non-invasive test for use as a pre-screen to select those at greatest risk who may be enrolled economically into surveillance programs.

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S74 CIRCULATING TUMOUR CELLS IN PERIPHERAL AND PULMONARY VENOUS BLOOD PREDICT POOR LONG-TERM SURVIVAL IN SURGICALLY RESECTED NON-SMALL CELL LUNG CANCER PATIENTS

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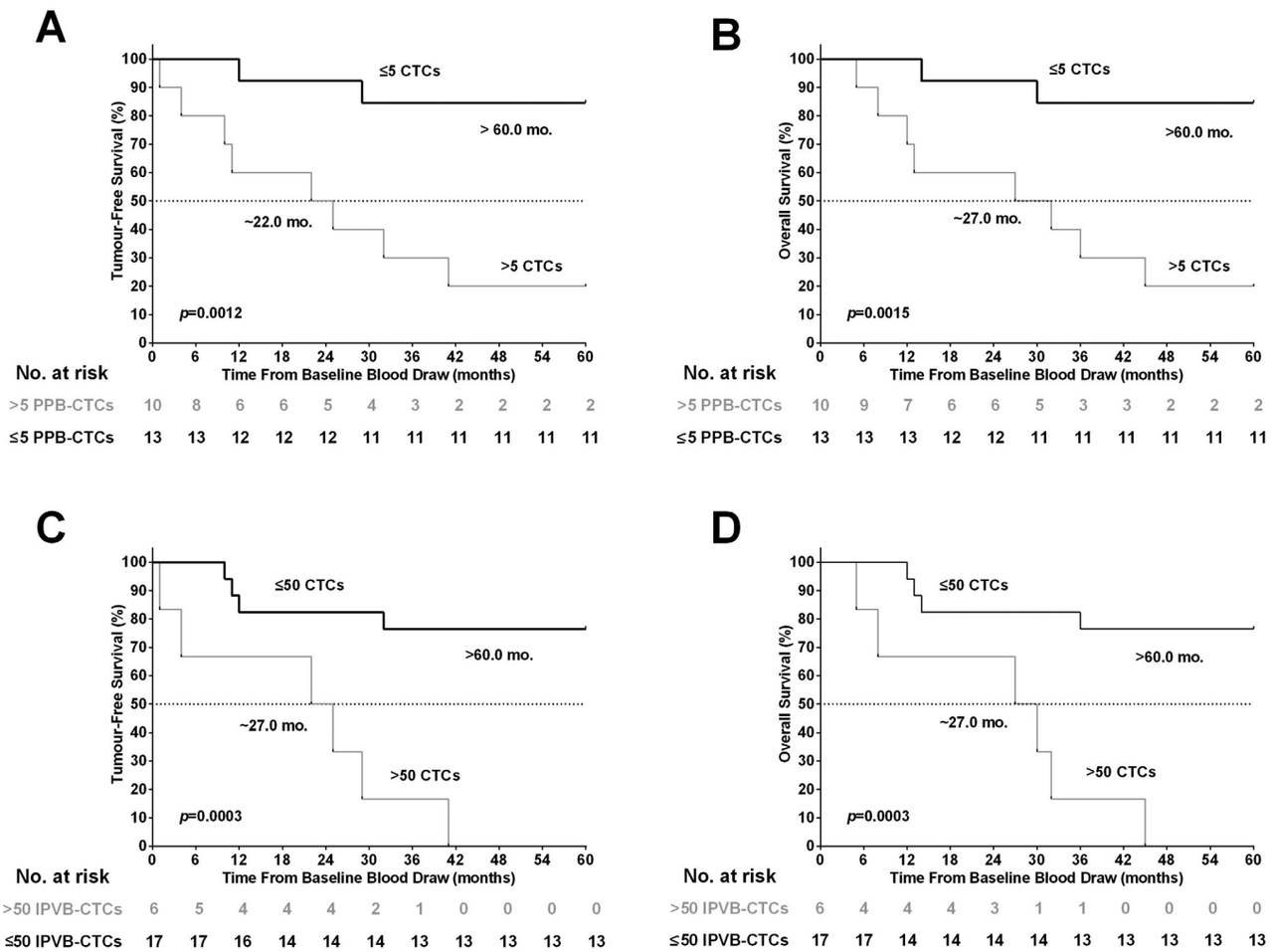
Background We tested the hypothesis that the circulating tumour cells (CTCs) in preoperative peripheralblood (PPB) and intraoperative pulmonary venous blood (IPVB) could predict poor long term survival in surgically resected NSCLC patients.

Method CTCs were separated from the blood using magnetic beads coated by antibody against epithelial-cell adhesion molecule (EpCAM) through magnetic activated cell sorting (MACS). The CTCs were quantified with fluorescence labelled antibodies against pan-cytokeratin through flow cytometry. CTCs were prospectively quantified in PPB and IPVB in 23 consecutive stage I-IIIA patients with surgically resected NSCLC. Association between CTCs and prognosis of these patients was evaluated after 5-year follow-up.

Results In the NSCLC patients, outcomes were assessed according to levels of CTCs at surgery, and compared with CTCs detected in benign pulmonary diseases, and healthy volunteers, wherethe mean and 95% CI of CTCs counts were all 5 CTCs/15 mL in PPB and >50 CTCs/15 mL in IPVB. Univariate Cox proportional-hazards regression analysis showed that CTCs count in PPB or IPVB was an independent risk factor for tumour-free and overall survivals. The high risk group of patients had a shorter median tumour-free survival (22 months vs. >60.0 months, P < 0.0012) and shorter overall survival (27 months vs. >60 months, P < 0.0015).

Conclusions CTCs countin PPBand IPVB was an independent risk factor for tumour-free and overall survivalin surgically resected NSCLC patients.



Abstract S74 Figure 1