7	89.4	87.1	84.0	79.8	0.9 (0.7–1.3)
Mucinous	44	63.3	95.4	90.7	83.6	83.6	83.6	1.2 (0.6–2.4)
Papillary	174	65.7	87.7	73.3	65.8	62.3	59.2	1.9 (1.4–2.4)
Clear cell	98	66.5	90.8	80.3	78.1	71.0	71.0	1.4 (0.9–2.0)
Squamous	15	60.4	100.0	93.3	93.3	85.6	85.6	1.2 (0.3–4.7)
Other	82	60.7	77.2	69.2	63.7	63.7	57.2	3.0 (2.1–4.4)

<sup>a</sup>Hazards ratio and 95% Confidence Intervals obtained from a Cox model adjusted for age, stage and country.

Fig. 29. Carcinoma of the corpus uteri: patients treated in 1996–98. Relapse-free survival by histological type, n=4485.

Table 30  
Carcinoma of the corpus uteri: patients treated in 1996–98. Multivariate analysis

Strata	Hazards ratios (95% CI) <sup>a</sup>			
	Stage I	Stage II	Stage III	Stage IV
<b>Age</b>				
Aged <50	Reference	Reference	Reference	Reference
Aged 50+	2.03 (1.33–3.09)	1.62 (0.90–2.92)	2.26 (1.44–3.54)	0.53 (0.25–1.11)
<b>Histological type</b>				
Endometrioid	Reference	Reference	Reference	Reference
Adenosquamous	1.33 (0.89–2.00)	1.06 (0.55–2.06)	0.74 (0.46–1.21)	0.61 (0.29–1.29)
Mucinous	1.06 (0.44–2.59)	1.24 (0.38–4.06)	0.70 (0.22–2.25)	0.93 (0.25–3.40)
Papillary	1.97 (1.28–3.04)	2.23 (1.27–3.90)	1.73 (1.27–2.35)	1.13 (0.67–1.89)
Clear cell	1.33 (0.79–2.25)	1.37 (0.64–2.94)	1.40 (0.86–2.28)	1.11 (0.58–2.11)
Squamous	1.54 (0.49–4.83)	0.96 (0.13–7.26)	2.75 (0.83–9.08)	–
Other	2.11 (1.35–3.31)	1.84 (0.90–3.77)	1.78 (1.22–2.59)	1.09 (0.55–2.14)
No histology	1.52 (0.21–11.2)	12.7 (3.57–44.9)	0.37 (0.05–2.71)	1.06 (0.35–3.22)
<b>Grade</b>				
Grade 1	Reference	Reference	Reference	Reference
Grade 2	1.41 (1.15–1.73)	0.86 (0.58–1.27)	1.31 (0.92–1.86)	0.74 (0.40–1.37)
Grade 3	2.70 (2.14–3.40)	1.92 (1.26–2.90)	2.37 (1.70–3.31)	1.41 (0.82–2.44)
Grade unknown	1.35 (0.87–2.09)	1.19 (0.63–2.25)	1.72 (1.06–2.77)	2.03 (0.98–4.21)
<b>Myometrial invasion</b>				
No myometrial invasion	Reference	Reference	Reference	Reference
Myometrial invasion ≤50%	1.21 (0.89–1.65)	1.17 (0.46–3.01)	0.88 (0.44–1.76)	0.88 (0.30–2.55)
Myometrial invasion >50%	2.18 (1.60–2.98)	1.58 (0.63–4.00)	1.43 (0.74–2.76)	0.89 (0.35–2.29)
Unknown	2.14 (1.48–3.10)	1.82 (0.66–4.99)	2.08 (1.04–4.18)	1.29 (0.50–3.35)

<sup>a</sup> From Cox proportional hazard regression model, also adjusted for country.