The Role of Removing the Kidney in the Setting of Kidney Cancer

There has been a lot of debate in the kidney cancer community regarding the utility of a procedure known as cytoreductive nephrectomy. Cytoreductive nephrectomy refers to the removal of the kidney in a patient with distant spread of his or her kidney cancer. Data from the immunotherapy era, when patients received agents such as interferon and interleukin-2, seemed to suggest that there was a substantial benefit with this procedure. However, it’s unclear whether or not the same benefit may potentially exist in the era of targeted therapy.

We’ve done an analysis of a large database known as the Surveillance Epidemiology and End Results Database (SEER) and our data seems to suggest that there’s still a benefit with cytoreductive nephrectomy in the era of targeted drugs. Having said that, I would still concede that we would probably need to rely on clinical trials to decide whether or not there is really a benefit related to this procedure. One trial that may get at the root of this issue is the SURTIME trial. This is a trial that compares immediate surgery or surgery after therapy with the drug sunitinib in patients with metastatic kidney cancer. In this particular clinical trial, the investigators are looking at the primary endpoint of progression-free survival (essentially, delay in tumor growth). The study is estimated to enroll a total of 458 patients.

A second study that will help address the role of cytoreductive nephrectomy in the targeted therapy is the CARMENA trial. This trial is a bit different in its design – as opposed to comparing sunitinib prior to surgery to sunitinib after surgery, the CARMNEA trial evaluates whether there is a benefit to surgery altogether. In this particular clinical trial, patients are randomized to receive nephrectomy followed by therapy with sunitinib or sunitinib alone (without nephrectomy). This trial differs slightly in that it evaluates the primary endpoint of overall survival. This study is also larger, including a total of 576 patients.

The SURTIME and CARMENA trials, if completed, may ultimately provide a more definitive answer regarding the potential utility of cytoreductive nephrectomy in patients that are receiving VEGF-directed agents, like sunitinib. However, with multiple promising drugs emerging (like PD-1 inhibitors and MET inhibitors, I wonder whether we will again need to demonstrate the benefit of cytoreductive nephrectomy using these novel classes of agents.