

# 'No Residual Tumor' Rate in Radical Cystectomy Specimens

## Radikal Sistektomi Spesmenlerinde Rezidüel Tümör Görülmeme Oranı

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Bladder cancer, which is the 9<sup>th</sup> most common type of cancer and the 13<sup>th</sup> cause of death from cancer, is a worldwide health problem (1). According to the GLOBOCAN, the highest incidence rates were in Western countries and Western Europe (2). Türkiye is one of the five countries with the highest age-standardized death rate (6.6/100.000) (3).

To achieve initial diagnosis, transurethral resection of the bladder tumor (TURBT) is usually performed (4). Some patients undergo radical cystectomy, which is the surgical procedure performed as standard therapy for locally confined, muscle-invasive, or highly aggressive superficial primary tumors of the bladder (5). Even though pathologists examine such specimens vigorously, no tumor can be detected because of several reasons, and such cases have been reported as pT0 tumor (6). No residual tumor (pT0) on cystectomy specimens may be related with completeness of TURBT, time frame of TURBT, neoadjuvant radio- and chemotherapy, small tumor size, initial misdiagnosis, and delayed formaldehyde fixation (6). Stage pT0 has been found to be associated with improved survival (7).

As a general rule, all cystectomy specimens are inked and immediately opened with Y-shaped incision through anterior wall when still fresh and fixed in 10% buffered formaldehyde overnight. Specimens are processed according to the international gross examination guidelines. Mucosa is inspected thoroughly and any suspicious area (irregularity, ulceration, solid or papillary mass, etc.) is described, and measured. After locating these lesions, already opened and fixed bladder is cut into horizontal slices of 0.5 cm thickness. Samples are taken from the determined suspicious areas, and depth of invasion is recorded if present. Also at least one sample is taken from each wall of the bladder even no lesion is detected. In histological examination if no tumor is noted, specimen is reexamined, and

the entire suspicious areas including the surrounding walls are sampled extensively.

Despite the fact that extensive measures are taken, cystectomy specimens with no residual tumor may still exist. In the literature, the rate of pT0 cystectomy specimens is found in 5.1-20.1% of cases (8). While the highest rate (20.1%) was reported in a dataset of 900 patients, the lowest rate (5.1%) was reported in a dataset of 4430 patients (9,10). Both of these were multi-center studies, and patients who received neoadjuvant radio- and/or chemotherapy were excluded (9,10). Different findings were reported by means of prognosis in pT0 patients. While these studies stated a relationship with better prognosis, others found none.

In our institution, 185 robotic radical cystectomy surgeries were performed between 2014 and 2018. Patients who received neoadjuvant radio- and/or chemotherapy were 30 in number. Out of 155 patients, who did not receive neoadjuvant radio- and/or chemotherapy, 15 were detected as having pT0 (9.6%). Our pT0 rate (9.6%) is in accordance with the previous reports.

Reporting 'no residual tumor' is a distress for the pathologist all the time because of potential pitfalls, such as delayed fixation, small tumor size or initial misdiagnosis, although no residual tumor in cystectomy specimen is a finding which may herald better prognosis.

**Keywords:** Cystectomy, pT0, Urothelial carcinoma, Residual tumor

**Anahtar Kelimeler:** Sistektomi, pT0, Ürotelyal karsinom, Rezidü tümör

### Ethics

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## Authorship Contributions

Surgical and Medical Practices: B.G., Concept: B.G., Design: B.G., Data Collection and/or Processing: M.M.K., Analysis and/or Interpretation: M.M.K., Literature Research: M.M.K., Writing: B.G.

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