

Treatment (Cancer-Directed Surgery)

Several studies have reported associations between the type of medical treatment given to cancer patients and socioeconomic and demographic factors, even after controlling for differences in clinical presentation (72–86). Age (72,75,76,81,82,86), race (74,77,78), marital status (84,85), geographic location (83), type of medical insurance (73), education (75,76,78,80,82), and income (75,79,80) have all been found to play a role. In this section, we describe socioeconomic patterns (as measured by the census tract poverty variable) in the surgical treatment given to patients with three types of cancer. Since published treatment recommendations (87) often refer to the American Joint Committee on Cancer 0–IV staging classification scheme (88), we present some of the results using this scheme instead of the localized-regional-distant summary staging scheme used elsewhere.

Non-Small-Cell Lung Cancer, Stages I or II

Surgical resection has been shown to confer a definitive benefit to patients with stage I or II non-small-cell lung cancer (89). Among men diagnosed with this type and stage of lung cancer, there was a consistent area socioeconomic gradient in surgery rates for each racial/ethnic group; those in the lowest census tract poverty group (highest SES group) had the

highest likelihood of undergoing surgery (Table 5.1, page 92, and Figure 5.1, page 89). Among women, the socioeconomic gradient was apparent only for non-Hispanic whites. Black women tended to be less likely to undergo surgery than other racial/ethnic groups (Figure 5.2, page 89).

Prostate Cancer, Localized or Regional Stage

The optimal course of treatment for nonmetastatic prostate cancer is controversial given the paucity of definitive evidence on the efficacy of aggressive therapies (radical prostatectomy or radiation therapy) compared to conservative management (hormonal therapy or observation) (90). This lack of a consensus on the therapeutic management of prostate cancer leads to variations in practice that may be linked to both clinical and nonclinical factors (78,91). Since radical prostatectomy is infrequently performed in older men, Figure 5.3, page 90, only shows surgery patterns among men under age 70 by race/ethnicity and area socioeconomic status. Table 5.2, page 93, however, contains surgery data for men aged under 70 as well as those aged 70 years or older. There were clear socioeconomic gradients in the frequency of prostatectomy for non-Hispanic white and black men aged under 70 years, with

the highest surgery frequency occurring in the lowest poverty group. The percentage of black patients receiving radical prostatectomy was the lowest among the four racial/ethnic groups within each area socioeconomic group. Radical prostatectomy was most common among Hispanic men, with only a slight drop in the frequency in the highest poverty group. There was no clear socioeconomic pattern in the frequency of surgery for Asian and Pacific Islanders.

socioeconomic group. BCS was performed less frequently among API women, however, than among other racial/ethnic groups. This was due to the greater likelihood of API women to undergo mastectomies (data not shown). These findings are similar to those reported in other, smaller studies (93–96). The percentage of women receiving BCS increased steadily in each socioeconomic group over the time period 1988–1998, though women in the lowest poverty group consistently showed the highest levels of BCS (Figure 5.5, page 91).

Breast Cancer, Stages I or II, <= 2 cm

Breast-conserving surgery has become the preferred method of treatment for many patients with stage I or II breast cancers (92). Among women diagnosed during 1995–1998 with stage I or II breast cancers, 2 cm or less in diameter, there was a consistent socioeconomic gradient in the percentage receiving breast-conserving surgery (BCS). For this analysis, BCS was defined to include partial or segmental mastectomy, quadrantectomy, tylectomy, wedge resection, nipple resection, lumpectomy, and excisional biopsy with or without dissection of axillary lymph nodes. BCS was most commonly performed in low poverty census tracts (high SES areas), and this relationship held for each racial/ethnic group (Table 5.3, page 93, and Figure 5.4, page 90). The percentage of black patients receiving BCS was somewhat higher than other racial/ethnic groups within each

Figure 5.1. Percentage of Stages I and II Non-Small-Cell Male Lung Cancer Patients Undergoing Surgery, 1995–1999

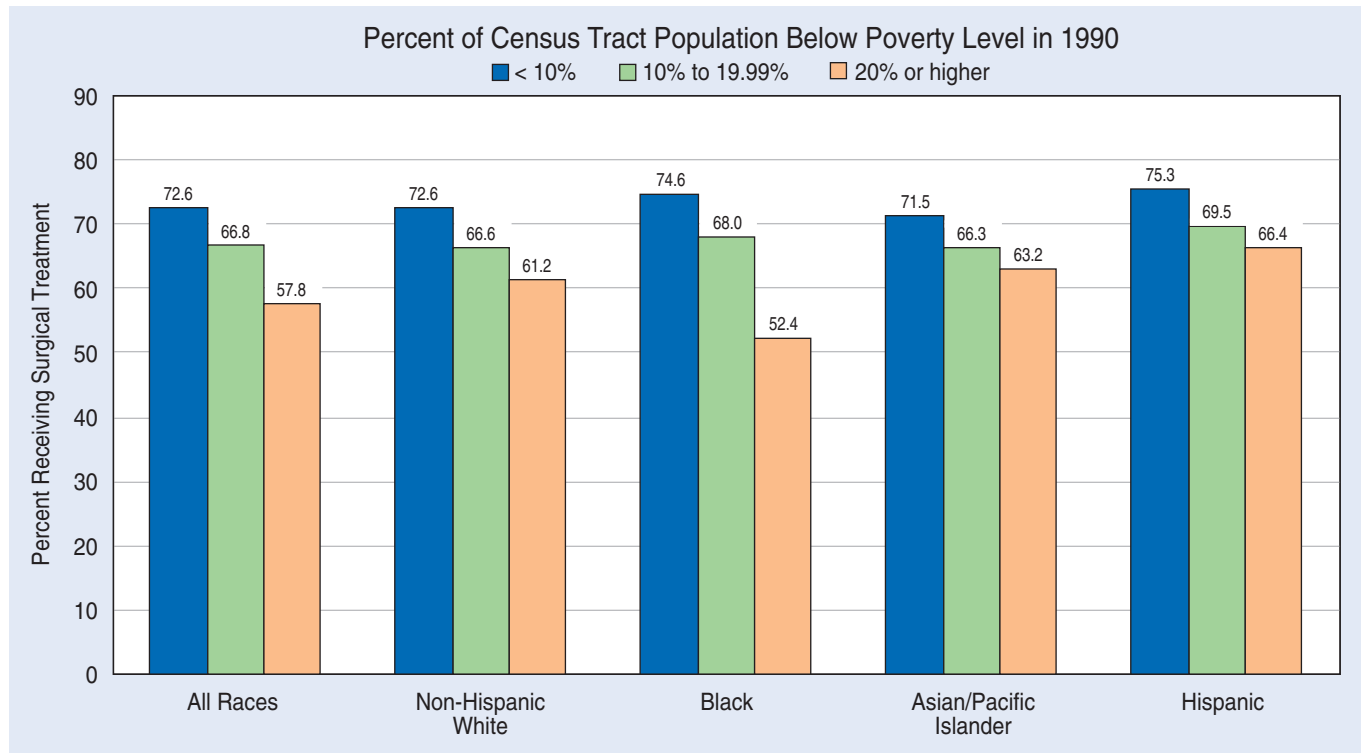
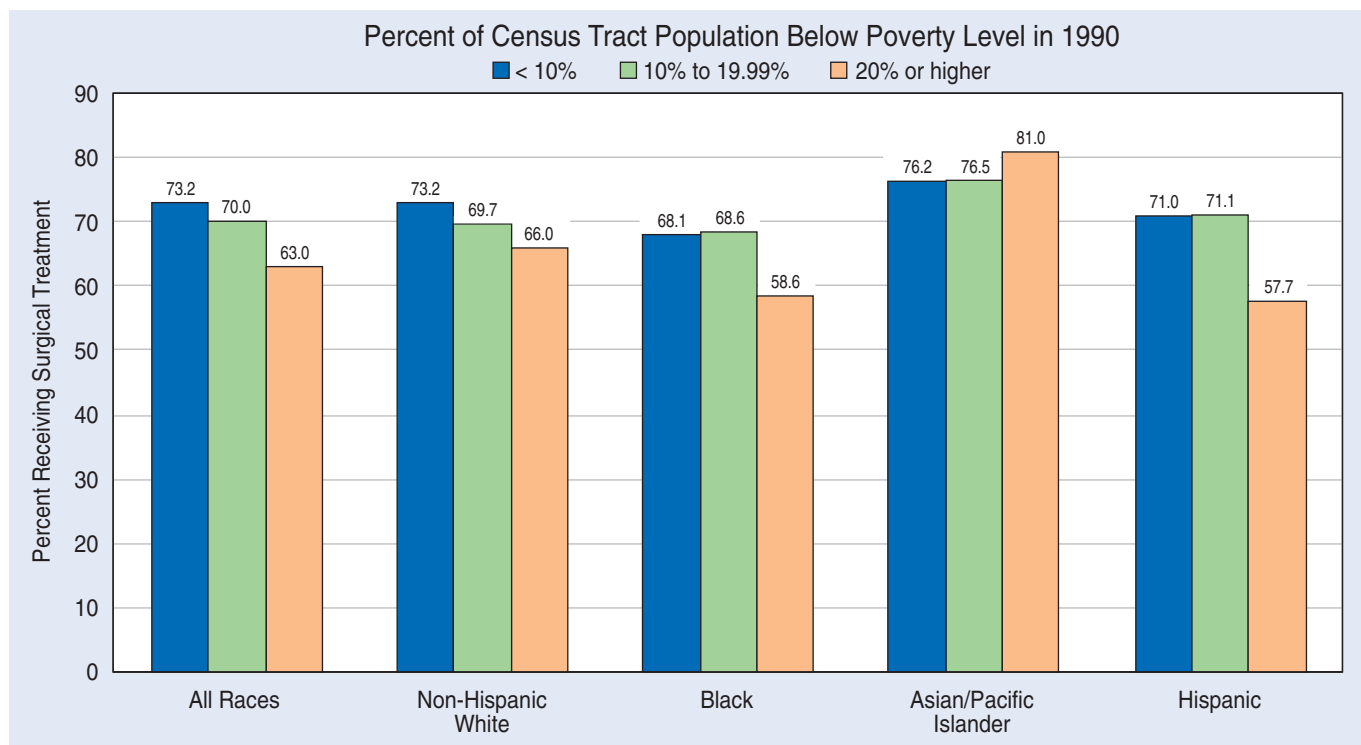


Figure 5.2. Percentage of Stages I and II Non-Small-Cell Female Lung Cancer Patients Undergoing Surgery, 1995–1999



Note: Based on data from 11 SEER registries. See “Data and Methods” for a list of SEER registries.

Figure 5.3. Percentage of SEER Localized- and Regional-Stage Prostate Cancer Patients Aged Less Than 70 Years Undergoing Radical Prostatectomy, 1995–1999

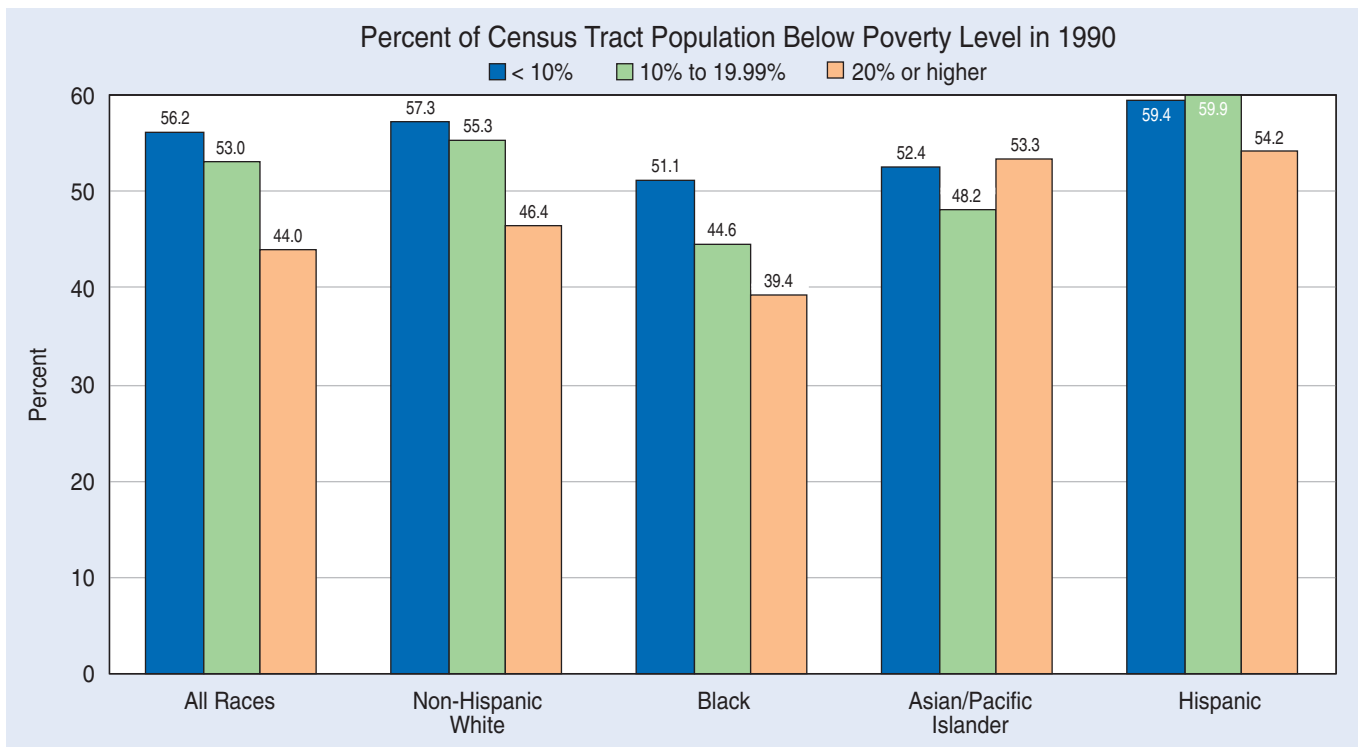
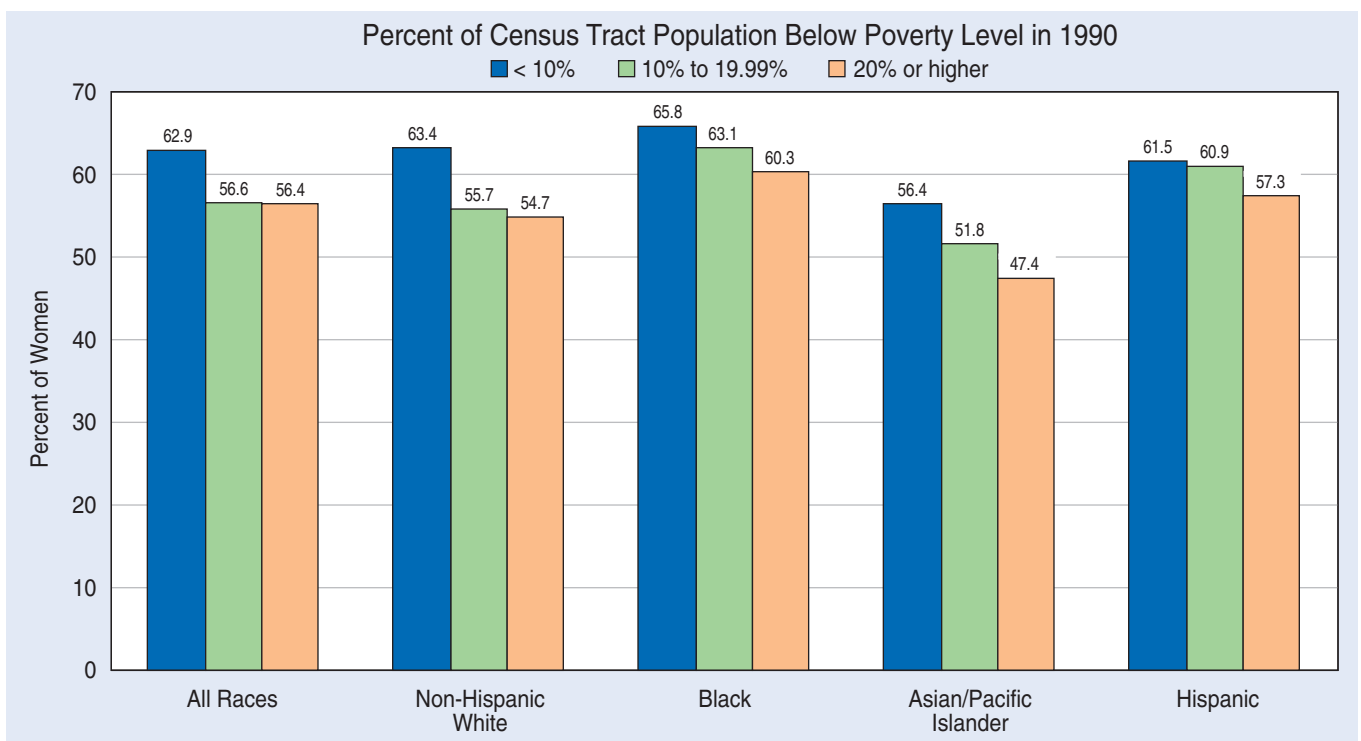
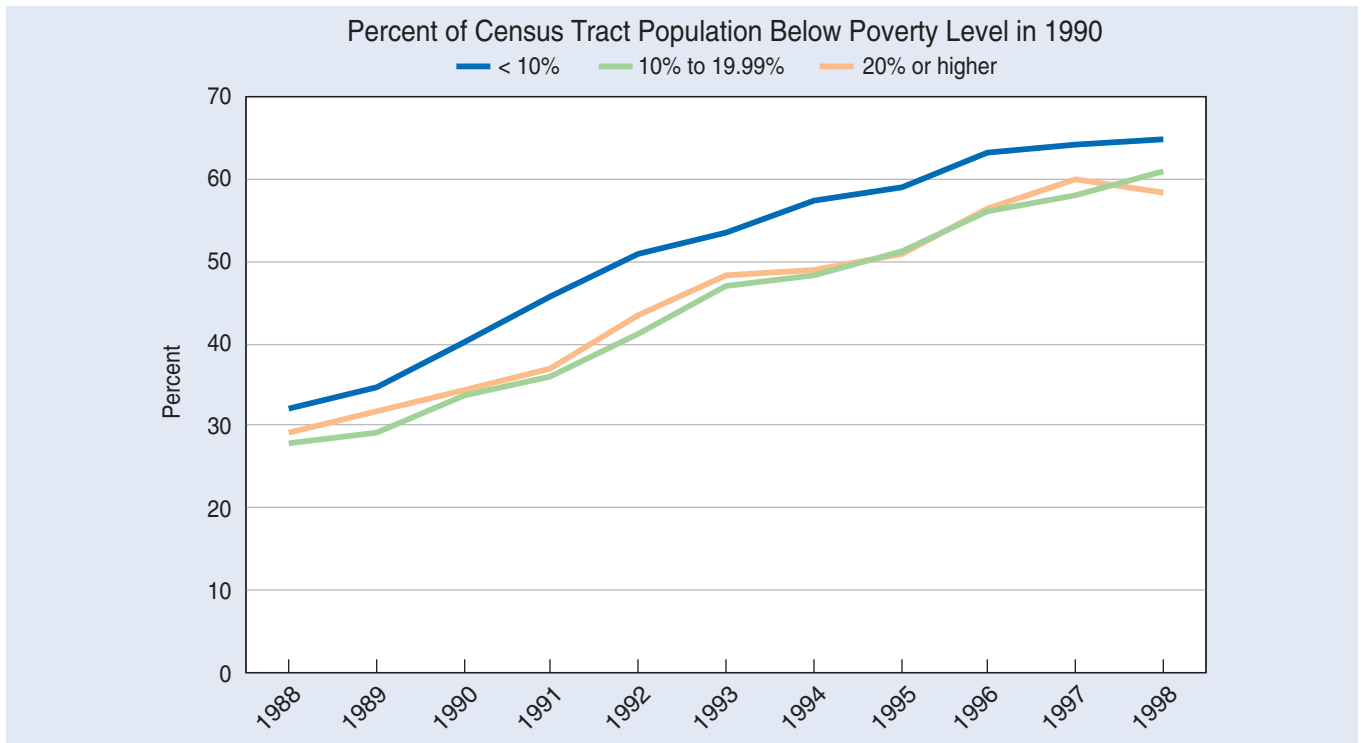


Figure 5.4. Percentage of Stages I and II Female Breast Cancer Patients With Tumor Size \leq 2 cm Undergoing Breast-Conserving Surgery, 1995–1998



Note: Based on data from 11 SEER registries. See “Data and Methods” for a list of SEER registries.

Figure 5.5. Percentage of Stages I and II Female Breast Cancer Patients With Tumor Size \leq 2 cm Undergoing Breast-Conserving Surgery, 1988–1998



Note: Based on data from 11 SEER registries. Los Angeles registry data from 1988 to 1991 were not available. See “Data and Methods” for a list of SEER registries.

Table 5.1. Number and Percentage of AJCC Stages I and II Non-Small-Cell Lung Cancer Patients Receiving Surgical Treatment by Sex, Race/Ethnicity, and Census Tract Poverty Rate, 1995–1999: 11 SEER Registration Areas

	Percent of Census Tract Population Below Poverty Level in 1990					
	< 10%		10% to 19.99%		20% or higher	
	Number	Percent	Number	Percent	Number	Percent
Male						
All Races	5,316	72.63	1,697	66.76	928	57.75
Non-Hispanic White	4,647	72.62	1,297	66.55	407	61.20
Black	188	74.60	189	67.99	365	52.37
Asian/Pacific Islander	343	71.46	126	66.32	79	63.20
Hispanic	125	75.30	82	69.49	73	66.36
Female						
All Races	4,925	73.15	1,428	70.00	672	62.98
Non-Hispanic White	4,439	73.17	1,107	69.67	301	66.01
Black	111	68.10	164	68.62	269	58.61
Asian/Pacific Islander	249	76.15	88	76.52	51	80.95
Hispanic	98	71.01	64	71.11	49	57.65

Table 5.2. Number and Percentage of Localized- and Regional-Stage Prostate Cancer Patients Undergoing Radical Prostatectomy by Age, Race/Ethnicity, and Census Tract Poverty Rate, 1995–1999: 11 SEER Registration Areas

	Percent of Census Tract Population Below Poverty Level in 1990					
	< 10%		10% to 19.99%		20% or higher	
	Number	Percent	Number	Percent	Number	Percent
Age Under 70 Years						
All Races	20,844	56.16	5,461	52.97	2,787	43.95
Non-Hispanic White	17,537	57.31	3,646	55.27	922	46.42
Black	1,336	51.07	888	44.56	1,222	39.38
Asian/Pacific Islander	837	52.44	219	48.24	106	53.27
Hispanic	924	59.38	655	59.93	500	54.17
Age 70 Years or Older						
All Races	3,903	12.76	1,269	12.95	520	9.12
Non-Hispanic White	3,382	13.09	942	13.22	202	10.00
Black	85	10.14	103	9.56	150	6.39
Asian/Pacific Islander	233	12.36	70	10.94	45	12.33
Hispanic	175	16.84	148	19.84	120	14.76

Table 5.3. Number and Percentage of AJCC Stages I and II Female Breast Cancer Patients With Tumor Size ≤ 2 cm Undergoing Breast-Conserving Surgery by Race/Ethnicity and Census Tract Poverty Rate, 1995–1998: 11 SEER Registration Areas

	Percent of Census Tract Population Below Poverty Level in 1990					
	< 10%		10% to 19.99%		20% or higher	
	Number	Percent	Number	Percent	Number	Percent
All Races	24,081	62.88	5,831	56.61	2,593	56.36
Non-Hispanic White	20,756	63.37	4,286	55.69	1,101	54.72
Black	730	65.77	598	63.08	893	60.34
Asian/Pacific Islander	1527	56.41	381	51.77	162	47.37
Hispanic	876	61.47	514	60.90	406	57.26