

PEDIATRIC UROLOGY

Improved survival with lymph node sampling in Wilms tumor

Zhuge Y, Cheung MC, Yang R, Koniaris LG, Neville HL, Sola JE

Division of Pediatric Surgery, DeWitt Daughtry Family Department of Surgery, University of Miami Miller School of Medicine, Miami, Florida, USA

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Objective: We sought to determine the impact of number of lymph nodes examined on survival for Wilms tumor (WT).

Methods: Data from the Surveillance, Epidemiology, and End Results and Florida Cancer Data System were queried for patients < 20 years of age with WT.

Results: Of 1805 WT patients, 1340 had lymph node (LN) data available following surgery. The mean age for the cohort was 3.3 ± 2.8 y. Most patients were White (78%), and non-Hispanic (78%). A total of 297 patients (22%) had 0 LN sampled, while 697 (52%) had 1-5 LN, 210 (16%) had 6-10 LN, and 136 (10%) had > 10 LN. Overall 5-y survival was 91%. By univariate analysis, 5-y survival was significantly lower for patients with 0 LN sampled (87% versus 91% 1-5 LN; 93% 6-10 LN; 95% > 10 LN, $P = 0.005$). Multivariate analysis confirmed a survival advantage for patients having 1-5 LN (HR 0.600, $P = 0.016$), 6-10 LN (HR 0.521, $P = 0.048$), and > 10 LN (HR 0.403, $P = 0.039$) compared with patients with 0 LN examined.

Conclusion: Failure to biopsy lymph nodes for WT patients not only increases the risk of local recurrence due to understaging and inadequate adjuvant therapy, but is also an independent prognostic indicator of lower survival.

Editorial Comment

The authors' use data from two large population based cancer registries in order to determine the impact of lymph node sampling on overall survival for pediatric Wilms tumor patients. Adequate data was found on 1340 patients. Patients were divided into groups on the basis of their lymph node sampling. 22% of patients had no lymph nodes sampled; 52% had 1-5 lymph nodes; 16% had 6-10 lymph nodes; and 10% had greater than 10 lymph nodes sampled. On multivariate analysis they found statistically significant survival advantage for those patients who had lymph nodes sampled versus those who did not. This advantage increased among groups with greater numbers of lymph nodes sampled.

While review of cancer registries to obtain this kind of information in a retrospective fashion always has inherent flaws, the large number of patients and multivariate analysis would certainly suggest benefit

from lymph node sampling. As the authors concede, it is difficult to know whether the survival advantage is secondary to under-staging, resulting in inadequate adjuvant therapy, or if there is improved regional disease control or both. In either case, pediatric urologists and surgeons who care for these children, as well as the pathologists that they work, with should be cognizant of such data when operating on these patients and reviewing their specimens.

Dr. M. Chad Wallis
Division of Pediatric Urology
University of Utah
Salt Lake City, Utah, USA
E-mail: chad.wallis@hsc.utah.edu