

Franco Gambazzi<sup>1</sup>, Gabrielo Mauro Tini<sup>2</sup>, Bettina Börner<sup>2</sup>, Matthias Brühlmeier<sup>3</sup>, Lukas Frey<sup>3</sup>, Oliver Springer<sup>4</sup>, Christoph Mamot<sup>5</sup> and Sarosh Irani<sup>2</sup>.

<sup>1</sup>Division of Thoracic Surgery, Cantonal Hospital Aarau, <sup>2</sup>Division of Pulmonary and Sleep Medicine, Cantonal Hospital Aarau, <sup>3</sup>Division of Nuclear Medicine, Cantonal Hospital Aarau, <sup>4</sup>Division of Radiology, Cantonal Hospital Aarau, <sup>5</sup>Division of Oncology, Cantonal Hospital Aarau, Switzerland

## **PET-CT or contrast-CT for active surveillance after curative lung cancer treatment: preliminary results of a prospective randomized trial**

**Introduction:** The first two years after curative treatment of non small cell lung cancer (NSCLC) represent the high risk period in terms of cancer recurrence. Although scientific data are scarce most thoracic societies recommend active surveillance. Both, PET-CT and contrast-CT are suitable modalities for post treatment surveillance of NSCLC patients. The purpose of this study was to investigate the specificity and positive predictive value of PET-CT and contrast-CT in the post treatment surveillance of NSCLC patients in a randomized prospective manner.

**Methods:** Patients suffering from NSCLC were included in a scheduled surveillance program after curative treatment. The surveillance consists of patients' history, a clinical examination and an imaging modality (PET-CT or contrast-CT) performed every six months for two years. All imaging studies were discussed in our weekly interdisciplinary board. This board, as well, defined every further diagnostic and therapeutic step to be taken. Specificity and positive predictive values of PET-CT and contrast-CT represent the endpoints of the study.

**Results:** So far 89 patients have been included (49 PET-CT and 40 contrast-CT, respectively), a complete dataset is available for 56 patients (33 and 22, respectively). Asymptomatic recurrence was diagnosed in 17 (51%) and 14 (63%) patients, respectively. The specificity and positive predictive values of the two imaging modalities were 64% / 60% and 70% / 69%, respectively.

**Conclusion:** So far PET-CT and contrast-CT seem to have comparable specificities and positive predictive values in the post-treatment surveillance setting of NSCLC patients. Further analyses of the current data are planned. A comparison of the costs of the two modalities will be of particular concern.