

# PATIENT SUMMARY

**European Association of Urology**  
Mr. E.N. van Kleffensstraat 5  
6842 CV Arnhem  
The Netherlands

## **Patient Function and the Value of Surgical Care for Kidney Cancer**

Hung-Jui Tan, Joseph D. Shirk, Karim Chamie, Mark S. Litwin and Jim C. Hu  
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Patient summary by Louisa Fleure,  
PCa Specialist Nurse, Urology Centre  
Guy's Hospital, London (UK)  
EAU PI Working Group Member



### **Introduction and background**

This American study looks at the value of kidney removal for cancer in the US health care system. Value in health care means achieving the best outcomes at the lowest cost.

In America, 28% of hospital admissions are for planned operations. However, these planned operations represent nearly 50% of expenditure for hospitals. Previous work has shown that the cost of an operation varies greatly. This is important for American systems such as accountable care organizations (ACOs) or bundled payments. ACOs are groups of doctors, hospitals, and other health care providers. Bundled payments are where health care providers are paid on the basis of expected costs for a procedure. These systems are described as “risk sharing” as payers (patients or insurance companies) get to share their risk with the providers of care as they are able to control costs. Providers are incentivised to provide care that is as effective and cost efficient as possible.

Surgical procedures become more expensive when complications occur. Sometimes these are a result of difficulties from the surgery itself. However, in cancer surgery, a patient’s functional status (ability to perform normal daily activities) and frailty (overall resilience and how this relates to their chance to recover quickly following health problems) have been identified as factors that make illness and death after surgery more common.

### **The aim of the study**

In this paper, the authors looked at the impact of a person’s functional status and frailty on the value (outcomes and cost) of kidney removal for cancer in older people.

### **What did they do?**

The authors looked at the records of 19,129 elderly patients with kidney cancer treated with surgery from 2000 to 2009. They assessed the patient level of function or disability before surgery, and measured illness, death, resource use and cost 30 days after surgery. They estimated the relationship between patient function, and treatment outcomes and costs.

- Functional status was assessed by a number of indicators (e.g. use of mobility aids, falls, fractures, home oxygen or pressure ulcers) or overlying disabilities (e.g. dementia, depression, malnutrition, respiratory failure or sepsis).
- Outcomes measured included morbidity (illness after surgery) and mortality (death), resource use and cost. They also looked at surgical and medical complications of surgery and other complications seen in older people such as dehydration, delirium, falls/fractures and pressure ulcers.
- To assess resource use, they recorded admission to intensive care, how long people stayed in hospital after surgery, whether patients needed rehabilitation care, emergency department visits and readmission to hospital after discharge.

### **What did the study find?**

Of the 19,129 patients 28.8% had 1 indicator of reduced function and 16.4% had 2 or more indicators. While surgical complications did not vary, patients with 2 or more indicators experienced illness or died within 30 days of surgery more often than patients with no functional problems before surgery. These patients needed more medical resources and had higher costs for their care.

### **Why is this study important?**

In this study, the authors found that during kidney cancer surgery, patients in poor functional health can face a more difficult medical recovery at higher cost, indicating lower value care. They concluded that there should be a greater consideration of frailty and functional status when considering kidney removal for cancer in older people. To improve value (best outcomes at lowest cost) they make some suggestions:

- Using “prehabilitation” interventions designed to improve patient health and fitness before treatment
- Team-based care using medical physicians and rehabilitation therapists
- Some patients may be better treated with surveillance rather than surgery

In all health care systems, good outcomes and low costs are important. This study highlights the risks faced by some older patients undergoing kidney removal for cancer and the necessity to assess accordingly and consider strategies to reduce this risk and improve value.

The study mentioned in this patient summary was conducted in the U.S.A. and focuses on the relevant American national healthcare.

Read the full article [here](#).