

Chapter 20

Cancer of the Fallopian Tube

Carol L. Kosary

INTRODUCTION

Cancer of the fallopian tube is very rare, accounting for fewer than 1% of all cancers of the female genital organs. In this cancer, tumor develops from cells inside the fallopian tubes. It is much more common for a tumor to metastasize to the fallopian tube from either the ovary or endometrium than for a primary cancer to develop inside the fallopian tube. Even major medical centers may see no more than a handful of cases of fallopian tube cancer over several years. The majority of the cases are diagnosed in women age 50 and older.

MATERIALS AND METHODS

Between 1988 and 2001, there were 1,033 cases of cancer of the fallopian tube diagnosed in SEER. The following were excluded from the analysis: patients for whom fallopian tube cancer was not the first primary, cases identified through autopsy or death certificate only, persons of unknown race, cases without active follow-up or alive with no survival time, patients less than 20 years old, cases without microscopic confirmation, in situ cancers, sarcomas, and carcinoids. After these exclusions, 769 adult cases remained for analysis (Table 20.1).

RESULTS

Age

Among adults, 84% of the cases were diagnosed in women aged 50 and older, with 33% diagnosed in women aged 70 and older (Table 20.2).

Only slight differences are observed in 5-year survival rate by age for ages 50+ (Table 20.2). The 40-49 age group had better survival than the other age groups (Table 20.3). When broader age groups are used, there is a slight decrease in survival as age increases. While the survival rates for black females are based on few cases, the 5-year relative survival rate (73%) was higher than for white females (65%) (Table 20.3).

Geographic Location

Five-year relative survival rates in the 12 SEER areas represented in this study ranged from 76% in San Francisco-Oakland to 50% in San Jose-Monterey, both part of the Greater Bay area (Table 20.4).

Histology

Eighty-seven percent of the cases were categorized as adenocarcinoma (Table 20.5). There is not a substantial difference in survival by histology.

Table 20.1: Cancer of the Fallopian Tube: Number of Cases and Exclusions by Reason, 12 SEER Areas, 1988-2001

Number Selected/Remaining	Number Excluded	Reason for Exclusion/Selection
1,033	0	Select 1988-2001 diagnosis (Los Angeles for 1992-2001 only)
816	217	Select first primary only
810	6	Exclude death certificate only or at autopsy
802	8	Exclude unknown race; children (<20); no microscopic confirmation, carcinoids
802	0	Exclude alive with no survival time
788	14	Exclude in situ cancers
769	19	Exclude sarcomas

Table 20.2: Cancer of the Fallopian Tube: Number and Distribution of Cases and 1-, 2-, 3-, 5-, 8-, & 10-Year Relative Survival Rates (%) by Age (20+), 12 SEER Areas, 1988-2001

Age (Years)	Cases	Percent	Relative Survival Rate (%)					
			1-Year	2-Year	3-Year	5-Year	8-Year	10-Year
Total 20+	769	100.0	93.4	85.1	76.7	64.7	56.7	54.8
20-29	6	0.8	~	~	~	~	~	~
30-39	17	2.2	~	~	~	~	~	~
40-49	98	12.7	99.1	91.6	90.5	73.9	66.6	63.4
50-59	171	22.2	98.2	91.9	78.8	61.8	59.0	52.0
60-69	221	28.7	93.1	80.4	71.7	64.6	56.3	56.3
70-79	192	25.0	86.9	79.8	71.6	58.8	42.6	36.6
80+	64	8.3	88.1	81.2	73.1	61.2	56.3	56.3

Table 20.3: Cancer of the Fallopian Tube: Number of Cases, Median Survival Time (Months) and 5-Year Survival Rates (%) by Race and Age (20+), 12 SEER Areas, 1988-2001

Race/Age (Years)	Cases	Median Survival Time (Months)	5-Year Survival Rate (%)		
			Observed	Expected	Relative
All Races, 20+	769	78.2	58.0	89.7	64.7
White, 20+	677	76.0	58.0	89.5	64.8
Black, 20+	49	> 120	66.4	88.2	72.7
All Races, 20-59	292	> 120	66.7	97.6	68.3
White, 20-59	248	> 120	65.9	97.7	67.5
Black, 20-59	21	~	~	~	~
All Races, 60-69	221	84.9	59.5	92.2	64.6
White, 60-69	189	102.5	60.2	92.5	65.1
Black, 60-69	21	~	~	~	~
All Races, 70+	256	53.7	47.1	78.6	60.0
White, 70+	240	58.2	48.4	78.6	61.5
Black, 70+	7	~	~	~	~

~ Statistic not displayed due to less than 25 cases.

Staging

The Federation Internationale de Gynecologie et d'Obstetrique (FIGO) and the American Joint Committee on Cancer (AJCC) have designated staging for cancers of the Fallopian Tube. The fifth edition of AJCC staging comprises (1):

Stage I: Tumor limited to one or both tubes, with or without ascites

Stage II: Tumor involves one or both tubes with pelvic extension and/or metastasis to the uterus or ovary or extension to other pelvic tissues.

Stage III: Tumor involves one or both tubes with peritoneal implants outside the pelvis and/or regional nodes.

Stage IV: Distant metastasis outside the peritoneal cavity.

Survival by Stage

Women diagnosed at age 60 or older are more likely to be diagnosed in stages III or IV (57%) than are women diagnosed under the age of 60 (42%) (Table 20.6).

Sparse numbers make it difficult to examine survival by stage and age. Five-year survival rates (%) are observed to decline with increased stage at diagnosis from 93% for stage I versus 40% for stage IV (Table 20.7 and Figure 20.1). Within stage, survival generally declines as years since diagnosis increases.

Conditional Survival

Five year relative survival rates, conditioned on years since diagnosis, are presented in Table 20.8 and Figure 20.2. For stages II-IV, increases in the 5-year survival rate are observed between diagnosis and 5 years past diagnosis. That is, the probability of surviving through the next 5 years generally increases as time since diagnosis increases. For women who have already survived five years, the survival rate for the next five years shows

Table 20.4: Cancer of the Fallopian Tube: Number and Distribution of Cases and 1-, 2-, 3-, 5-, 8-, & 10-Year Relative Survival Rates (%) by SEER Geographic Area, Ages 20+, 12 SEER Areas, 1988-2001

SEER Geographic Area	Cases	Percent	Relative Survival Rate (%)					
			1-Year	2-Year	3-Year	5-Year	8-Year	10-Year
Total	769	100.0	93.4	85.1	76.7	64.7	56.7	54.8
Atlanta and Rural Georgia	50	6.5	91.8	82.0	72.8	62.7	60.8	55.2
California								
Los Angeles - 1992+	131	17.0	90.9	86.1	83.5	73.0	68.5	68.5
Greater Bay Area	140	18.2	97.3	89.6	83.3	69.5	57.5	57.5
San Francisco-Oakland SMSA - 1988+	99	12.9	99.2	92.7	85.9	76.0	64.2	64.1
San Jose-Monterey - 1988+	41	5.3	91.3	81.9	76.6	49.8	39.1	39.1
Connecticut - 1988+	119	15.5	94.5	84.7	72.4	58.4	49.7	44.6
Detroit (Metropolitan) - 1988+	73	9.5	89.4	81.7	69.8	65.4	52.2	44.5
Hawaii - 1988+	15	2.0	~	~	~	~	~	~
Iowa - 1988+	68	8.8	87.3	76.7	72.1	51.2	40.1	34.0
New Mexico - 1988+	45	5.9	96.5	91.0	79.6	67.0	61.8	60.3
Seattle (Puget Sound) - 1988+	108	14.0	94.2	84.3	73.6	64.6	56.0	56.0
Utah - 1988+	20	2.6	~	~	~	~	~	~

~ Statistic not displayed due to less than 25 cases.

Table 20.5: Cancer of the Fallopian Tube: Number and Distribution of Cases and 5-Year Relative Survival Rates (RSR) (%) by Histology, Ages 20+, 12 SEER Areas, 1988-2001

Histology	ICD-O Code	Cases	Percent	5-Year RSR (%)
Total	8000-9989	769	100.0	64.7
Squamous	8050-8130	15	2.0	~
Adenocarcinoma	8140-8147,8160-8162,8180-8221,8250-8506,8520-8550,8570-8573,8940-8941	672	87.4	64.3
Other Specified Carcinomas	8030-8045,8150-8155,8170-8171,8230-8248,8510-8512,8560-8562,8580-8671	8	1.0	~
Carcinoma, NOS	8010-8022	44	5.7	72.3
Other Specified Types	8720-8790,8931-8932,8950-8979,8982,9000-9030,9060-9110,9350-9364,9380-9512,9530-9539	27	3.5	67.7
Choriocarcinoma	9100-9101	<6	~	~
All Other Specified Types	8720-8790,8931-8932,8950-8982,9000-9030,9060-9099,9102-9110,9350-9364,9380-9512,9530-9539	22	2.9	~
Unspecified	8000-8004	<6	~	~

~ Statistic not displayed due to less than 25 cases.

* NOS: Not Otherwise Specified

Table 20.6: Cancer of the Fallopian Tube: Number and Distribution of Cases by AJCC Stage (5th Edition) and Age (20+), 12 SEER Areas, 1988-2001

AJCC Stage	Age (Years)					
	Total 20+		20-59		60+	
	Cases	Percent	Cases	Percent	Cases	Percent
Total	769	100.0	292	100.0	477	100.0
I	204	26.5	107	36.6	97	20.3
II	102	13.3	43	14.7	59	12.4
III	81	10.5	30	10.3	51	10.7
IV	259	33.7	69	23.6	190	39.8
Unstaged	123	16.0	43	14.7	80	16.8

Table 20.7: Cancer of the Fallopian Tube: Number and Distribution of Cases and 1-, 2-, 3-, 5-, 8-, & 10-Year Relative Survival Rates (%) by AJCC Stage (5th Edition), Ages 20+, 12 SEER Areas, 1988-2001

AJCC Stage	Cases	Percent	Relative Survival Rate (%)					
			1-Year	2-Year	3-Year	5-Year	8-Year	10-Year
Total	769	100.0	93.4	85.1	76.7	64.7	56.7	54.8
I	204	26.5	99.3	98.3	96.6	92.9	87.0	85.7
II	102	13.3	98.6	96.7	92.1	74.1	64.6	64.6
III	81	10.5	90.3	83.4	72.8	66.4	57.8	54.0
IV	259	33.7	86.3	68.5	54.8	40.2	32.7	29.8
Unstaged	123	16.0	94.2	88.6	79.1	62.4	47.8	44.3

Table 20.8: Cancer of the Fallopian Tube: 5-Year Relative Survival Rates (%), Conditioned on Years Since Diagnosis, by AJCC Stage (5th Edition), Ages 20+, 12 SEER Areas, 1988-2001

AJCC Stage	5-Year Relative Survival Rate (%)					
	Years Since Diagnosis					
	0	1	2	3	4	5
Total	64.7	63.5	66.6	73.5	77.5	84.2
I	92.9	89.1	88.2	90.1	93.1	93.0
II	74.1	65.5	66.2	69.6	77.2	86.0
III	66.4	70.9	70.2	81.6	77.3	79.9
IV	40.2	42.2	49.6	58.7	59.1	73.8
Unstaged	62.4	56.1	54.5	59.7	66.9	71.1

much less variation by stage (93% for stage I to 74% for stage IV) than for females at diagnosis whose 5-year relative survival rates ranged from 93% (stage I) to 40% (stage IV).

DISCUSSION

Cancer of the fallopian tube is a very rare cancer. Women 40-49 have better survival than older women. Only small differences in survival between blacks and whites are observed with black females having the better survival.

These differences are based on few cases for black females. Stages III and IV are more common in women 60 years and older compared to women less than 60.

REFERENCE

1. Fleming ID, Cooper JS, Henson DE, Hutter RVP, Kennedy BJ, Murphy GP, O’Sullivan B, Sobin LH, Yarbro, JW (eds). AJCC Cancer Staging Manual, Fifth edition, American Joint Committee on Cancer. Philadelphia: Lippincott-Raven, 1997.

Figure 20.1: Cancer of the Fallopian Tube: Relative Survival Rates (%) by AJCC Stage (5th Edition), Ages 20+, 12 SEER Areas, 1988-2001

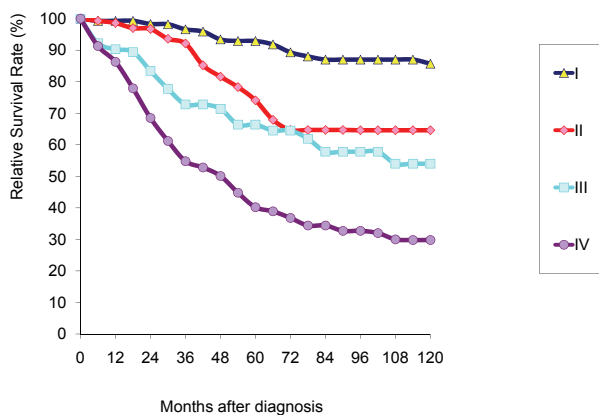


Figure 20.2: Cancer of the Fallopian Tube: 5-Year Relative Survival Rate (%), Conditioned on Years Since Diagnosis, by AJCC Stage (5th Edition), Ages 20+, 12 SEER Areas, 1988-2001

