

## SURGERY

# Tumor risk after urinary diversion

A number of different techniques can be used to re-route urine flow out of the body when the bladder is no longer functional. Of these, ureterosigmoidostomies, cystoplasties and orthotopic ileocolonic neobladders seem to be associated with a higher risk of secondary tumor development than other types of urinary diversion, according to new research published in *European Urology*.

Adenomas and adenocarcinomas are a recognized complication of ureterosigmoidostomy, but little has been known about the risks associated with other types of urinary diversion. Tilman Kälble and colleagues therefore assessed the medical records of all patients who had undergone urinary diversion at one of 44 mostly high-volume clinics across Germany. Their study encompassed a nearly 40-year period.

Records showed that 32 secondary tumors developed in a total cohort of 17,758 surgeries. Of the continent

urinary diversions, secondary tumor risk was greatest following ureterosigmoidostomy (2.58%) and cystoplasty (1.58%). Moreover, of the different neobladder types, ileocolonic neobladders had a higher tumor risk than ileal neobladders (1.29% versus 0.05%, respectively). Ileal conduits were associated with minimal risk of secondary tumor development (0.02%).

The period between surgery and postoperative tumor development ranged from 4 years to 34 years. A large proportion of the tumors that developed after ureterosigmoidostomy occurred >20 years postoperatively, whilst most of the tumors associated with neobladders and pouches occurred within the first 10 years.

Tumor location also differed between the urinary diversion types. For instance, the majority of tumors after ureterosigmoidostomy (94%) and cystoplasty (75%), and all tumors after conduit and ileal neobladder surgery,

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occurred at the urointestinal border. By contrast, most tumors associated with ileocolonic pouches or neobladders (86%) developed away from the site of anastomosis.

The study authors assert that the increased risk of tumor development after ureterosigmoidostomy, cystoplasty and orthotopic ileocolonic neobladder construction necessitates regular endoscopy in patients who have undergone these procedures. By contrast, “regular endoscopy is not imperative after ileal neobladders and conduits, but with catheterizable ileocecal pouches, it is recommended in the presence of symptoms such as hydronephrosis, chronic urinary infection, and hematuria.”

Exactly why the various urinary diversion techniques are associated with different secondary tumor risks is unknown. Research in this area is ongoing.

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