Conclusions Genetic deletion or pharmacological inhibition of NOX2 sensitized AML cells to daunorubicin induced killing in hypoxic environments. NOX2 may thus be a target for overcoming chemoresistance in AML cells in the hypoxic bone marrow environment.

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### P03.28

**STRUCTURAL CHARACTERISTICS IN TUMOR AND LYMPH NODES AS PREDICTORS OF 3-YEAR METASTASIS-FREE SURVIVAL IN SURGICALLY TREATED NSCLC**


Background Surgery is the treatment of choice for early and for some locally advanced non-small cell lung cancer (NSCLC). Ipsilateral hilar and mediastinal lymph nodes are generally removed at the time of tumor resection and assessed for tumor infiltration. However, in particular in the context of immunotherapy, there is now increased awareness about the physiological role of lymph nodes in cancer. It may be possible to assess immune response by examining the cellular composition of locoregional lymph nodes. We aimed to assess structural characteristics in tumor tissue and affected and unaffected lymph nodes in patients with and without 3-year metastasis-free survival.

Materials and methods Internal hospital databases were screened for NSCLC patients fulfilling inclusion criteria. Data on patients age, sex, surgery type, (neo)adjuvant therapy, tumor characteristics and time and location of relapse was extracted. FFPE tissue blocks of primary tumor, affected and unaffected lymph nodes were collected. Hematoxylin and eosin stainings were obtained and tissues were analyzed (e.g. for B-cell proliferation and macrophage infiltration) in collaboration with an experienced pathologist.

Results A total of 754 NSCLC patients were screened for inclusion criteria. Of these, 71 patients remained in remission for at least 3 years after surgery, and 80 patients had local or systemic relapse within 3 years after surgery. Structural characteristics in tumor and lymph node immune populations differed between patients with and without 3-year metastasis-free survival.

Conclusion Structural characteristics differ between patients with and without relapse. Our findings show that structural markers in tumor and lymph nodes should be taken into account when assessing patient prognosis and relapse risk.