



KIDNEY CANCER

Research Summary

Cost and value of surgery for kidney cancer patients in the United States aged 65 years and older

Healthcare in the United States is expensive, but high costs do not always guarantee quality. Dr Hung-Jui Tan and his colleagues from the Department of Urology at the University of North Carolina wanted to understand more about cost versus quality for patients undergoing surgical treatment for kidney cancer.

Why was the study done?

In this modern era of technology, costly cancer treatment options such as focal therapy and robot-assisted surgery are used more frequently than conservative approaches like close monitoring. Yet services that are either costly or result in poorer outcomes for patients, such as surgical complications, infections, or post-surgical care, are considered lower in value from a healthcare perspective. So, there is a need to find out if the cost of surgical treatment for kidney cancer aligns with patient outcomes to understand the value of kidney cancer care.

How was the study done?

For this study, the research team used data from SEER-Medicare. SEER is a large cancer database in the United States that contains information about how many people have cancer as well as the treatment they have received. The database is linked to Medicare, a government organisation that provides health insurance for people over 65.

Focal therapy is a type of treatment (usually high heat or extreme cold) which targets the cancer with minimal damage caused to the surrounding tissue.

A **nephrectomy** is a surgical procedure to remove part of the kidney (partial) or the whole kidney (radical).

The research team collected information on age, gender, ethnicity, and tumour details from 19,129 people over the age of 65 who had undergone partial or radical nephrectomy.

They calculated the number of kidney cancer surgeries performed at each hospital per year, the medical problems people had both before and after surgery, the resources used to treat each patient, and the cost of their cancer care.

What were the results?

8,636 patients (45%) had 1 or more existing medical problem. The most common were fall-related injury, malnutrition, depression, pneumonia, fainting episodes, and mobility assistance needs.

The researchers found that patients with existing medical problems needed more aftercare post-surgery than healthier patients (such as hospitalisation and intensive care treatment), regardless of the surgery performed. So, their “health outcomes” were poorer.

The cost of care for patients with existing medical problems over a 30-day period was in the region of \$25,000, which was over \$2,000 (9%) higher than the cost of care for healthier patients. So, their treatment was more costly.

What was the conclusion?

Previous studies have reported that patients with early-stage kidney cancer, including those with existing medical problems, have often undergone surgical treatment despite the option of active surveillance. But as healthcare shifts from simply improving outcomes to improving value, patient selection for surgical treatment needs to be balanced in terms of cost and health outcomes. This study provided an insight into the current balance, demonstrating how patients with medical problems used more health care services immediately after surgery and after discharge. So, while surgery was feasible, the recovery for these patients was more eventful and costly, indicating lower-value care.

So, to improve the value of cancer care for elderly patients, urologists need to carefully consider the recovery involved for older patients with multiple health problems, both in terms of their potential health outcomes and the cost of care.



Louisa Fleure, Specialist Nurse, EAU PI Working Group

What does this mean for patients?

“We know being diagnosed with cancer is an extremely anxious time, but the results of this study reinforce how important it is for you and your doctor to think carefully about all available treatment options. A nephrectomy is major surgery, so you need to think about the risk of complications, as well as the road to recovery to be sure it’s definitely the right choice for you, particularly if you are over 65 and have other ongoing health problems.”