



# CANCER AND MEDICARE A CHARTBOOK

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ACS CAN, the nonprofit, nonpartisan advocacy affiliate of the American Cancer Society, supports evidence-based policy and legislative solutions designed to eliminate cancer as a major health problem. ACS CAN works to encourage elected officials and candidates to make cancer a top national priority. ACS CAN gives ordinary people extraordinary power to fight cancer with the training and tools they need to make their voices heard. For more information, visit [www.acscan.org](http://www.acscan.org).

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CANCER AND MEDICARE  
A CHARTBOOK

## INTRODUCTION

This Chartbook provides an overview of cancer among the elderly. It includes information on cancer incidence and deaths by age and type of cancer, including differences by race and ethnicity; use of recommended cancer screening services by people age 65 and older; and Medicare expenditures for cancer care in the aggregate and by type of service. Background information on the Medicare program is also included, highlighting provisions of particular relevance to cancer screening and treatment.

## HIGHLIGHTS

While cancer is a major cause of illness and death at any age, the elderly are most affected. The likelihood of getting cancer increases with age, and more than half of the 1.4 million new cancer cases in 2008 will occur in people age 65 and older (Chart 1). Moreover, cancer is the cause of more than one in five deaths among the elderly (Chart 2).

Because the Medicare program provides health insurance coverage to virtually all elderly Americans, it is a major source of financing for cancer care. According to the National Cancer Institute, Medicare accounted for about 45% of the estimated \$72 billion spent on cancer treatment in 2004 (Chart 9). Likewise, cancer accounts for a large share of Medicare spending, with almost one in ten Medicare fee-for-service dollars spent on cancer treatment or screening in 2006 (Chart 10).

The elderly are ten times more likely than younger people to get cancer (Chart 11), and even among the elderly, cancer incidence increases with age (Chart 15). This is not true for all cancers, however. For example, prostate cancer is more common among men ages 65-79 than it is for those age 80 and older (Chart 17). Medicare beneficiaries with cancer also have higher incomes and educational attainment than beneficiaries without cancer (Chart 12).

Four common cancers (lung, prostate, colorectal and breast) account for more than half of all new cancer cases among the elderly. Lung cancer alone accounts for nearly one in five new cases (Chart 5).

The elderly account for nearly 70% of all cancer deaths (Chart 3) and lung cancer is responsible for almost one-third of all cancer deaths among the elderly (Chart 7).

Among racial and ethnic groups, elderly whites and blacks are both more likely to get cancer than Hispanics, Asians or Native Americans (Chart 19). Cancer death rates are highest among elderly blacks, however, for whom the death rate is 16% higher than for elderly whites. Elderly Hispanics, Native Americans, and Asians have death rates that are 50%-60% that of elderly blacks (Chart 23).

For those over age 65, prostate cancer is the most common among all racial and ethnic groups, but the incidence varies greatly. Black men have a prostate cancer rate that is more than 30% higher than the rates for whites and Hispanics. After prostate cancer, the

most common types for all groups are breast cancer, lung cancer and colorectal cancer, except that for Native Americans, lung cancer ranks second. Hispanics have the lowest lung cancer rate, one that is almost half that of blacks and whites. White women have the highest incidence of breast cancer, while the rate for Asian women is about half that of whites (Chart 20).

Cancer screening rates for the elderly are highest for mammograms. Colorectal cancer screening is increasing for those age 65 and older, and for this type of cancer, screening rates are higher for the elderly than for the pre-Medicare population for which screening is recommended (Chart 8). Screening rates are lower for those who are poor and less educated (Charts 27 and 28). Whites have higher rates of colorectal cancer screening and mammograms, but Pap test use varies little by race/ethnicity (Charts 29 and 30).

Medicare payments for cancer treatment, including amounts paid by or on behalf of beneficiaries, totaled \$29 billion in 2006. Payments for cancer screening totaled an additional \$1 billion that year, and another \$2 billion was spent on drugs that treat the side effects of chemotherapy. Together, these amounts represent almost one in ten Medicare fee-for-service dollars (Chart 10). These totals do not count expenditures for outpatient prescription drugs or cancer-related expenditures for Medicare beneficiaries enrolled in private Medicare Advantage (MA) plans. (In 2006, 15% of beneficiaries were enrolled in MA plans; enrollment has grown to more than 20% since then.)

Medicare beneficiaries with cancer have on average much higher health expenditures than those without cancer—almost four times higher (Chart 31). Compared to Medicare expenditures overall, spending for cancer care is more likely to result from outpatient hospital, physician, and hospice care and less likely to result from inpatient hospital stays (Charts 32 and 33). This spending mix varies by type of cancer. For example, inpatient hospital payments are a particularly small portion of the Medicare total for breast cancer and prostate cancer (Chart 36).

Cost sharing borne by Medicare beneficiaries finances about 15% of Medicare fee-for-service cancer expenditures, the same level as for all Medicare services. Cost sharing is higher for prostate and breast cancer than for other forms of the disease. These cancers involve more use of outpatient services, where Medicare's beneficiary cost sharing requirements are greater (Chart 37). In addition, cancer drugs account for a large share of Medicare Part B drug expenditures (Chart 39), with the costs faced by Medicare beneficiaries for their cancer drugs varying greatly (Chart 40).

Almost 40% of Medicare hospice care is for cancer patients (Chart 41). Studies of patterns of Medicare expenditures by type of cancer have shown that costs are higher in the initial 12 months after diagnosis and in the last 12 months of life. At both times, costs are higher for patients for whom cancer was at a later stage at the time of diagnosis (Charts 48, 49, and 50).

## LIST OF CHARTS

### CANCER AND THE ELDERLY: THE BASIC NUMBERS

1. Persons aged 65 and older comprise 13% of the US population, but 54% of all new cancer cases
2. Cancer accounts for more than one in five deaths among the elderly
3. The elderly account for nearly 70% of all cancer deaths
4. Among the most common cancers, those age 65 and older account for most new cases, but breast cancer is an exception
5. Four cancers account for more than half of all new cancer cases among the elderly
6. The majority of deaths from the most common cancers occur in the elderly
7. Lung cancer leads among all cancer deaths of those over age 65, accounting for almost one-third in 2005
8. Cancer screening rates for the elderly are highest for mammograms, while colorectal screening rates are higher for the elderly than for the pre-Medicare population
9. Medicare accounts for a major share of the cost of cancer treatment
10. Almost one in ten Medicare fee-for-service dollars is spent on cancer

### MORE ON CANCER INCIDENCE AMONG THE ELDERLY

11. The elderly are ten times more likely than younger people to get cancer
12. Medicare beneficiaries with cancer have higher incomes and educational attainment than other beneficiaries
13. Medicare beneficiaries with cancer are more likely to be male
14. Medicare beneficiaries with cancer are older than other beneficiaries
15. Among the elderly, cancer incidence is higher among men and increases with age
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18. The most commonly diagnosed cancer among the elderly varies by sex and age
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20. Racial and ethnic variation in cancer incidence differs by cancer site

### MORE ON CANCER DEATHS AMONG THE ELDERLY

21. Cancer death rates are higher for men
22. Death rates are highest for lung cancer
23. Cancer death rates among the elderly vary by race/ethnicity and are highest among blacks
24. Racial and ethnic differences in cancer death rates vary by type of cancer

### CANCER SCREENING AMONG THE ELDERLY

25. Use of colorectal cancer screening is increasing for Americans age 65+
26. Each year, about two-thirds of male Medicare beneficiaries report having blood screening done for detection of prostate cancer
27. Women ages 65 and older who are poor or with less education are less likely to have a mammogram
28. Elderly women who are poor or with less education are less likely to have a Pap test

- 29. Whites are more likely than others age 65+ to have a colorectal cancer screening test
- 30. Use of mammograms is lower among black women ages 65+, but Pap test use varies little by race/ethnicity

### **MEDICARE EXPENDITURES FOR CANCER**

- 31. Average Medicare expenditures for beneficiaries with cancer are almost four times higher than expenditures for those without cancer
- 32. Hospital services accounted for most Medicare fee-for-service payments for cancer care in 2006
- 33. Compared to Medicare expenditures overall, spending for cancer care is more likely to result from outpatient hospital, physician, and hospice care than from inpatient hospital stays
- 34. Cancer care accounts for 9% of all Medicare fee-for-service payments, but that share differs by type of service
- 35. Four cancers accounted for half of Medicare payments for cancer care in 2006
- 36. The mix of Medicare expenditures varies by type of cancer
- 37. Beneficiary cost sharing finances about 15% of Medicare fee-for-service expenditures for cancer care, but varies by type of cancer
- 38. Medicare fee-for-service spending on screening for colorectal, breast, prostate and cervical cancer in 2006 totaled \$1.1 billion
- 39. Cancer drugs account for a large share of Medicare Part B drug expenditures
- 40. The cost of cancer drugs to Medicare beneficiaries varies greatly
- 41. Almost 40% of Medicare hospice care is for cancer patients
- 42. Medicare expenditures in the last year of life are lower for cancer patients who enroll in hospice than for those who do not, a result not seen for non-cancer patients
- 43. Cancer care represents a greater share of Medicare spending for whites than for other groups
- 44. Cancer care represents a greater share of Medicare spending for men than for women
- 45. Medicare cancer care spending varies by age
- 46. Medicare payments for the initial cost of cancer care vary among the most common cancers and reflect the mix of services used
- 47. Medicare payments for the initial cancer treatment period have grown at different rates for different cancers, reflecting changes in the mix of services used
- 48. Costs of cancer care to Medicare are highest in the initial phase of care and the last year of life
- 49. The cost to Medicare of cancer patients during the initial period after diagnosis varies by the stage of cancer
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## **BACKGROUND ON MEDICARE**

### **WHO IS COVERED?**

Medicare covers nearly all elderly Americans and millions of disabled individuals as well. Of the program's 44 million beneficiaries, 37 million are eligible because they are age 65 or older.

## WHAT IS COVERED?

Medicare provides a comprehensive set of benefits. Part A, the Hospital Insurance program, covers inpatient hospital services, some post-hospital skilled nursing facility stays, some home health visits, and hospice care.

Part B, the Supplementary Medical Insurance program, covers physician services and a broad range of outpatient services including care provided in hospital clinics, emergency rooms, ambulatory surgical centers and other settings, durable medical equipment (DME), clinical laboratory and physical therapy services and some home health visits.

In general, outpatient prescription drug coverage is provided through Medicare Part D, discussed below, but some drugs, including some of those used to treat cancer or the side-effects of chemotherapy, are covered under Part B. Drugs and vaccines covered under Part B are those that are usually not self-administered and are provided incident to a physician's service; those that are necessary for the effective use of covered DME; certain self-administered oral cancer and anti-nausea drugs; erythropoietin (used to treat anemia); immunosuppressive drugs after covered Medicare organ transplants; and vaccines for influenza, pneumonia and hepatitis B.

Some cancer screenings and other preventive health services are covered under Part B. Mammograms are covered annually for female beneficiaries over age 40, with a baseline mammogram for those ages 35 to 39. Cervical cancer screening (Pap smear and pelvic exam) is covered once every 24 months, and annually for certain high risk women. Annual prostate cancer screening (digital rectal exam and prostate specific antigen (PSA) test) is covered for male beneficiaries age 50 and older. Colorectal screening is covered for all beneficiaries starting at age 50, including an annual fecal occult blood test and either a colonoscopy every 10 years (more frequent for high risk patients) or a flexible sigmoidoscopy every 48 months. A physician may substitute a barium enema for sigmoidoscopy or colonoscopy.

Medicare will cover smoking cessation counseling if ordered by a doctor. Counseling is covered for two cessation attempts within a 12 month period if the beneficiary is diagnosed with a smoking-related illness or is taking medicine that may be affected by tobacco use. Counseling for each cessation attempt includes up to four face-to-face visits.

Annual check-ups are generally not covered by Medicare, but a "Welcome to Medicare" physical is covered for beneficiaries during their first year of enrollment. The exam includes a thorough review of the person's health, education and counseling on preventive services, including cancer screenings, and referrals for other needed care. The Secretary of Health and Human Services has the discretion to expand Medicare coverage to include additional preventive services in the future.

Hospice care is limited to people with a terminal illness who are expected to live six months or less if the disease runs its normal course and who are willing to forego cura-

tive treatment. Hospice benefits include pain relief, supportive medical and social services, physical therapy, nursing services, and symptom management for a terminal illness. Medicare will also cover some short-term inpatient stays (for pain and symptom management) and inpatient respite care.

Part D is Medicare's prescription drug program, through which beneficiaries may enroll in a private prescription drug plan that contracts with Medicare. Although a standard benefit is defined in law, plans are permitted to vary the standard design and to include more generous benefits. For cancer patients considering Part D coverage options, a key concern is the adequacy of coverage for cancer-related drugs. Under CMS guidance, Part D plans must list on formulary all, or substantially all, cancer-related drugs. Accordingly, for 2009, oral anticancer drugs, including brand-name products, are covered by nearly all plans, although prior authorization or other utilization management requirements might limit access to some.<sup>1</sup>

Under Medicare Part C, or Medicare Advantage (MA), beneficiaries may choose to enroll in a private health plan that contracts with Medicare to provide benefits under Parts A and B or Parts A, B and D. MA plans may also offer additional benefits, but beneficiaries who enroll in these plans may face a restricted choice of providers. In 2008, about one in five Medicare beneficiaries was enrolled in an MA plan.

Medicare has recognized the need to provide certain exceptions for cancer patients, including covering many cancer screening services, covering certain prescription drugs under Part B, requiring Part D plans to cover "all or substantially all" anticancer drugs, and making coverage of anticancer off-label drug uses under Part D consistent with Part B.

### HOW MUCH DO BENEFICIARIES PAY?

Medicare beneficiaries pay cost sharing in the form of premiums, deductibles and co-insurance on covered services. A monthly premium is required for Part B coverage, and those that enroll in a prescription drug plan under Part D pay an additional premium for that coverage as well. No premium is ordinarily required for Part A benefits. A deductible is charged for hospital inpatient stays, for Part B services overall, and in the standard Part D benefit. Subsidies to cover Medicare cost sharing are available to low-income beneficiaries. Cost sharing may differ for MA plan enrollees.

**Part B premium.** The Part B premium amount is established each year at the level needed for total premium collections to cover 25% of total Part B expenditures. In 2009, the monthly Part B premium is \$96.40. Since 2007, higher-income beneficiaries must pay an additional income-related Part B premium, which ranges from 40% to 220% more than the standard premium, depending on their income. About 5% of beneficiaries must pay the additional amount. Income thresholds are \$85,000 in 2009 for a beneficiary filing an individual income tax return or married and filing a separate return, and \$170,000 for a beneficiary filing a joint tax return, and are indexed annually for inflation to the Consumer Price Index (CPI). The highest premiums are paid by those with incomes in excess of \$213,000 filing an individual or separate married return and \$426,000 for those filing a joint return.

**Cost Sharing under Parts A and B.** Medicare beneficiaries face deductibles and coinsurance when they use health care services under Parts A and B.

A deductible applies to inpatient hospital stays, which is \$1,068 in 2009. Daily copayments apply to long hospital stays, beginning after 60 days, and to skilled nursing facility stays after 20 days. An annual deductible (\$135 in 2009) applies to all Part B services, except certain preventive benefits including colorectal cancer screening, mammograms, Pap tests, PSA tests, and the “Welcome to Medicare” physical. Physician visits and most Part B services require 20% beneficiary coinsurance. Medicare does not require any coinsurance on outpatient laboratory tests, which includes Pap tests, PSA tests and fecal occult blood tests (FOBT) used for colorectal cancer screening. Physicians who elect not to be a Medicare participating provider may bill Medicare patients up to 9.25% above the Medicare fee schedule amount (known as “balance billing”). Few Medicare providers are non-participating, however, and in 2007 less than 1% of total Medicare physician charges involved claims for which balance billing was permitted.<sup>2</sup>

Unlike most private employer health plans, original fee-for-service (FFS) Medicare does not provide a cap on out-of-pocket expenditures by beneficiaries. As a result, even with Medicare coverage, health care can be costly to beneficiaries who are sick and need extensive care.

**Part D premiums and cost sharing.** Monthly premiums for Part D prescription drug plans vary widely depending on the plan chosen by the beneficiary. Premiums in 2009 for plans offering basic benefits range from a low of \$11.50 per month to a high of \$112.70 per month. Premiums for enhanced plans with more generous coverage range up to \$136.80 per month.

In 2009, the defined standard Part D benefit has a \$295 deductible, 25% coinsurance up to an initial benefit limit (\$2,700), a \$3,454 coverage gap (“the donut hole”) and catastrophic coverage, which begins once the total covered drug spending for the enrollee reaches \$6,154. To reach catastrophic coverage, the enrollee will have incurred total out-of-pocket costs of \$4,350. For all covered drug spending after that point, enrollees pay the greater of 5% coinsurance or a copayment (\$2.40 generic or \$6.00 brand). These amounts are indexed annually to the average per capita aggregate expenditure growth for Part D eligible beneficiaries.

As noted above, most Part D plans do not provide the standard benefit, however, and cost sharing can vary greatly. Plans must offer either the standard benefit or one that is equal in value, and may also offer enhanced benefits. Of particular importance to cancer patients, most plans impose much higher cost sharing on the use of high-cost specialty drugs by placing them in higher cost-sharing tiers, called “specialty tiers.” In 2009, 38 of the 43 national PDPs use specialty tiers; as do more than three-quarters of all standalone PDPs. The additional cost sharing required by plans for drugs included in these specialty tiers can add significantly to beneficiary out-of-pocket costs and increase the likelihood

of cancer patients reaching the coverage gap. In 2009, the median coinsurance amount in specialty tiers is 33%<sup>3</sup>.

**Cost sharing in Medicare Advantage.** Beneficiaries enrolling in a Medicare Advantage plan face different out-of-pocket costs than original FFS Medicare coverage. Most MA plans do not charge an additional premium above the Part B amount, although some plans do, and some offer rebates to reduce the Part B premium for enrollees. (In general, MA plans are required to offer rebates to beneficiaries in the form of reduced premiums, reduced cost sharing or increased benefits, the difference between the amount the plan bids to Medicare to provide services and a pre-determined benchmark.)

An MA plan may charge different copayments, coinsurance and deductibles for Part A and Part B services than are charged under original FFS Medicare benefits so long as overall projected average cost sharing does not exceed what beneficiaries would be expected to pay if they remained in original FFS Medicare, and the actuarial value of all cost sharing does not exceed the value of cost sharing in original FFS Medicare. Many MA plans offered reduced cost sharing, including providing for a cap on out-of-pocket costs, and some reduce the beneficiary's Part B premium. In some cases, however, cost sharing for individual services in an MA plan may be greater than it would have been under the original FFS Medicare program.

**Subsidies for low-income beneficiaries.** Subsidies are available to cover the Part B and Part D premiums and cost sharing for low-income beneficiaries. Beneficiaries who are also enrolled in Medicaid (full "dual eligibles") and certain others who qualify on the basis of their income have their Part B premiums paid by Medicaid. For others, states are given some flexibility in providing this assistance through Medicare Savings Plans, and eligibility varies among the states. In some states, beneficiaries must meet both an income standard and assets test to qualify for assistance with Part B cost sharing. Eligibility for assistance with Part D is determined separately, based on a single national eligibility standard that includes both an income standard and an assets test. Those who are eligible receive a subsidy of up to 100% of a Part D benchmark premium determined annually for each region. Many plans are more expensive than the benchmark premium, so choice of plans is limited for beneficiaries receiving subsidies, unless they pay out of pocket for the premium amount over the benchmark. Those receiving the full subsidy have no deductible and no coverage gap and face only modest copayments prior to the threshold where catastrophic coverage begins.

**Medicare supplemental coverage.** Most beneficiaries do not pay Medicare cost sharing directly. In 2006, 35% had employer coverage to supplement Medicare, 18% purchased private Medicare supplemental policies, and 16% were covered by Medicaid. Another 19% were covered by Medicare Advantage plans. Only 11% were covered by fee-for-service Medicare alone.<sup>4</sup> Millions of beneficiaries continue to get their drug coverage not through Part D, but through employer-sponsored retiree health plans, the Veterans Administration, or other sources.

## NOTES ON THE CHARTS

**Reference to breast cancer and lung cancer.** Breast cancer refers to female breast cancer only except for Charts 35, 36, 37, and 38 which present Medicare expenditures for all breast cancer. Unless otherwise stated, lung cancer refers to cancers of the lung and bronchus combined.

**Medicare claims data analysis.** A number of charts are based on analysis of Medicare expenditures for 2006 prepared by Direct Research, LLC. The analysis was conducted using the Medicare 5% sample Limited Data Set (LDS) Standard Analytic File (SAF) files for 2006.

Facility claims with a principal diagnosis of cancer, and claims for physician care and other services with a line item diagnosis of cancer were identified as cancer claims. This approach does not capture the additional cost burden from cancer when it is coded on the claim as a secondary diagnosis, but it does include the costs of follow-up services for persons with cancer in remission. Diagnosis codes included in the Clinical Classification System categories of “Other and unspecified benign neoplasm” and “Neoplasms of unspecified nature or uncertain behavior,” were not included in the cancer totals.

Claims for cancer screening were identified separately without regard to diagnosis using Healthcare Common Procedure Coding System (HCPCS) codes for colorectal cancer screening, screening mammography, screening Pap test and pelvic examination, and prostate cancer screening. The totals include all claims for which a separate payment was made for cancer screening, such as physician and similar professional bills (including independent diagnostic testing facilities and independent mammography centers) and hospital outpatient department bills.

Finally, claims for anti-anemia drugs (i.e., erythropoietin, Aranesp, Procrit), coded as unrelated to end-stage renal disease (ESRD) were analyzed separately. The primary non-ESRD use of these drugs is treatment of chemotherapy side effects. However, these claims do not include a cancer diagnosis code and therefore would not be included in the total for cancer care, which reflects claims identified by the presence of a diagnosis code of cancer. By contrast, expenditures for chemotherapy agents or other drugs covered under Medicare Part B are included in the relevant cancer treatment claims totals. That is, Part B drugs billed on physician claims with a line items diagnosis of cancer are included as Medicare expenditures for physician care, and those billed on hospital outpatient department claims are included as expenditures for hospital outpatient department services.

The Medicare five percent sample data base does not include all Medicare expenditures. It is limited to Medicare fee-for-service claims, meaning that expenditures for cancer treatment and screening by private Medicare Advantage plans are not included. About one in five beneficiaries is enrolled in Medicare Advantage for their Medicare benefits. The data base also does not include expenditures for outpatient prescription drugs, which are not covered under fee-for-service Medicare. (About 60% of Medicare beneficiaries are enrolled in private stand-alone Medicare Part D prescription drug plans or Medicare Advantage plans with Part D coverage.<sup>5</sup>)

**Medicare Current Beneficiary Survey.** A few other slides are based on data from the Medicare Current Beneficiary Survey (MCBS) prepared by Jean Mitchell at the Georgetown Public Policy Institute.

The data include beneficiaries with cancer identified as those participating in the Medicare Current Beneficiary Survey at any point during 2002-2004 with at least five Medicare claims for a primary diagnosis of non-skin cancer and more than \$500 in total Medicare reimbursement for cancer-related claims. For patients with any Medicare claims in 2002, expenditures for 2001 are included. The beneficiaries included are enrolled in FFS Medicare, and thus those enrolled in private Medicare Advantage plans are excluded.

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<sup>1</sup> Murphy, Lisa and Sarah Barber, Medicare Part D and Cost Sharing for Cancer Drugs: Looking Back and Moving Ahead, Avalere Health and American Cancer Society Cancer Action Network, December 2008.

<sup>2</sup> Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy*, March 2008, pp. 88-89.

<sup>3</sup> Hoadley, Jack et al., "Medicare Part D Benefit Designs and Formularies, 2006-2009," prepared for the Medicare Payment Advisory Commission (MedPAC), December 5, 2008.

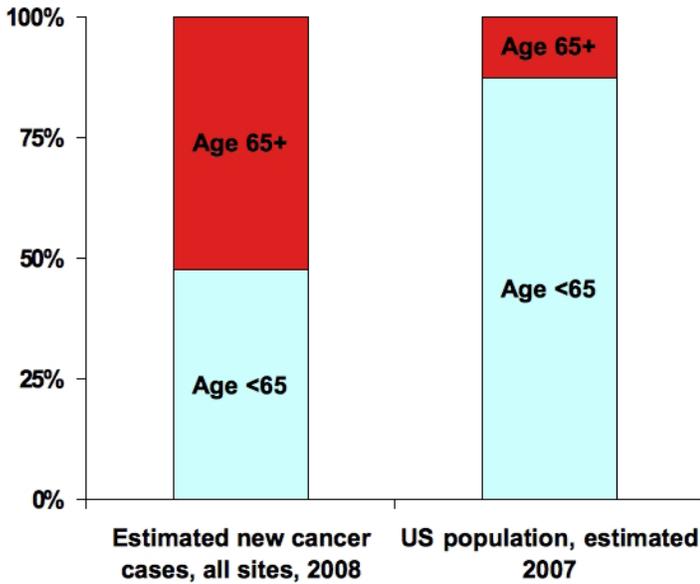
<sup>4</sup> Kaiser Family Foundation, *Examining Sources of Coverage Among Medicare Beneficiaries*, August 2008.

<sup>5</sup> Centers for Medicare and Medicaid Services, *Medicare Advantage, Cost, PACE, Demo, and Prescription Drug Plan Contract Report – Monthly Summary Report*, December 2008.

CANCER AND THE ELDERLY:  
THE BASIC NUMBERS

## Chart 1.

Persons aged 65 and older comprise 13% of the US population, but 54% of all new cancer cases



Those age 65 and older account for more than 750,000 of the estimated 1.4 million new cancer cases in 2008.

Although they account for half of new cancer cases, the elderly make up only 13% of the national population.

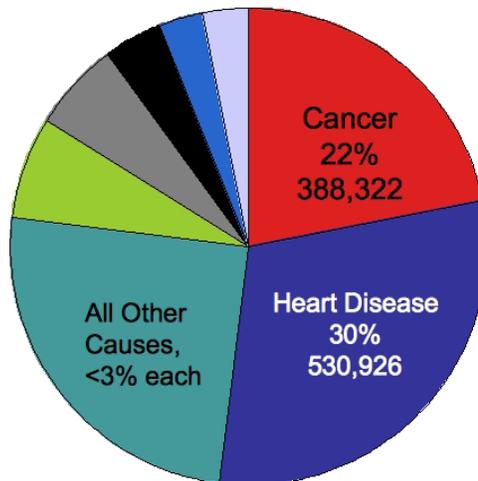
Source: Projected cases based on 1995-2004 incidence rates from 41 states representing about 85% of the US population as reported by the North American Association of Central Cancer Registries. Prepared by American Cancer Society, Surveillance Research, 2008. Population data from US Census Bureau, Population Estimates Program, 2007 Population Estimates data set.

## Chart 2.

Cancer accounts for more than one in five deaths among the elderly

### CAUSES OF DEATH, AGE 65+, 2005

- Cerebrovascular Diseases, 7%
- Chronic Obstructive Pulmonary Disease, 6%
- Alzheimers, 4%
- Pneumonia and Influenza, 3%
- Diabetes Mellitus, 3%



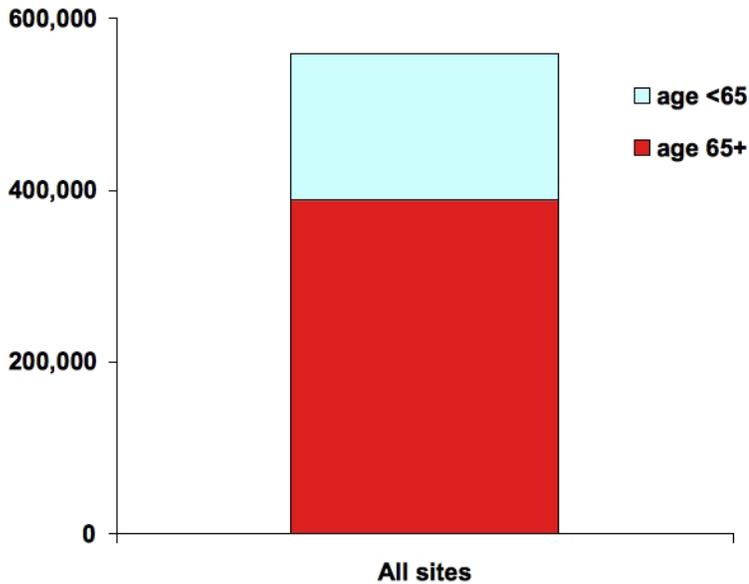
TOTAL DEATHS = 1,788,189

Source: National Center for Health Statistics, National Vital Statistics System-Mortality. Prepared by American Cancer Society, Surveillance Research, 2008.

### Chart 3.

The elderly account for nearly 70% of all cancer deaths

**NUMBER OF CANCER DEATHS, 2005**



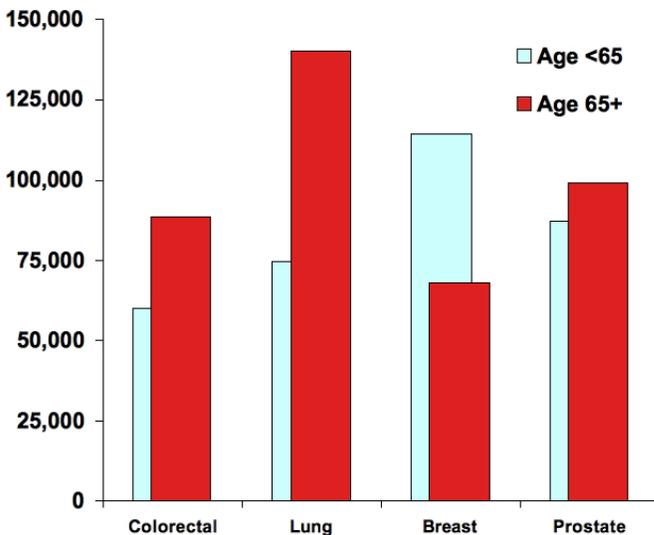
People age 65 and older accounted for 388,322 of the 559,303 cancer deaths in 2005. The elderly represent 74% of all deaths from causes other than cancer.

Source: National Center for Health Statistics, National Vital Statistics System-Mortality. Prepared by American Cancer Society, Surveillance Research, 2008.

### Chart 4.

Among the most common cancers, those age 65 and older account for most new cases, but breast cancer is an exception

**ESTIMATED NUMBER OF NEW CANCER CASES, BY AGE, 2008**



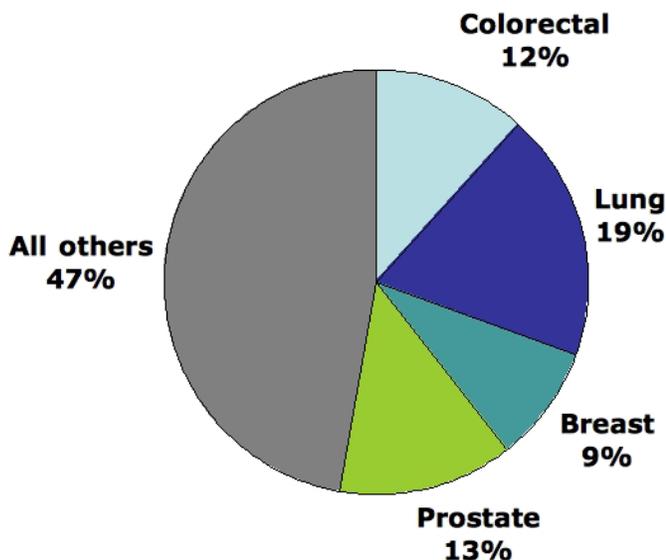
Among the most common cancers, those age 65 and older account for 60% of colorectal cancers, 65% of lung cancers, 53% of prostate cancers and 37% of breast cancers. Lung cancer accounts for almost one in five of all new cancer cases among the elderly.

Source: Projected cases based on 1995-2004 incidence rates from 41 states representing about 85% of the US population as reported by the North American Association of Central Cancer Registries. Prepared by American Cancer Society, Surveillance Research, 2008.

## Chart 5.

Four cancers account for more than half of all new cancer cases among the elderly

ESTIMATED NEW CANCER CASES, AGE 65+, 2008



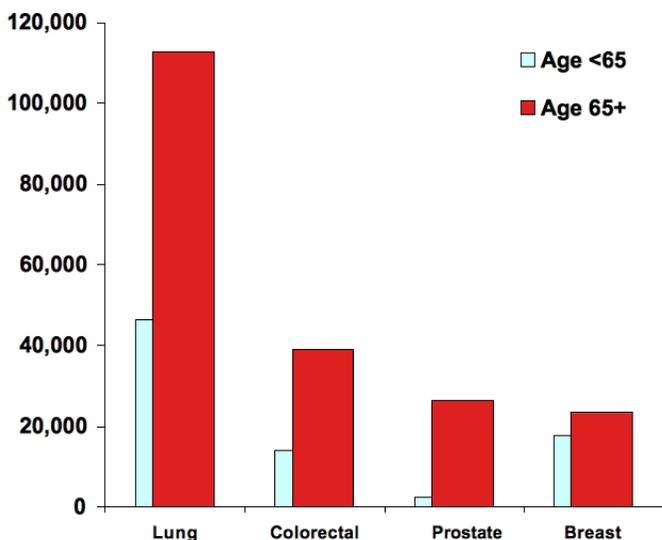
Lung cancer accounts for about one in five new cancer cases among the elderly, followed by prostate, colorectal and breast cancer.

Source: Projected cases based on 1995-2004 incidence rates from 41 states representing about 85% of the US population as reported by the North American Association of Central Cancer Registries. Prepared by American Cancer Society, Surveillance Research, 2008.

## Chart 6.

The majority of deaths from the most common cancers occur in the elderly

NUMBER OF CANCER DEATHS, BY AGE, 2005



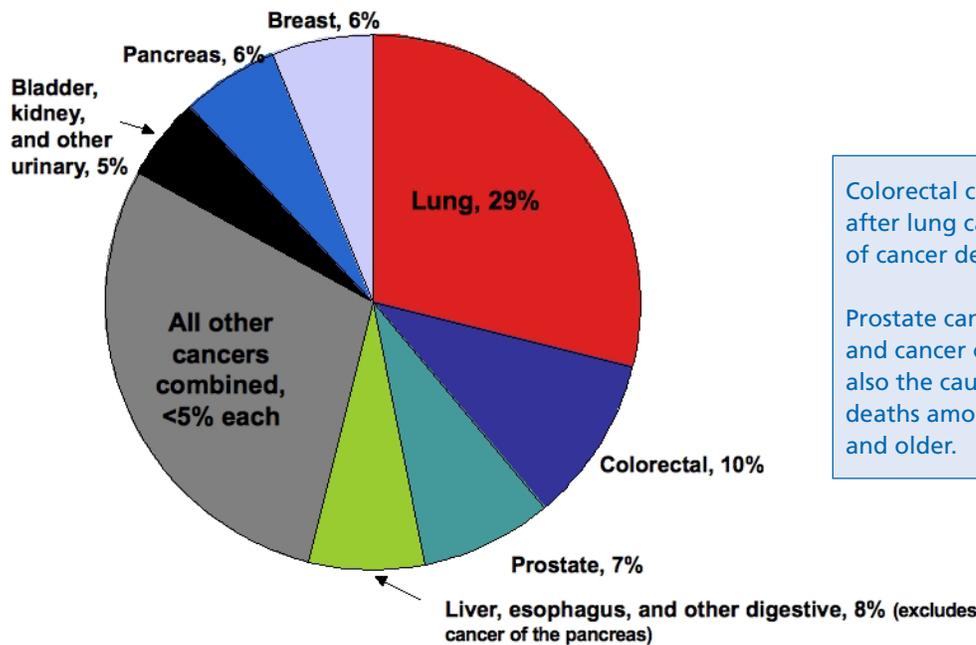
Seventy-four percent of deaths from colorectal cancer, 71% of deaths from lung cancer, 91% of prostate cancer deaths and 57% of breast cancer deaths occur in people age 65 and over.

Source: National Center for Health Statistics, National Vital Statistics System-Mortality. Prepared by American Cancer Society, Surveillance Research, 2008.

## Chart 7.

Lung cancer leads among all cancer deaths of those over age 65, accounting for almost one-third in 2005

**CANCER DEATHS AGE 65+, 2005 | TOTAL = 388, 322**



Colorectal cancer ranks second after lung cancer, causing 10% of cancer deaths in the elderly.

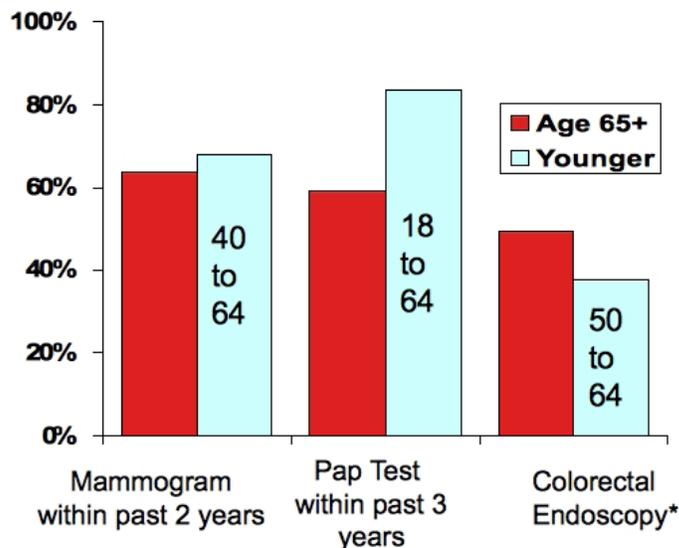
Prostate cancer, breast cancer, and cancer of the pancreas are also the cause of many cancer deaths among those age 65 and older.

Source: National Center for Health Statistics, National Vital Statistics System-Mortality. Prepared by American Cancer Society, Surveillance Research, 2008.

## Chart 8.

Cancer screening rates for the elderly are highest for mammograms, while colorectal screening rates are higher for the elderly than for the pre-Medicare population

**PERCENT REPORTING SCREENING, 2005**



Cancer screening rates for those over age 65 are highest for mammograms, with 64% of women reporting having had the test within the past 2 years.

Some 59% of elderly women report having had a Pap test within three years, a much lower level than younger women.

Half of those age 65 and older report having had a colorectal endoscopy test, (either colonoscopy, sigmoidoscopy, or proctoscopy), a rate much higher than the 38% for those ages 50-64.

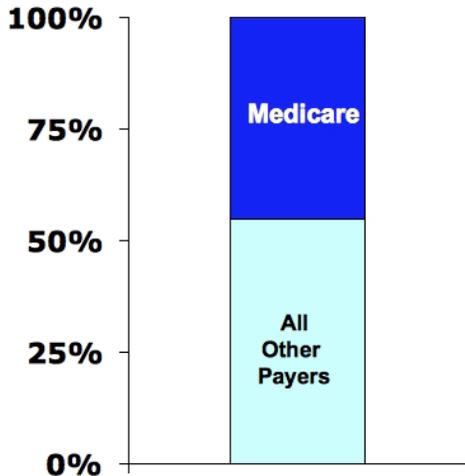
\*Flexible sigmoidoscopy in the past five years or colonoscopy within the past ten years.

Source: Projected cases based on 1995-2004 incidence rates from 41 states representing about 85% of the US population as reported by the North American Association of Central Cancer Registries. Prepared by American Cancer Society, Surveillance Research, 2008.

## Chart 9.

Medicare accounts for a major share of the cost of cancer treatment

**SHARE OF CANCER TREATMENT COSTS, 2004**  
**ESTIMATED TOTAL = \$72 BILLION**



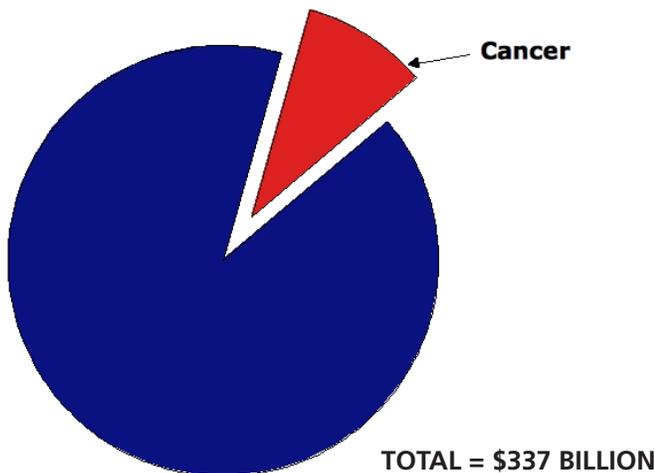
According to estimates from the National Cancer Institute, Medicare accounted for 45% of all spending on cancer treatment in 2004.

Source: National Cancer Institute estimates. For total cancer treatment spending see “The Cost of Cancer” at <http://www.cancer.gov/aboutnci/servingpeople/CostOfCancer>. Total Medicare costs estimated by using cases from the SEER cancer registry – diagnosed from 1996-1999 and linked to Medicare claims for those years. These were updated to 2004 dollars using the medical care services component of the consumer price index. Details of the original estimation method are described in: Brown ML, Riley GF, Schussler N, Etzioni RD. Estimating health care costs related to cancer treatment from SEER-Medicare data. Medical Care 2002 Aug;40(8 Suppl):IV-104-17.

## Chart 10.

Almost one in ten Medicare fee-for-service dollars is spent on cancer

**2006 MEDICARE FEE-FOR-SERVICE PAYMENTS**



Medicare fee-for-service payments for cancer care totaled \$28.8 billion in 2006.

Another \$1.1 billion was paid for colorectal, breast, prostate and cervical cancer screenings.

Additionally, Medicare paid \$2.2 billion for outpatient use of anti-anemia drugs (Darbepoetin alfa and erythropoietin) for purposes other than treatment of end stage renal disease (ESRD). Treatment of chemotherapy side effects is the most common non-ESRD use of these drugs.

Notes: Includes beneficiary cost sharing as well as amounts paid directly by Medicare. Medicare fee-for-service expenditures exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans.

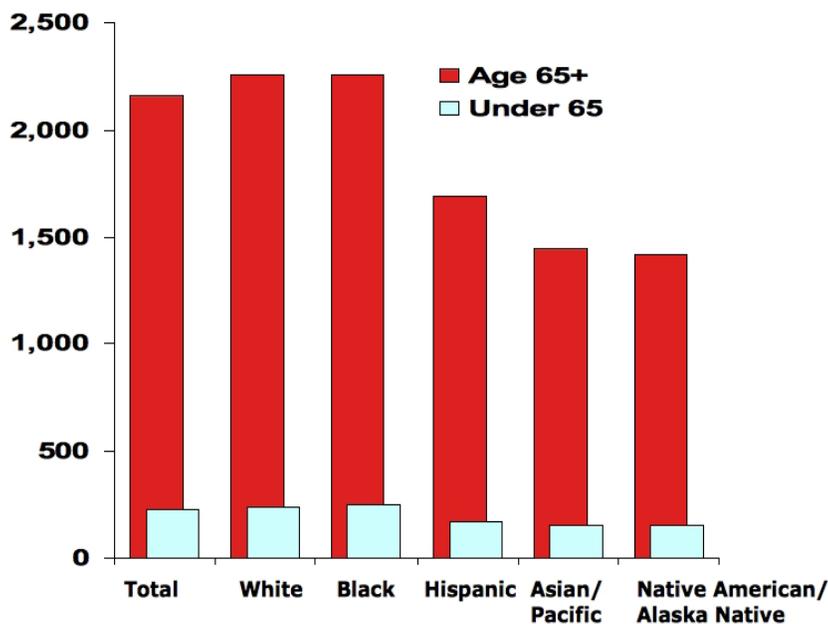
Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

MORE ON CANCER INCIDENCE  
AMONG THE ELDERLY

## Chart 11.

The elderly are ten times more likely than younger people to get cancer

INCIDENCE PER 100,000 POPULATION, 2001-2005



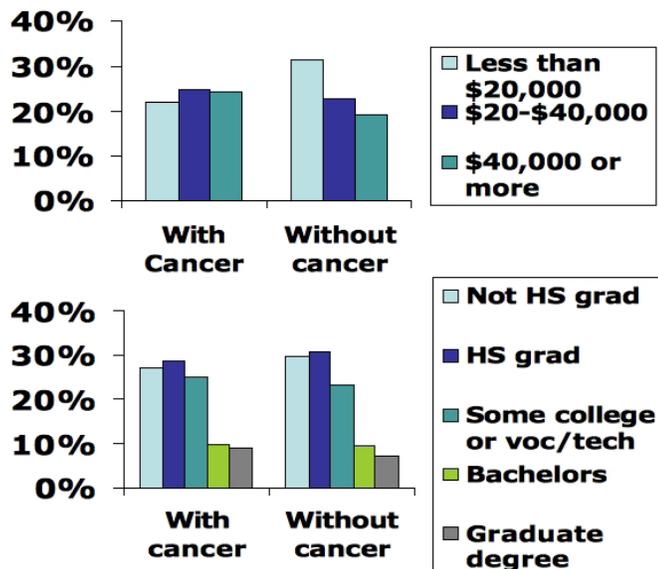
The incidence of cancer among the elderly is ten times higher than for those under age 65, a finding that holds true across racial and ethnic groups.

Notes: Rates are age adjusted to the 2000 US standard population. Data shown for Whites and Blacks exclude Hispanics. Data for Whites, Blacks, and Hispanics exclude deaths from the Alaska Native Registry and Kentucky. Data for American Indians/Alaska Natives are based on the CHSDA (Contract Health Service Delivery Area) counties.

Source: Surveillance, Epidemiology, and End Results Program (SEER), SEER 17 Registries, Division of Cancer Control and Population Science, National Cancer Institute, 2008. Prepared by American Cancer Society, Surveillance Research.

## Chart 12.

Medicare beneficiaries with cancer have higher incomes and educational attainment than other beneficiaries



Nearly 25% of Medicare beneficiaries with cancer have incomes of \$40,000 or more, compared with 19% of other beneficiaries. By contrast, less than 40% of beneficiaries with cancer have incomes below \$20,000 compared with 47% of other beneficiaries.

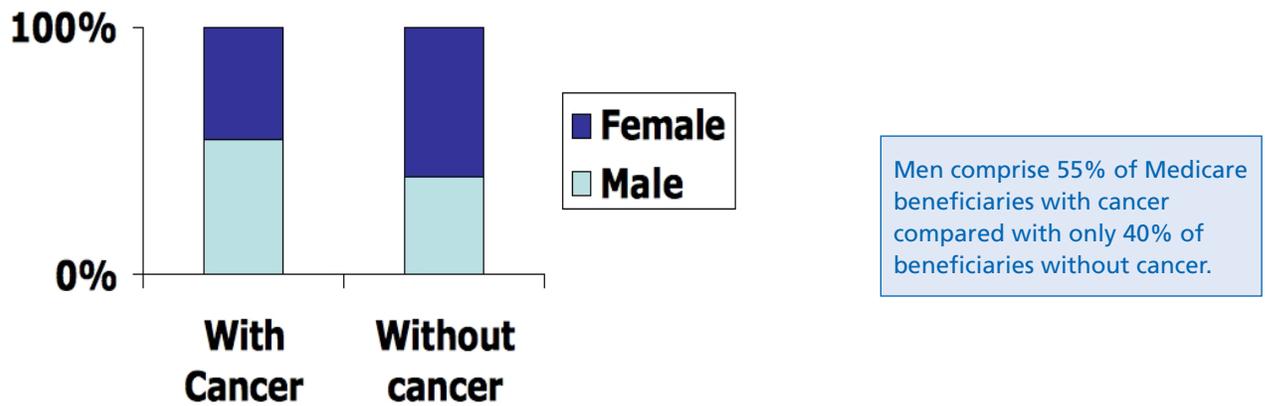
Some 44% of Medicare beneficiaries with cancer have a college degree or other post-high school education, compared with 40% of other beneficiaries.

Notes: Medicare beneficiaries with cancer are defined as those with at least five cancer-related claims and more than \$500 in total Medicare reimbursement for those claims. They would likely include patients with an initial diagnosis of cancer, those under medical surveillance, and those being treated for recurrence. The data do not serve as a surrogate for new incidence data.

Source: Jean Mitchell, Georgetown Public Policy Institute, 2008. Analysis of Medicare Current Beneficiary Survey data.

### Chart 13.

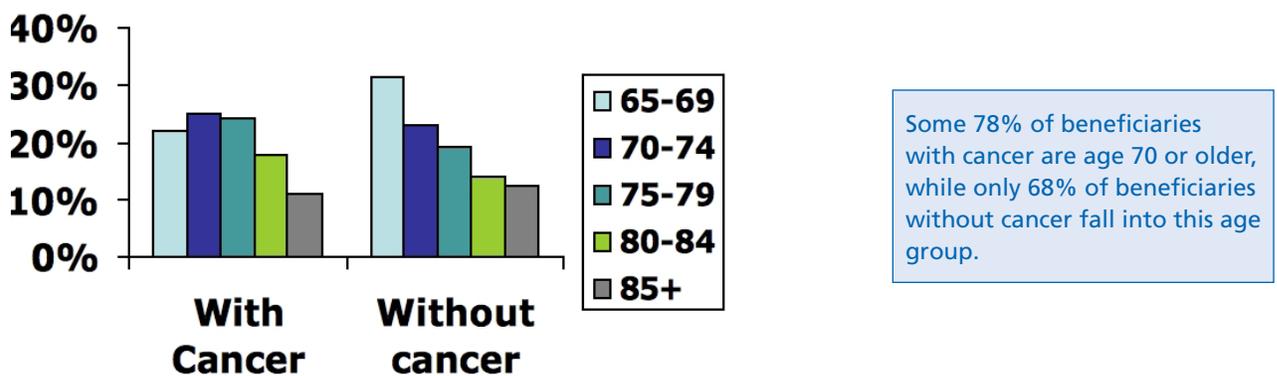
Medicare beneficiaries with cancer are more likely to be male



Notes: Medicare beneficiaries with cancer are defined as those with at least five cancer-related claims and more than \$500 in total Medicare reimbursement for those claims. They would likely include patients with an initial diagnosis of cancer, those under medical surveillance, and those being treated for recurrence. The data do not serve as a surrogate for new incidence data.  
 Source: Jean Mitchell, Georgetown Public Policy Institute, 2008. Analysis of Medicare Current Beneficiary Survey data.

### Chart 14.

Medicare beneficiaries with cancer are older than other beneficiaries

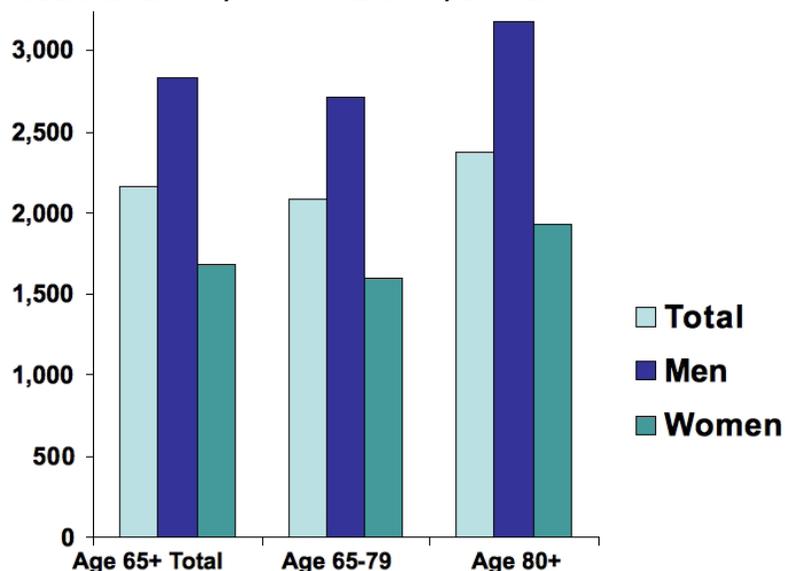


Notes: Medicare beneficiaries with cancer are defined as those with at least five cancer-related claims and more than \$500 in total Medicare reimbursement for those claims. They would likely include patients with an initial diagnosis of cancer, those under medical surveillance, and those being treated for recurrence. The data do not serve as a surrogate for new incidence data.  
 Source: Jean Mitchell, Georgetown Public Policy Institute, 2008. Analysis of Medicare Current Beneficiary Survey data.

## Chart 15.

Among the elderly, cancer incidence is higher among men and increases with age

INCIDENCE PER 100,000 POPULATION, 2001-2005



For those age 65 and older, the incidence of cancer is 68% higher among men than women.

For both men and women, the incidence of cancer increases with age, and is about 14% higher for those ages 80 and older than for those ages 65-79.

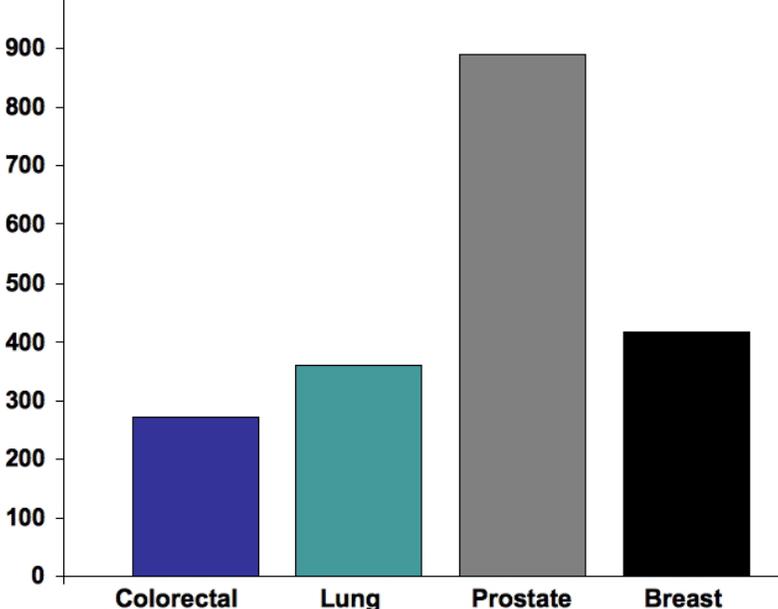
Note: Rates are age-adjusted to the 2000 US standard population.

Source: Surveillance, Epidemiology, and End Results Program (SEER), SEER 17 Registries, Division of Cancer Control and Population Science, National Cancer Institute, 2008. Prepared by American Cancer Society, Surveillance Research.

## Chart 16.

The incidence of cancer among those age 65+ varies by site

INCIDENCE PER 100,000 POPULATION, 2001-2005



Among those age 65 and older, prostate cancer is the most common, followed by female breast cancer, lung cancer and colorectal cancer.

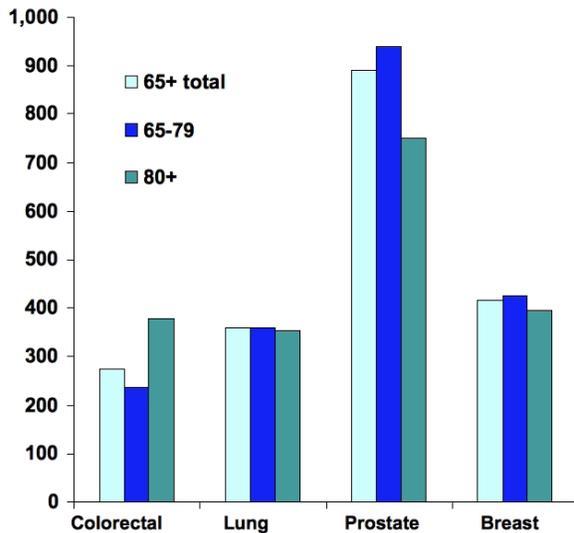
Note: Rates are age adjusted to the 2000 US standard population.

Source: Surveillance, Epidemiology, and End Results Program (SEER), SEER 17 Registries, Division of Cancer Control and Population Science, National Cancer Institute, 2008. Prepared by American Cancer Society, Surveillance Research.

## Chart 17.

Among the elderly, cancer incidence does not increase with age for all types of cancer

**INCIDENCE PER 100,000 POPULATION, 2001-2005**



Colorectal cancer incidence is 60% higher among those age 80 and older than it is for those ages 65-79.

But the incidence of prostate cancer is about 25% higher among men ages 65-79 than it is for older men.

Lung cancer incidence is roughly the same for these two groups, while breast cancer incidence is slightly lower among the oldest women.

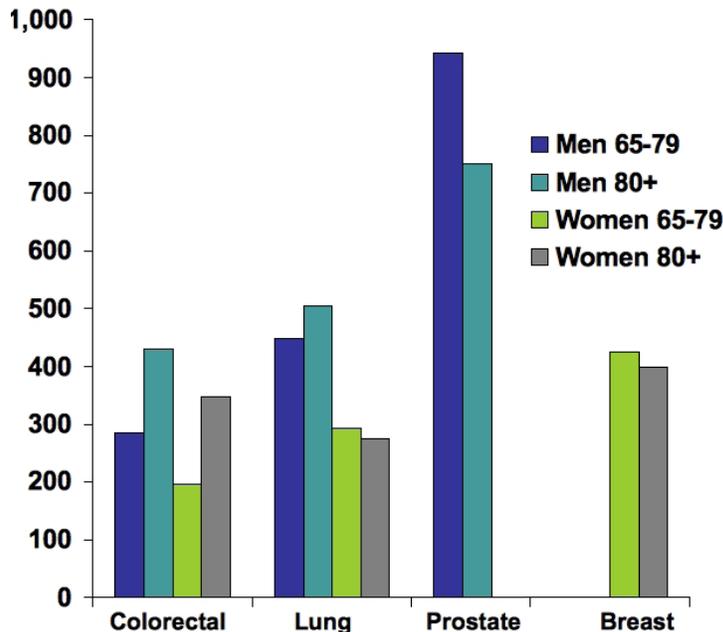
Note: Rates are age adjusted to the 2000 US standard population.

Source: Surveillance, Epidemiology, and End Results Program (SEER), SEER 17 Registries, Division of Cancer Control and Population Science, National Cancer Institute, 2008. Prepared by American Cancer Society, Surveillance Research.

## Chart 18.

The most commonly diagnosed cancer among the elderly varies by sex and age

**INCIDENCE PER 100,000 POPULATION, 2001-2005**



Prostate cancer in men and breast cancer in women are the most frequently diagnosed cancers in people age 65 and older.

Among people ages 65-79, lung cancer ranks second for both sexes, followed by colorectal cancer.

Among women age 80 and over, colorectal cancer is more common than lung cancer.

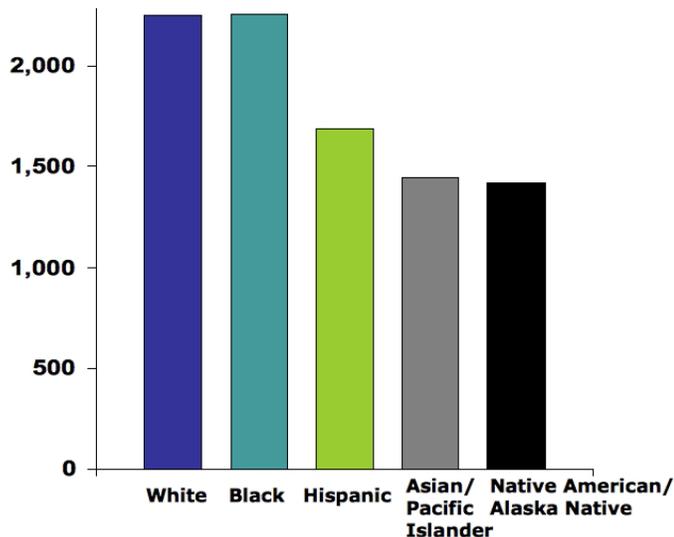
Note: Rates are age adjusted to the 2000 US standard population.

Source: Surveillance, Epidemiology, and End Results Program (SEER), SEER 17 Registries, Division of Cancer Control and Population Science, National Cancer Institute, 2008. Prepared by American Cancer Society, Surveillance Research.

## Chart 19.

Among the elderly, blacks and whites are more likely to get cancer than other groups

### INCIDENCE PER 100,000 POPULATION, 2001-2005



Among the elderly, Hispanics have a cancer incidence rate that is 25% lower than that of blacks and whites, while Asians and Native Americans have rates that are almost 40% lower.

Notes: Rates are age adjusted to the 2000 US standard population. Data shown for Whites and Blacks exclude Hispanics. Data for Whites, Blacks, and Hispanics exclude deaths from the Alaska Native Registry and Kentucky. Data for American Indians/Alaska Natives are based on the CHSDA (Contract Health Service Delivery Area) counties.

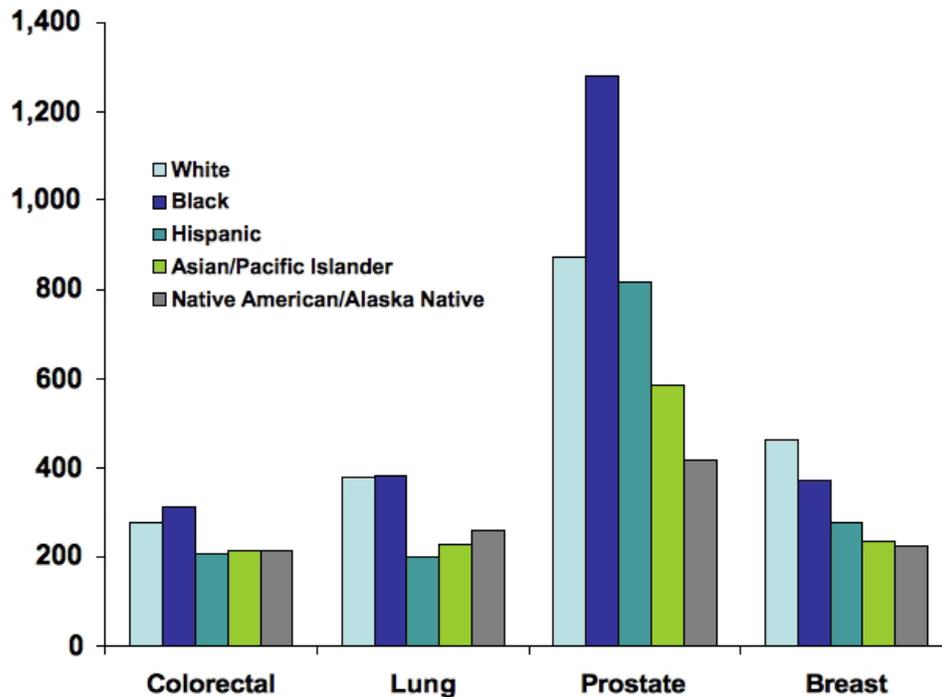
Source: Surveillance, Epidemiology, and End Results Program (SEER), SEER 17 Registries, Division of Cancer Control and Population Science, National Cancer Institute, 2008. Prepared by American Cancer Society, Surveillance Research.



## Chart 20.

Racial and ethnic variation in cancer incidence differs by cancer site

### INCIDENCE PER 100,000 POPULATION, 2001-2005



Racial and ethnic variation in cancer incidence differs by cancer site for those age 65 and older.

Among all groups, prostate cancer is the most common, followed by breast cancer, lung cancer and colon cancer, except for Native Americans, for whom lung cancer ranks second.

- Hispanics have the lowest lung cancer rate, which is almost half that of blacks and whites.
- Black men have a prostate cancer rate that is more than 30% higher than the rates for whites and Hispanics.
- White women have the highest incidence of breast cancer, with the rate for black women 21% lower and Hispanic women 40% lower. The breast cancer rate for Asian women is about half that of whites.

Notes: Rates are age adjusted to the 2000 US standard population. Data shown for Whites and Blacks exclude Hispanics. Data for Whites, Blacks, and Hispanics exclude deaths from the Alaska Native Registry and Kentucky. Data for American Indians/Alaska Natives are based on the CHSDA (Contract Health Service Delivery Area) counties.

Source: Surveillance, Epidemiology, and End Results Program (SEER), SEER 17 Registries, Division of Cancer Control and Population Science, National Cancer Institute, 2008. Prepared by American Cancer Society, Surveillance Research.

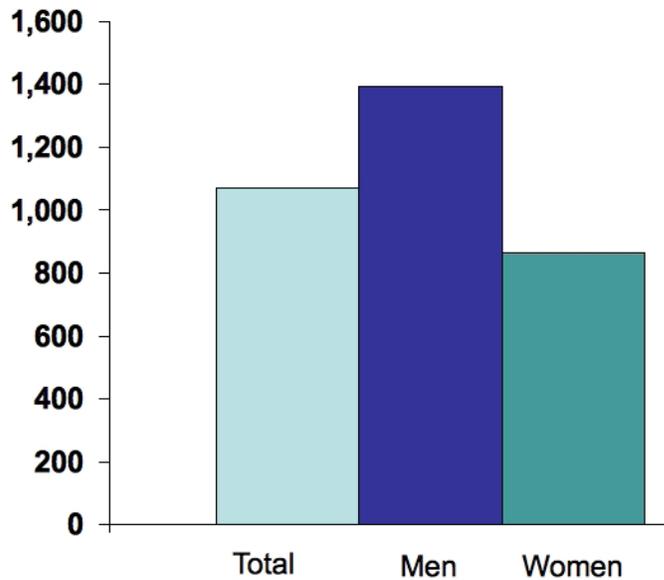


MORE ON CANCER DEATHS  
AMONG THE ELDERLY

## Chart 21.

Cancer death rates are higher for men

DEATHS PER 100,000 POPULATION, 2001-2005



Among those age 65 and older, the cancer death rate among men is about 60% higher than it is among women.

In 2005, about 201,000 men and 187,000 women over age 65 died of cancer.

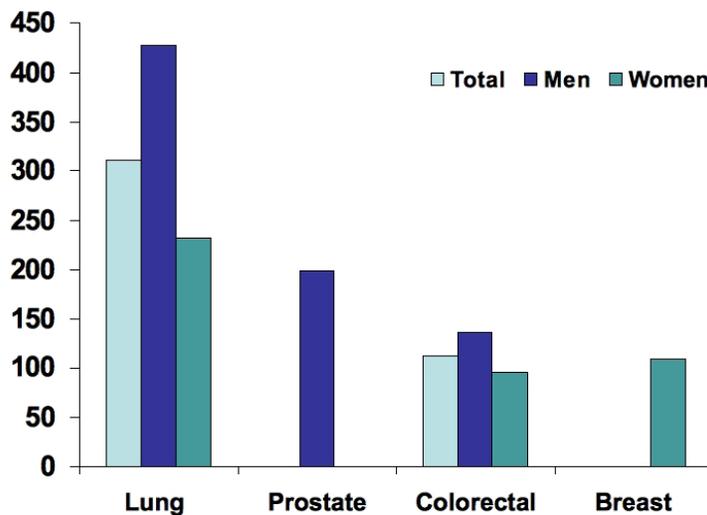
Note: Rates are age-adjusted to the 2000 US standard population.

Source: National Center for Health Statistics, National Vital Statistics System-Mortality. Prepared by American Cancer Society, Surveillance Research, 2008.

## Chart 22.

Death rates are highest for lung cancer

DEATHS PER 100,000 POPULATION, 2001-2005



For the most common cancer sites, death rates among the elderly are highest for lung cancer, followed by prostate cancer, cancer of the colon and rectum, female breast, and pancreas.

The death rate for lung cancer is more than double that of the other leading cancers.

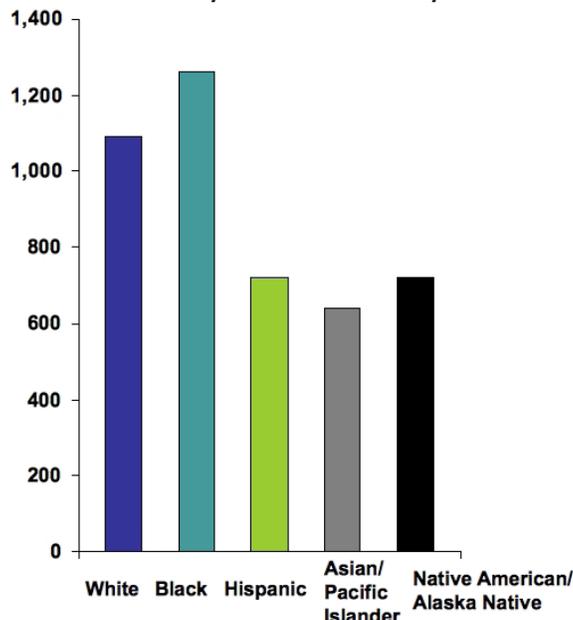
Note: Rates are age-adjusted to the 2000 US standard population.

Source: National Center for Health Statistics, National Vital Statistics System-Mortality. Prepared by American Cancer Society, Surveillance Research, 2008.

## Chart 23.

Cancer death rates among the elderly vary by race/ethnicity and are highest among blacks

DEATHS PER 100,000 POPULATION, 2001-2005



The cancer death rate for blacks age 65 and older is 16% higher than for whites. Hispanics, Native Americans, and Asians have death rates that are 50%-60% that of blacks.

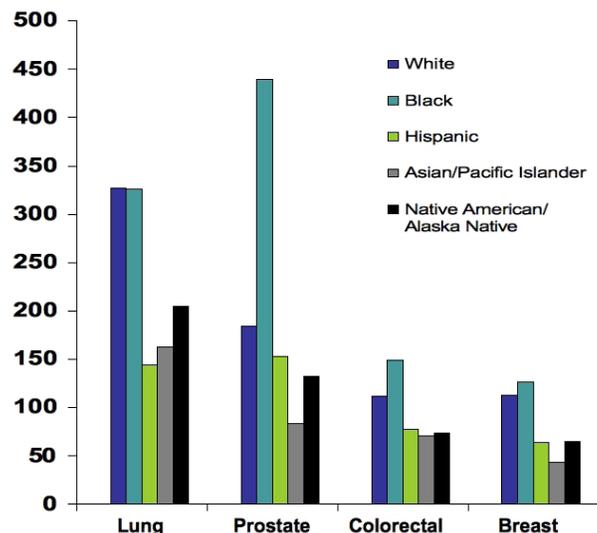
Notes: Rates are age-adjusted to the 2000 US standard population. Data shown for Whites and Blacks exclude Hispanics. Data for Whites, Blacks, and Hispanics exclude deaths from the Alaska Native Registry and Kentucky. Data for American Indians/Alaska Natives are based on the CHSDA (Contract Health Service Delivery Area) counties.

Source: National Center for Health Statistics, National Vital Statistics System-Mortality. Prepared by American Cancer Society, Surveillance Research, 2008.

## Chart 24.

Racial and ethnic differences in cancer death rates vary by type of cancer

DEATHS PER 100,000 POPULATION, 2001-2005



Among the most common cancers, prostate cancer shows the most racial/ethnic variation in death rates. The death rate among blacks for prostate cancer is more than double the rate for whites, and five times the rate for Asians.

The difference in the death rates between whites and blacks is much smaller for lung cancer than for other sites.

Asians generally have the lowest cancer death rates, except for lung cancer, for which Hispanics have the lowest rate.

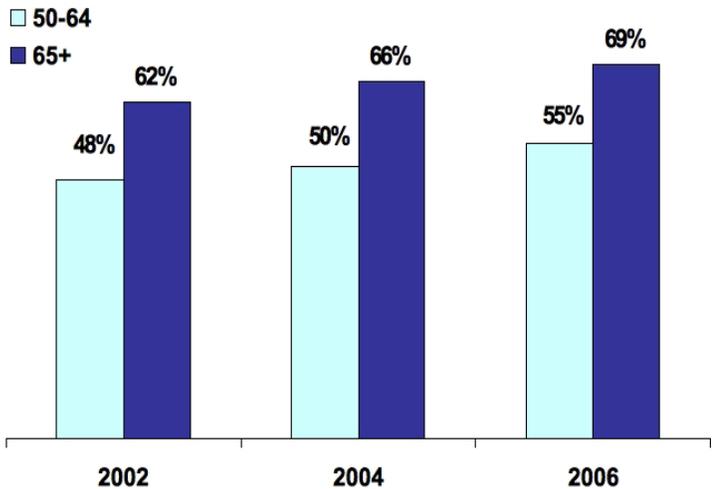
Notes: Rates are age-adjusted to the 2000 US standard population. Data shown for Whites and Blacks exclude Hispanics. Data for Whites, Blacks, and Hispanics exclude deaths from the Alaska Native Registry and Kentucky. Data for American Indians/Alaska Natives are based on the CHSDA (Contract Health Service Delivery Area) counties.

Source: National Center for Health Statistics, National Vital Statistics System-Mortality. Prepared by American Cancer Society, Surveillance Research, 2008.

CANCER SCREENING AMONG  
THE ELDERLY

## Chart 25.

Use of colorectal cancer screening is increasing for Americans age 65+



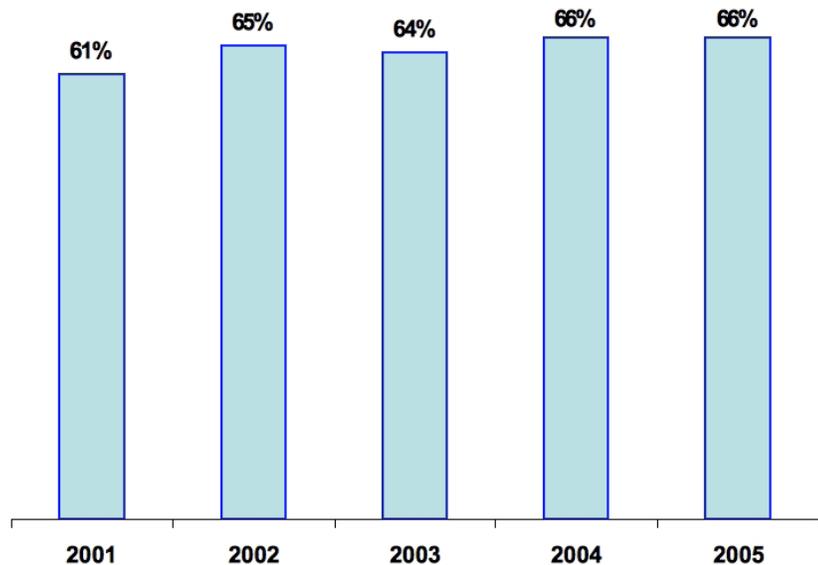
Use of colorectal cancer tests among those age 65 and older is higher than for those ages 50-64, which may reflect the availability of Medicare coverage for these services.

By 2006, almost 70% of the elderly reported having received a fecal occult blood test within 1 year and/or a sigmoidoscopy or colonoscopy within 10 years.

Source: DA Joseph and others, "Use of Colorectal Cancer Tests – United States, 2002, 2004, and 2006," MMWR 2008;57:253-8.

## Chart 26.

Each year, about two-thirds of male Medicare beneficiaries report having blood screening done for detection of prostate cancer

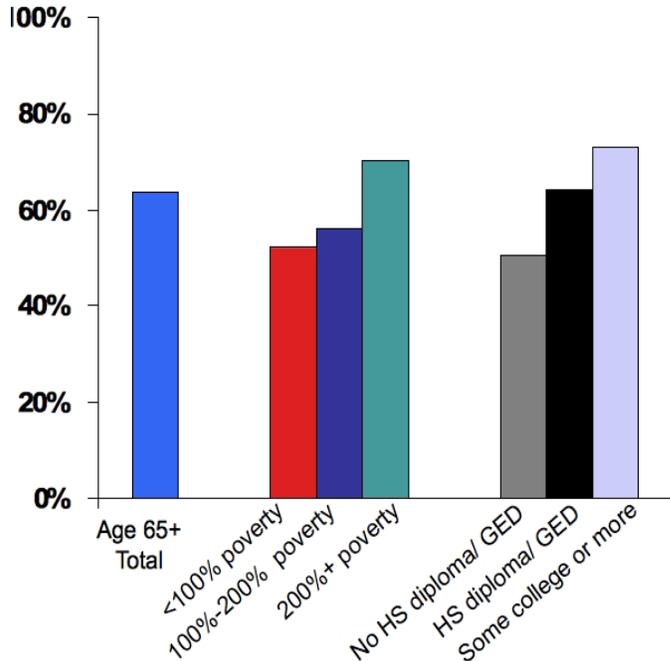


Source: Centers for Medicare & Medicaid Services, Medicare Current Beneficiary Survey, reported in Murgolo, M. "Data from the Characteristics and Perceptions of the Medicare Population: 2001-2005," Health Care Financing Review, Spring 2008.

## Chart 27.

Women ages 65 and older who are poor or with less education are less likely to have a mammogram

**PERCENT OF WOMEN AGE 65 OR OLDER HAVING A MAMMOGRAM WITHIN THE PAST 2 YEARS, 2005**



Use of mammography among women age 65 and older varies by income and education. In 2005, only 52% of women with incomes below the poverty line reported having a mammogram within the past two years, compared with 70% of women with incomes more than 200% of poverty.

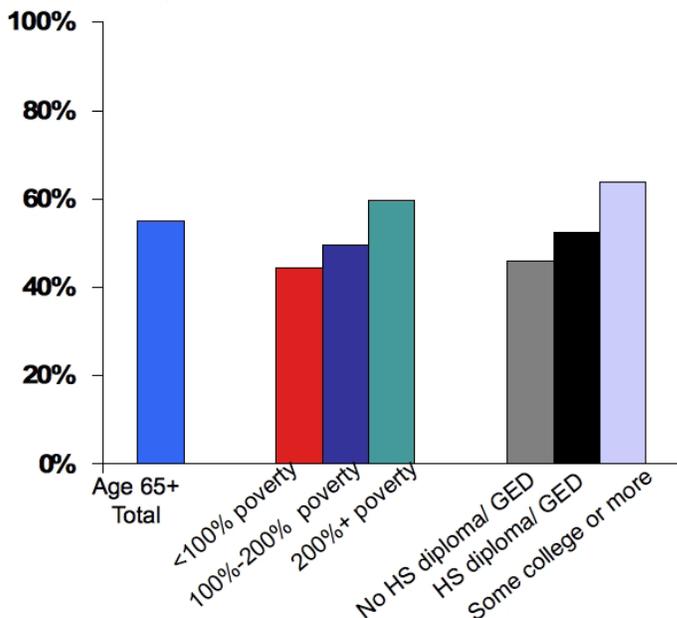
Similarly, 51% of women with no high school diploma or GED reported having a mammogram compared with 73% of women with some college education or more.

Source: National Center for Health Statistics, Health, United States, 2007, from National Health Interview Survey.

## Chart 28.

Elderly women who are poor or with less education are less likely to have a Pap test

**PERCENT OF WOMEN AGE 65 OR OLDER HAVING A PAP SMEAR WITHIN THE PAST 3 YEARS, 2005**



Use of Pap smears among women ages 65 and older varies by income and education.

Less than half of women with incomes below poverty report having had a Pap smear within the past 2 years, compared with 60% of higher income women.

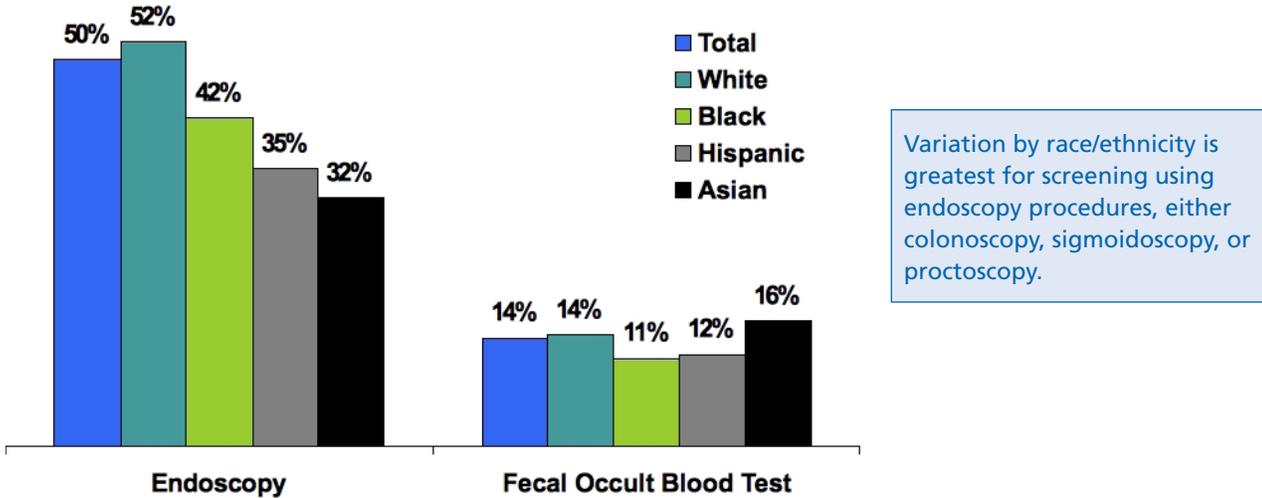
While 64% of women with at least some college education have had a Pap smear, only 46% of those with no high school diploma have done so.

Source: National Center for Health Statistics, Health, United States, 2007, from National Health Interview Survey.

## Chart 29.

Whites are more likely than others age 65+ to have a colorectal cancer screening test

### COLORECTAL CANCER SCREENING RATES, AGES 65+, 2005

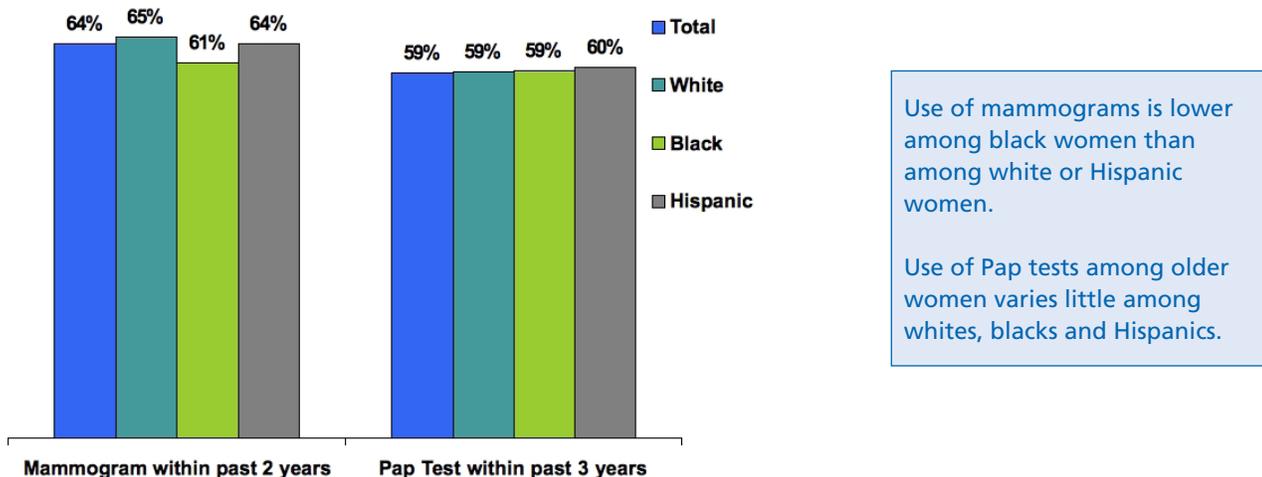


Note: Data shown for Whites and Blacks exclude Hispanics.  
 Source: National Health Interview Survey Public Use Data File 2005, National Center for Health Statistics. Prepared by American Cancer Society, Surveillance Research, 2008.

## Chart 30.

Use of mammograms is lower among black women ages 65+, but Pap test use varies little by race/ethnicity

### MAMMOGRAM WITHIN 2 YEARS, AGES 65+, 2005



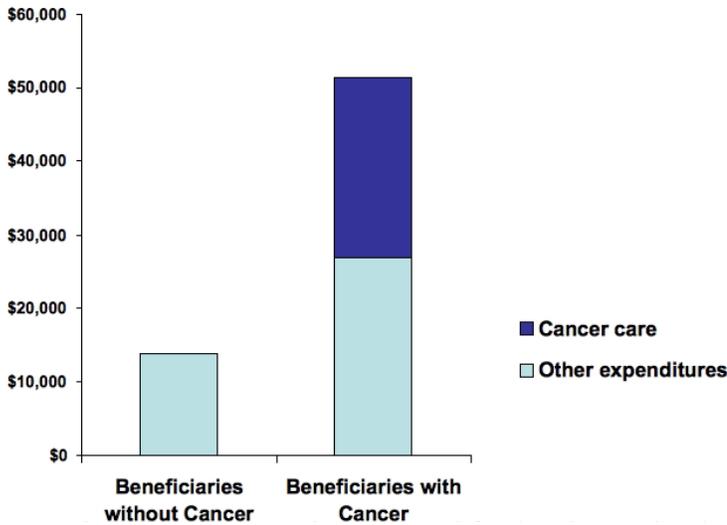
Note: Data shown for Whites and Blacks exclude Hispanics.  
 Source: National Health Interview Survey Public Use Data File 2005, National Center for Health Statistics. Prepared by American Cancer Society, Surveillance Research, 2008.

MEDICARE EXPENDITURES  
FOR CANCER

## Chart 31.

Average Medicare expenditures for beneficiaries with cancer are almost four times higher than expenditures for those without cancer

### AVERAGE MEDICARE FEE-FOR-SERVICE EXPENDITURES PER BENEFICIARY



Medicare beneficiaries with cancer have on average much higher health expenditures than others. From a multiyear survey, expenditures for beneficiaries with cancer averaged \$51,000 compared with \$14,000 for those without cancer.

While on average cancer treatment accounted for about half of total Medicare expenditures for those with cancer, other health expenditures were almost twice as high for beneficiaries with cancer than for others.

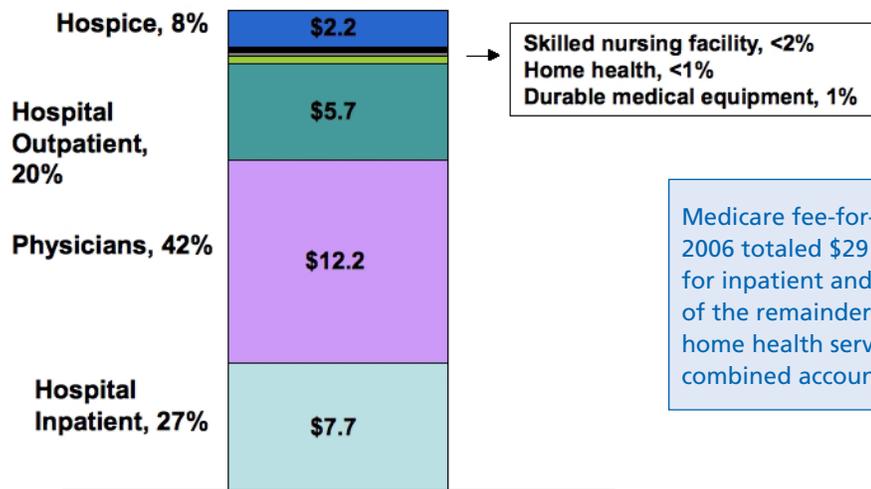
Notes: Medicare beneficiaries with cancer are defined as those with at least five cancer-related claims and more than \$500 in total Medicare reimbursement for those claims. They would likely include patients with an initial diagnosis of cancer, those under medical surveillance, and those being treated for recurrence. The data do not serve as a surrogate for new incidence data.

Source: Jean Mitchell, Georgetown Public Policy Institute, 2008. Analysis of Medicare Current Beneficiary Survey data.

## Chart 32.

Hospital services accounted for most Medicare fee-for-service payments for cancer care in 2006

### DISTRIBUTION OF MEDICARE FEE-FOR-SERVICE EXPENDITURES FOR CANCER CARE, 2006



Medicare fee-for-service payments for cancer care in 2006 totaled \$29 billion. Almost half this total went for inpatient and outpatient hospital care, and most of the remainder for physician services. Hospice care, home health services and skilled nursing facility stays combined accounted for 11 percent of the total.

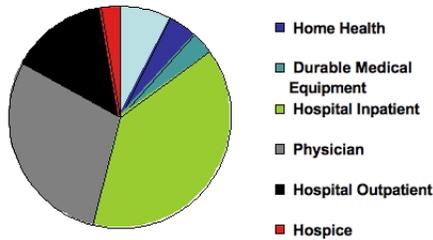
Notes: Includes beneficiary cost sharing as well as amounts paid directly by Medicare. Medicare fee-for-service expenditures exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans.

Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

## Chart 33.

Compared to Medicare expenditures overall, spending for cancer care is more likely to result from outpatient hospital, physician, and hospice care than from inpatient hospital stays

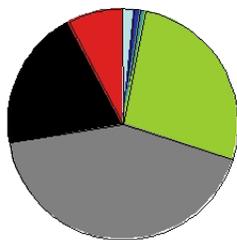
### TOTAL MEDICARE EXPENDITURES



Inpatient hospital stays accounted for 27% of Medicare fee-for-service payments for cancer care in 2006, compared with 39% of all Medicare spending.

Hospice comprised 8% of cancer care spending compared with 3% of total Medicare fee-for-service payments.

### MEDICARE EXPENDITURES FOR CANCER CARE



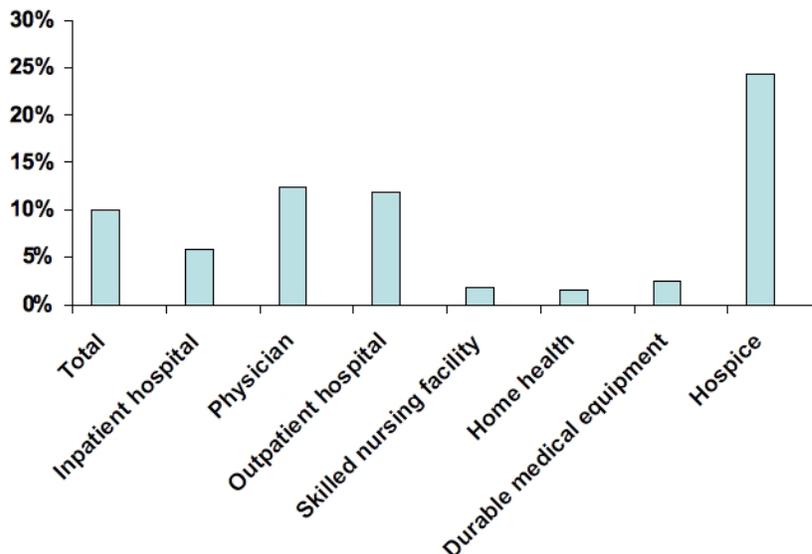
Notes: Includes beneficiary cost sharing as well as amounts paid directly by Medicare. Medicare fee-for-service expenditures exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans.

Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

## Chart 34.

Cancer care accounts for 9% of all Medicare fee-for-service payments, but that share differs by type of service

### CANCER CARE AS PERCENT OF MEDICARE FEE-FOR-SERVICE EXPENDITURES, 2006



Cancer care accounted for 24% of Medicare's hospice payments in 2006, about 12% of outpatient hospital and physician payments, but less than 5% of payments for skilled nursing facility stays, home health visits, and durable medical equipment.

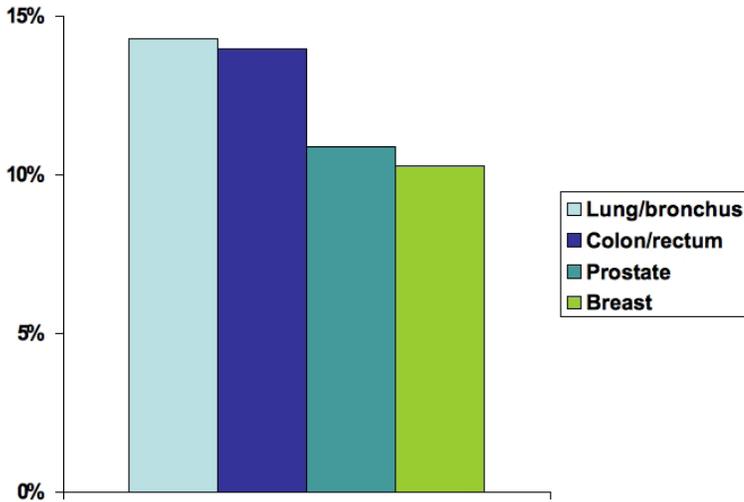
Notes: Includes beneficiary cost sharing as well as amounts paid directly by Medicare. Medicare fee-for-service expenditures exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans.

Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

## Chart 35.

Four cancers accounted for half of Medicare payments for cancer care in 2006

**PERCENT OF MEDICARE FEE-FOR-SERVICE CANCER PAYMENTS, 2006**  
**TOTAL = \$29 BILLION**



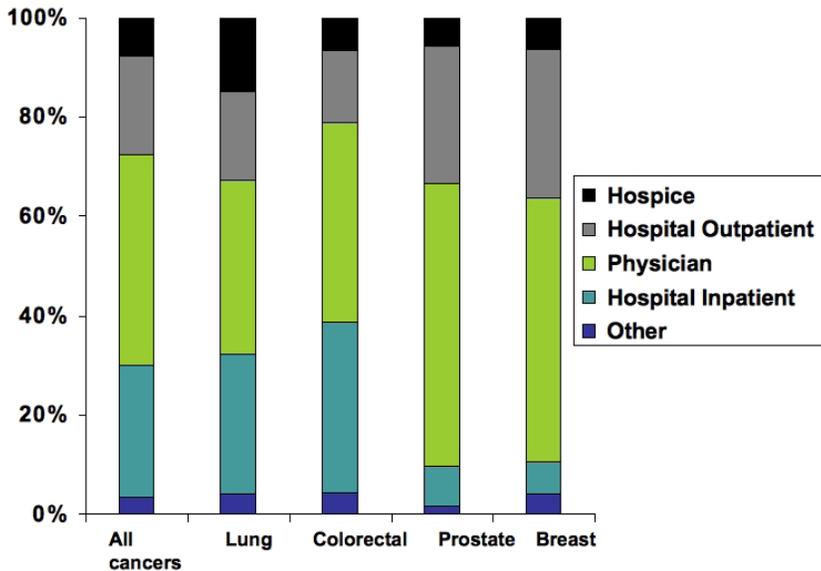
Lung and colorectal cancer each accounted for about 14% of Medicare cancer expenditures in 2006, with prostate and breast cancer contributing 11% and 10% respectively.

Notes: Includes beneficiary cost sharing as well as amounts paid directly by Medicare. Medicare fee-for-service expenditures exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans.  
 Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

## Chart 36.

The mix of Medicare expenditures varies by type of cancer

**DISTRIBUTION OF MEDICARE FEE-FOR-SERVICE EXPENDITURES FOR CANCER CARE, 2006**



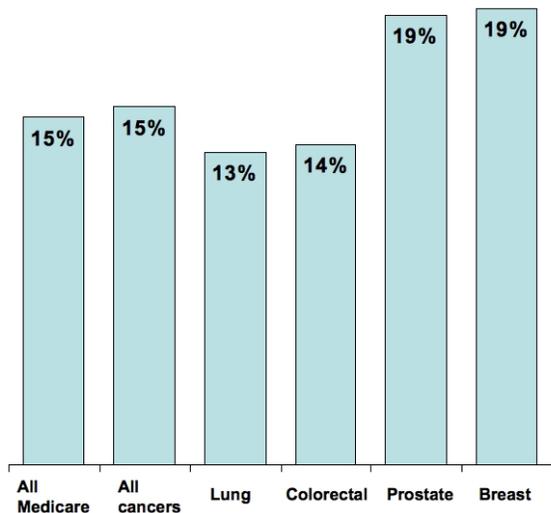
Inpatient hospital payments are a relatively small portion of the Medicare total for breast cancer (6%) and prostate cancer (8%) when compared with all cancers (27%).  
 Hospice care accounts for a greater share of total Medicare expenditures for lung cancer (15%) than it does for other cancer sites (8%).

Notes: Includes beneficiary cost sharing as well as amounts paid directly by Medicare. Medicare fee-for-service expenditures exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans.  
 Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

### Chart 37.

Beneficiary cost sharing finances about 15% of Medicare fee-for-service expenditures for cancer care, but varies by type of cancer

**BENEFICIARY COST SHARING AS PERCENT OF EXPENDITURES, 2006**



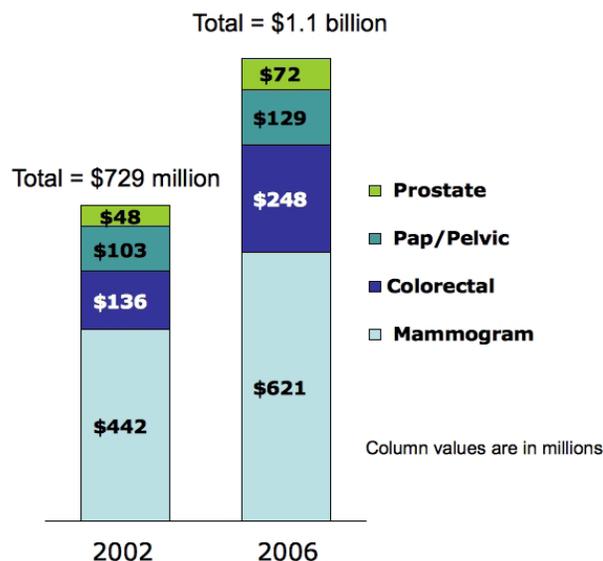
As a share of Medicare fee-for-service expenditures, beneficiary cost sharing is higher for cancer of the prostate and breast than for lung and colorectal cancer.

For these cancers, outpatient services account for a greater share of Medicare expenditures than do inpatient services, which have lower Medicare cost sharing.

Note: Medicare fee-for-service expenditures exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans. Cost sharing may be paid directly by beneficiaries or through retiree health plans, individual private supplemental coverage or Medicaid. Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

### Chart 38.

Medicare fee-for-service spending on screening for colorectal, breast, prostate and cervical cancer in 2006 totaled \$1.1 billion



Among fee-for-service Medicare cancer screening expenditures in 2006, mammograms accounted for 58% of the total.

Expenditures for colorectal cancer screening have grown faster than those for other cancer screening services, rising 82% since 2002 compared with 51% for prostate screening, 41% for mammograms, 26% for Pap tests, and 29% for Medicare fee-for-service spending overall.

Notes: Includes beneficiary cost sharing as well as amounts paid directly by Medicare. Medicare fee-for-service expenditures only, which exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans. Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

## Chart 39.

Cancer drugs account for a large share of Medicare Part B drug expenditures

Drug	Indication	Percent of spending	Rank by % of spending
Darbepoetin alfa	Anemia	10.6%	1
Rituximab	Non-Hodgkin's lymphoma	6.9%	2
Non-ESRD erythropoietin	Anemia	6.4%	3
Pegfilgrastim	Cancer	5.1%	5
Bevacozumab	Cancer	4.3%	6
Oxaliplatin	Cancer	2.9%	9

More than one-third of Part B drug expenditures are for six drugs that treat either cancer or the side effects associated with chemotherapy.

Part B drug expenditures totaled \$10.6 billion in 2006. With few exceptions, Part B drugs must be administered by physicians.

Note: New Medicare coverage guidelines for use of anti-anemia drugs were issued 2007, substantially reducing the use of these drugs.  
Source: Medicare Payment Advisory Commission, A Data Book: Healthcare Spending and the Medicare Program, June 2008.

## Chart 40.

The cost of cancer drugs to Medicare beneficiaries varies greatly

Cancer Protocol	Part B Beneficiary Cost* 2009	Part D Beneficiary Cost Range** 2009
<b>Breast Cancer</b> (With hyperlipidemia, type 2 diabetes, and hypertension)	<b>\$4,964</b>	<b>\$2,172 – 3,239</b>
<b>Metastatic Colon Cancer</b>	<b>\$14,780</b>	<b>\$21 - 654</b>

Medicare beneficiaries face out-of-pocket costs for cancer drugs that vary greatly.

Drugs covered under Medicare Part B require 20% cost sharing, which can be substantial in dollar terms because cancer drugs are expensive. Many beneficiaries have private supplemental plans, retiree health benefits, or Medicaid to assist with these costs.

Medicare Part D cost sharing varies depending on the particular drugs and the scope and structure of benefits under the beneficiary's particular Part D plan. For example, out-of-pocket costs in 2009 for breast cancer range from \$2,172 to \$3,239.

Low-income beneficiaries are eligible for subsidies to cover some or all of their Part D out-of-pocket costs.

\*Includes Part B premium and physician administration fees. Assumes no supplemental Part B coverage.

\*\*Includes premiums, drugs excluded from Part D, and spending on any off-formulary drugs. With generic substitution. Range compares premiums and cost sharing for select PDPs and Medicare Advantage Prescription Drug (MA-PD) plans in California.

Source: Avalere Health, Cost Sharing for Cancer Patients in Medicare 2009, prepared for The American Cancer Society, December 2008.

## Chart 41.

Almost 40% of Medicare hospice care is for cancer patients

Data for 2005			
Disease category	Cases	Percent of total cases	Average length of stay (days)
Cancer (except lung cancer)	194,089	27.2%	46.4
Lung cancer	79,560	11.2%	14.5
Circulatory, except heart failure	77,653	10.9%	55.3
Heart failure	57,010	8.0%	62.6
Debility, not otherwise specified	51,616	7.2%	67.4
Total	713,144	100%	56.6

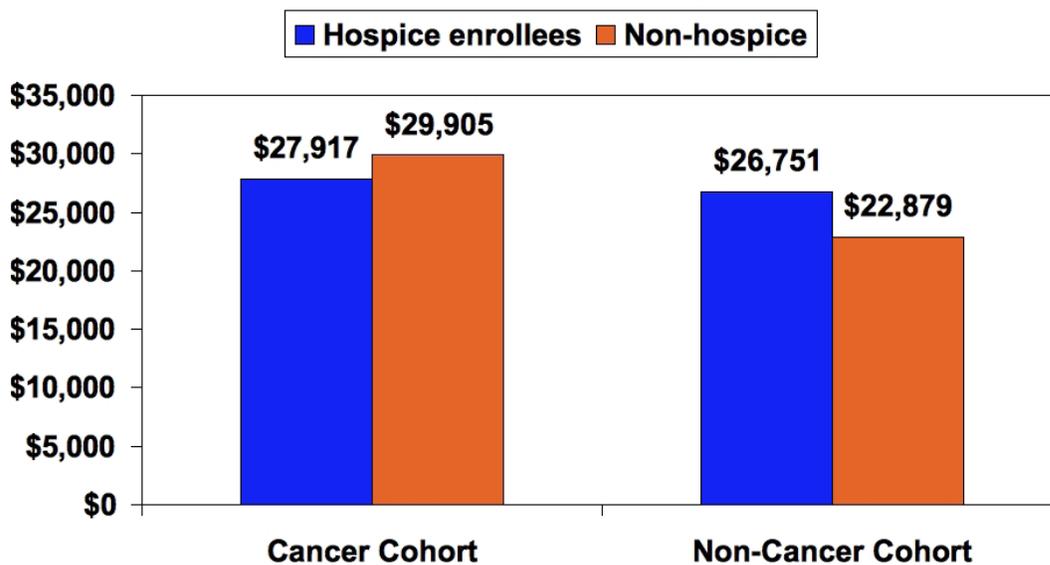
Lung cancer alone accounts for 11% of the total.

Lengths of stay in hospice for those with lung cancer are, on average, shorter than stays for other hospice patients – 14.5 days compared with 46.4 days for other cancer patients and 56.6 days for all patients.

Source: Medicare Payment Advisory Commission, A Data Book: Healthcare Spending and the Medicare Program, June 2008.

## Chart 42.

Medicare expenditures in the last year of life are lower for cancer patients who enroll in hospice than for those who do not, a result not seen for non-cancer patients

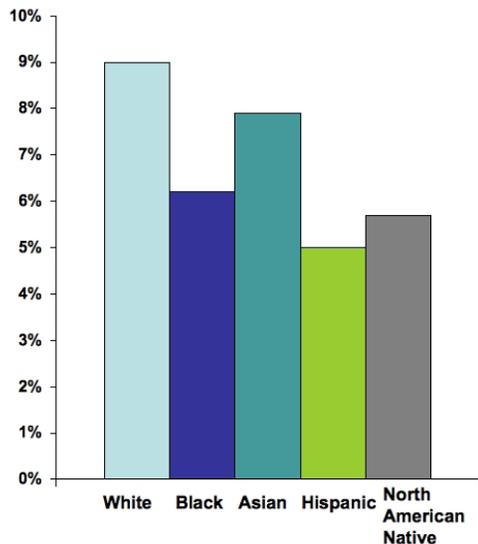


Source: Campbell, D. and others. "Medicare Program Expenditures Associated with Hospice Use," Annals of Internal Medicine, February 17, 2004.

## Chart 43.

Cancer care represents a greater share of Medicare spending for whites than for other groups

**CANCER CARE AS A % OF TOTAL FEE-FOR-SERVICE MEDICARE PAYMENTS, 2006**



As a share of Medicare fee-for-service payments, cancer care is highest for whites (9%) and lowest for Hispanics (5%).

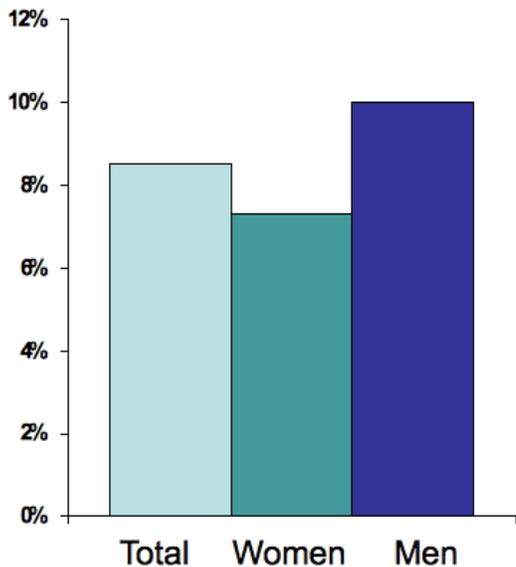
Per capita Medicare cancer care payments for whites are 14% higher than for blacks and higher by 40% or more when compared with other groups.

Notes: Includes beneficiary cost sharing as well as amounts paid directly by Medicare. Medicare fee-for-service expenditures exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans.  
 Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

## Chart 44.

Cancer care represents a greater share of Medicare spending for men than for women

**CANCER CARE AS A % OF TOTAL FEE-FOR-SERVICE MEDICARE SPENDING, 2006**



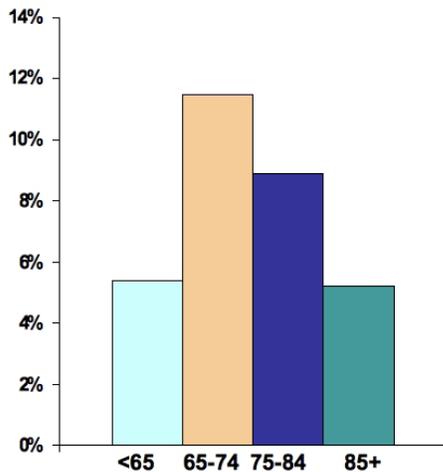
About 10% of all Medicare fee-for-service spending for men is for cancer; the share is 7% for women.

Notes: Includes beneficiary cost sharing as well as amounts paid directly by Medicare. Medicare fee-for-service expenditures exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans.  
 Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

## Chart 45.

Medicare cancer care spending varies by age

**CANCER CARE AS A % OF TOTAL FEE-FOR-SERVICE MEDICARE SPENDING, 2006**



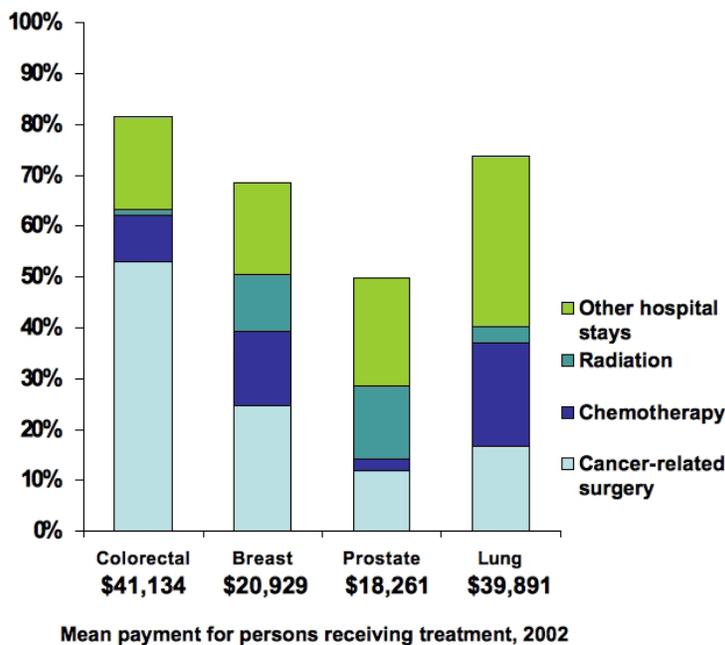
Cancer care accounted for 12% of 2006 total Medicare fee-for-service spending for those ages 65-74; this share was 9% for those ages 75-84 but only 5% for those beneficiaries under 65 or those age 85 and older.

Notes: Includes beneficiary cost sharing as well as amounts paid directly by Medicare. Medicare fee-for-service expenditures exclude spending by Part D prescription drug plans and Part C Medicare Advantage plans.  
 Source: Medicare five percent sample LDS SAF files, 2006. Analysis by Direct Research, LLC.

## Chart 46.

Medicare payments for the initial cost of cancer care vary among the most common cancers and reflect the mix of services used

**PERCENT OF TOTAL MEDICARE PAYMENT, 2002**



Medicare payments for initial cancer treatment in 2002 averaged about \$40,000 for both colorectal cancer and lung cancer.

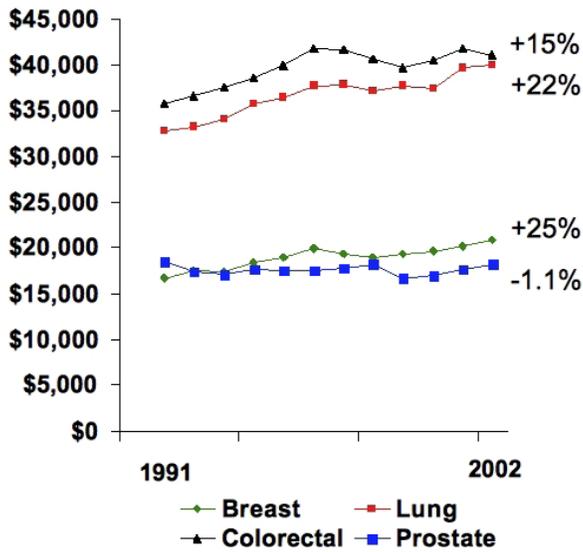
Surgery and other hospital stays accounted for most expenditures for these cancers — 50% for lung cancer and 72% for colorectal cancer. Chemotherapy comprised another 20% of Medicare payments for lung cancer, but was less than 10% of payments for colorectal cancer.

For breast and prostate cancer, initial treatment costs averaged half as much as for colorectal and lung cancer, with a greater share of costs associated with chemotherapy and radiation services.

Note: Initial treatment period includes care provided from 2 months before diagnosis to 365 days after diagnosis.  
 Source: Warren, J. and others, "Evaluation of Trends in the Cost of Initial Cancer Treatment," Journal of the National Cancer Institute, June 18, 2008.

### Chart 47.

Medicare payments for the initial cancer treatment period have grown at different rates for different cancers, reflecting changes in the mix of services used



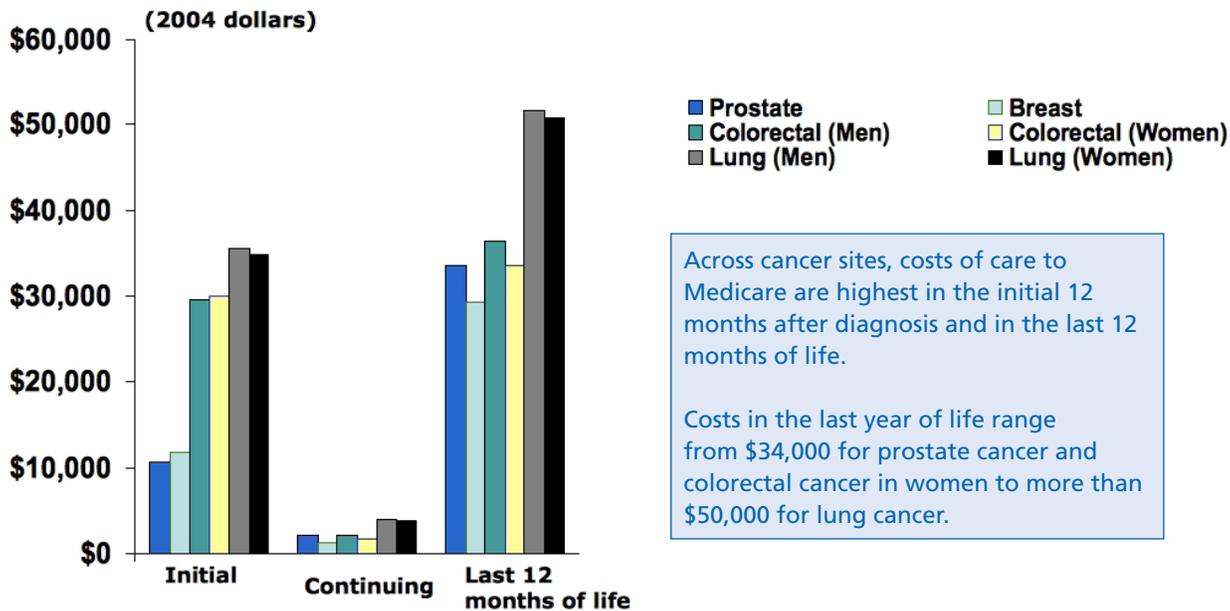
Excluding the effects of health care cost inflation, Medicare payments for initial treatment of prostate cancer declined by 1.1% between 1991 and 2002, while for breast cancer, lung cancer, and colorectal cancer, payments increased by at least 15 percent.

During these years, use of surgery during initial treatment of prostate cancer declined from 54% to 24% of Medicare patients.

Notes: Initial treatment period includes care provided from 2 months before diagnosis to 365 days after diagnosis. Figures are in constant 2003 dollars, and adjusted for geographic price variation.  
 Source: Warren, J. and others, "Evaluation of Trends in the Cost of Initial Cancer Treatment," Journal of the National Cancer Institute, June 18, 2008.

### Chart 48.

Costs of cancer care to Medicare are highest in the initial phase of care and the last year of life



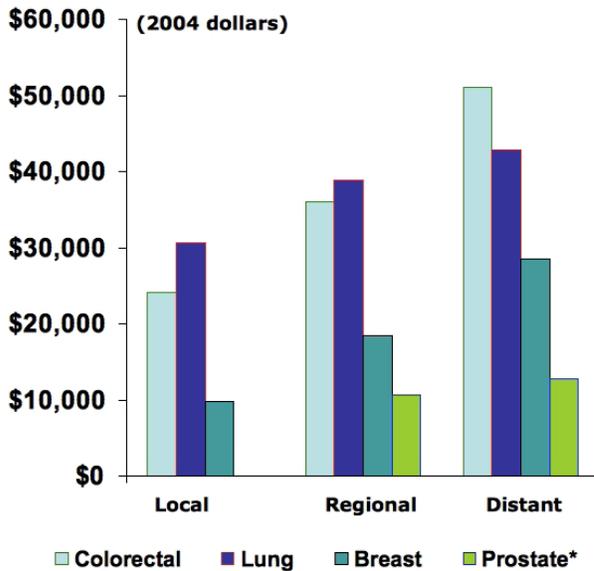
Across cancer sites, costs of care to Medicare are highest in the initial 12 months after diagnosis and in the last 12 months of life.

Costs in the last year of life range from \$34,000 for prostate cancer and colorectal cancer in women to more than \$50,000 for lung cancer.

Notes: Initial period is the first 12 months following diagnosis; continuing phase is the months between the initial period and the last 12 months of life. Costs of continuing phase are annualized. Costs in the last year of life include cancer patients dying of other causes.  
 Source: Yabroff, R. and others, "Cost of Care for Elderly Cancer Patients in the United States," Journal of the National Cancer Institute, May 7, 2008.

## Chart 49.

The cost to Medicare of cancer patients during the initial period after diagnosis varies by the stage of cancer



In general, costs to Medicare for cancer patients for the 12 months after diagnosis are higher for those with a later stage of diagnosis.

For example, for breast cancer, costs during the 12 months after diagnosis are 3 times higher for those diagnosed with distant disease than for those with local disease.

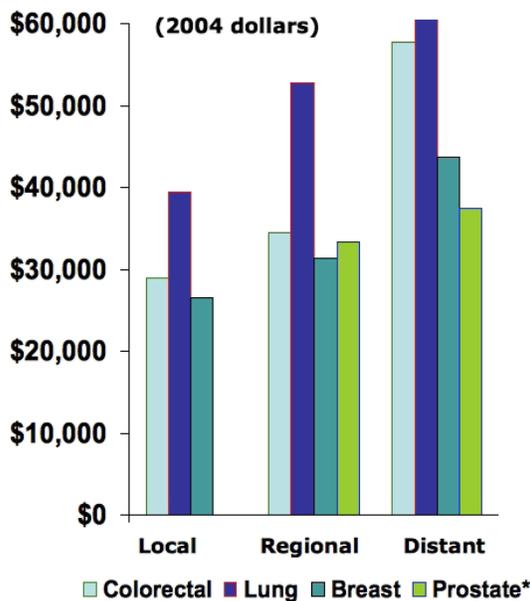
\*Localized and regional prostate cancer are combined into one category.

Note: Initial period is the first 12 months following diagnosis.

Source: Yabroff, R. and others, "Cost of Care for Elderly Cancer Patients in the United States," Journal of the National Cancer Institute, May 7, 2008.

## Chart 50.

The cost to Medicare for cancer patients during the last year of life varies by the stage at diagnosis



In general, costs to Medicare for cancer patients during the last year of life are also higher with later stage of diagnosis.

For example, for colorectal cancer, costs during the last 12 months of life for those with local disease at diagnosis are about half the costs of those with distant disease.

\*Localized and regional prostate cancer are combined into one category.

Note: Costs in the last year of life include cancer patients dying of other causes.

Source: Yabroff, R. and others, "Cost of Care for Elderly Cancer Patients in the United States," Journal of the National Cancer Institute, May 7, 2008.



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