

Cost of Cancer Care for Patients Insured by Medicare

Summary of “Cost of Cancer Management by Stage of Diagnosis Among Medicare Beneficiaries”

– Data published in Current Medical Research and Opinion, 2022 –

Cancer Treatment is a Huge Financial Burden

Cancer is one of the most challenging medical problems around the globe. Around 40% of people will be diagnosed with cancer sometime in their lives.¹ Cancer is the second leading cause of death in the United States.² Cancer is also an expensive disease. In 2020, between \$174 billion and over \$1 trillion was spent on cancer care, depending on whether indirect costs are included.³ Cancers detected earlier are easier to treat than advanced cancers.⁴ Importantly, early diagnosis may also help decrease the overall costs of medical care. Some studies have examined the cost of cancer care for patients with private insurance.⁵⁻⁸ But few studies have looked at how different cancer types and stages affect costs for patients insured by Medicare.

A Study Examined How the Cancer Stage at Diagnosis Affects the Cost of Cancer

Treatment Over Time

To identify these costs, this study looked at data from the Medicare claims database between 2012 and 2016. Researchers looked at the records of patients covered by Medicare plans who were diagnosed with one of 17 common cancer types. The disease progression of cancers can range from early (Stage I) to late (Stage IV) when diagnosed. The study gathered all Medicare claims for any treatment related to cancer care. The goal was to estimate the average annual costs of cancer care for years 1 through 5 after patients were diagnosed with cancer. They also looked at how the costs were spread over months 1-6 and months 7-12. Finally, researchers wanted to know how the stage of cancer at diagnosis affected these costs. Costs were divided into three groups - (1) Inpatient costs coming from treatment after a patient is admitted to the

hospital, (2) Outpatient costs from services patients receive outside a hospital, like seeing a specialist, and (3) And pharmacy costs for prescription drugs.

Cancers Diagnosed at Earlier Stages Cost Less Regardless of Treatment Period

The study looked at the records of over 2 million patients diagnosed with cancer. Records that didn't list the stage of a patient's cancer were not used. Patients also needed to be continuously enrolled in Medicare to be counted in the study. Overall, nearly six hundred thousand patients were included in the study. When researchers looked at the costs of their cancer care they found three notable patterns:

(1) Those diagnosed with a higher/later stage cancer had the greatest costs compared to earlier stages (**Figure 1a**). This means that the cost of cancer increases for each higher stage at diagnosis. This pattern was seen each of the 5 years after cancer diagnosis.

(2) Costs were also highest during the first year after cancer diagnosis (**Figure 1b**). This was true regardless of cancer type or stage at diagnosis. Annual costs fell sharply from year 1 to year 2. However, costs did not fall as much from years 2 to 5. Moreover, costs were always higher during months 1-6 than for months 7-12.

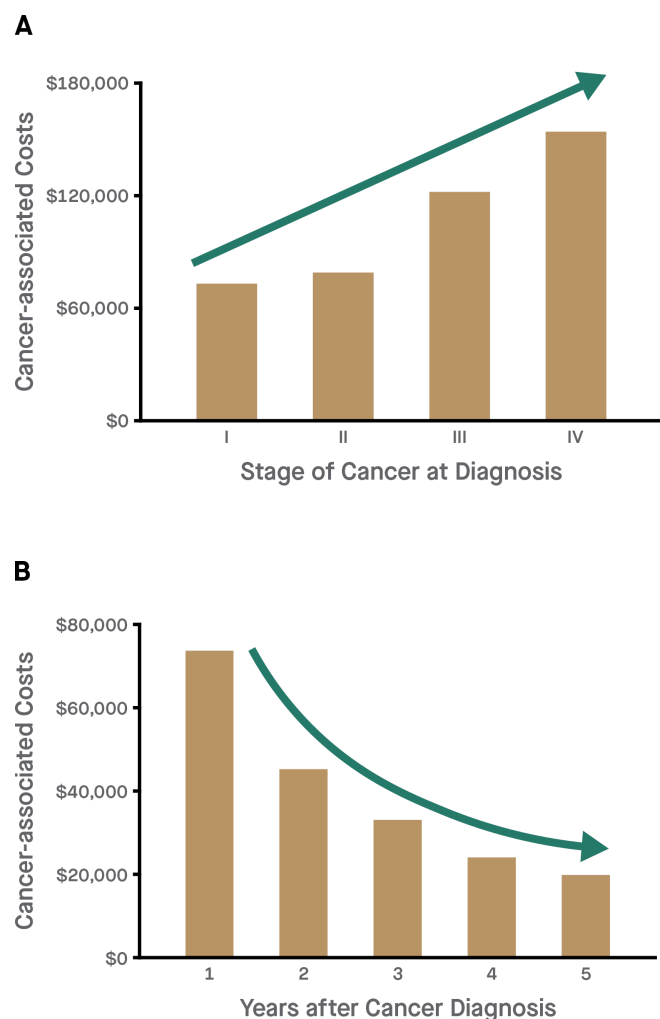
(3) For nearly all cancers in the first year of care, most costs came from inpatient services (**Figure 1c**). This proportion was typically even higher for patients diagnosed at later stages. However, each year after diagnosis the proportion of inpatient costs typically fell.

Overall, this study found the greatest costs of care were for late-stage cancers during the first year. The higher costs associated with a Stage IV diagnosis versus earlier stages were seen as early as six months after diagnosis. But these increases persisted up to Year 5. One recent

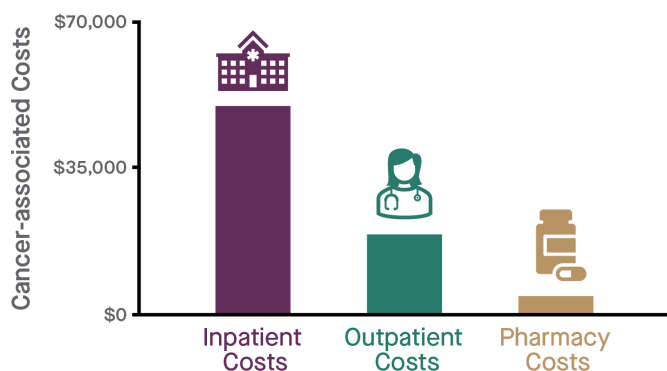
study looked at similar data from 2013 to 2017⁸ and reported similar patterns in the cost of cancer care. They found that higher stages at diagnosis incurred higher costs and that cost differences were greatest in the initial period after diagnosis.

Early cancer detection involves both screening for cancer in patients without obvious symptoms and diagnosing cancers early when symptoms show up. Studies have shown that early cancer detection may lead to better health outcomes in patients. Results from this study show that there is also a large economic benefit to diagnosing cancers as early as possible in patients insured by Medicare.

Figure 1. Trends in Relative Costs of Cancer-Associated Care



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Figures depict a single cancer type representative of the observed trends in cancer-associated costs by stage and time since diagnosis. Cancer-associated costs from Year 1 after liver cancer diagnosis at Stages I-IV (Figure A). Cancer-associated costs for each year after diagnosis of Stage I liver cancer (Figure B). Cancer-associated cost components during Year 1 after Stage I liver cancer diagnosis (Figure 1C).

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