

Surgical Outcomes in AFT-46: CHIO3: CHemotherapy Combined with Immune Checkpoint Inhibitor for Operable Stage IIIA/B Non-Small Cell Lung Cancer

OBJECTIVE: Enthusiasm for resection of Stage III (N2) NSCLC has increased given impressive outcomes with neoadjuvant or perioperative chemotherapy and checkpoint inhibitors (CPI). Surgery for Stage III NSCLC is more complex and carries higher risk. The addition of CPI's creates an uncertain landscape with hilar fibrosis and more difficult dissection. The primary endpoint of AFT-46, N2 nodal clearance (N2NC) exceeding the goal of 50% (22/31, 71%), has previously been reported. We describe herein surgical outcomes from this N2+ NSCLC cohort following chemotherapy and durvalumab.

METHODs: This was an open-label, single arm phase 2 NCI cooperative group trial enrolled at 9 US hospitals. Eligible patients had resectable stage III NSCLC, pathologically proven N2+. Patients received 4 cycles of platinum doublet + durvalumab followed by lobectomy or greater, and adjuvant durvalumab Q4 weeks for 1 year. Surgical approach, extent of resection, extent of lymphadenectomy, morbidity, mortality, time intervals between treatment steps, and receipt of adjuvant therapy were analyzed.

RESULTS: From 2021-2023, 38 patients were enrolled; 31 patients underwent resection (81.6%). DSMB recommended early closure as primary endpoint had been met on interim analysis. Surgical outcomes (Table) are notable for R0 resection in 29/31 patients (93.5%), low pneumonectomy rate (2/31, 6.5%) median LOS 3 d, no mortality at 30 and 90 d. Minimally invasive strategy was possible in 19/31 (61%; 2 VATS, 17 robotic), with 3 nonurgent conversions (3/22, 13.6%) to thoracotomy (total open: 12/31, 39%). Hilar fibrosis, or challenging dissection, was mentioned in 15/31 (48.4%) operative notes, but no patient required sleeve resections, vascular repair, nor circulatory support. Median interval from neoadjuvant therapy to surgery was 6.5 weeks, and from surgery to adjuvant therapy was 5.5 weeks. All 23 patients recommended to receive adjuvant therapy were able to do so.

CONCLUSION: This is the first report of surgical outcomes in an exclusively N2+ population following chemotherapy and CPI. Surgery in Stage III (N2) NSCLC after neoadjuvant durvalumab plus chemotherapy on AFT46 was accomplished with no mortality, high rates of minimally invasive surgery, complete resection, and lobectomy, with prompt return to oncologic therapy. Resection as part of a multidisciplinary strategy for N2+ NSCLC can be achieved with excellent surgical outcomes and does not interfere with receipt of systemic therapy.

Linda Martin (1), Xiaofei Wang (2), David Kozono (3), James Urbanic (4), Ankit Bharat (5), Mark Crye (6), Mark Ferguson (7), Samuel Kim (8), Edward Todd Robbins (9), Jason Wallen (6), Thomas Stinchcombe (10), Jyoti Patel (11), (1) University of Virginia Health System, Charlottesville, VA, (2) N/A, United States, (3) Dana-Farber Cancer Institute, Boston, MA, (4) UCSD Radiation Oncology, La Jolla, CA, (5) Northwestern University Feinberg School of Medicine, Chicago, IL, (6) N/A, Syracuse, NY, (7) University of Chicago, Chicago, IL, (8) Northwestern University Feinberg School of Medicine, Wilmette, IL, (9) Baptist Memorial Hospital, Memphis, TN, (10) Duke University Medical Center, Sainte-Anne-Des-Lacs, QC, (11) Northwestern University, Chicago, IL

Additional Resources

- https://files.aievolution.com/prd/aat2101/abstracts/abs_10044/SurgicalOutcomesinAFT46Table.docx