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**INTRODUCTION & OBJECTIVES:** According to EAU (European Association of Urology), AUA (American Association of Urology), NCCN (National Comprehensive Cancer Network) and CUA (Canadian Urological Association) guidelines all the patients surgically treated for Renal Cell Cancer (RCC) should routinely undergo chest-imaging examination for the detection of chest recurrences. EAU Guidelines suggest the use of chest computed tomography (CT) for oncological follow-up in all low risk patients while many urologists prefer to base follow-up on chest x-ray as suggested by AUA, NCCN and CUA societies. Surveillance schemes are based on low level of evidence and the benefits of chest examination in all RCC patients have not been proven yet.

**MATERIAL & METHODS:** We retrospectively review all the pathological reports of patients that underwent radical or partial nephrectomy between January 2003 and September 2015 in two tertiary care centers in Europe. All the patients with pT1 RCC and follow-up of 6 or more months were included in the study. Demographics, pathological characteristics (TNM staging, Fuhrman Grade, presences of intratumoural necrosis, lymphovascular invasion and surgical margins) and postoperative follow-up data (imaging, laboratory and clinical data) were recorded and analysed. Particular attention was paid to the chest imaging follow-up which have been performed every 6 months during the first postoperative year and then annually, according to the protocols of the two departments.

**RESULTS:** 234 patients were included in our study. 175 of them had clear cell, 44 papillary and 15 chromophobe histotype RCC. Median follow-up was 52 months (IQR 29,72). 19 (8%) patients developed a recurrence and only 3 (1,3%) of them developed a chest recurrence. The first one had a clear cell, pT1a, Fuhrman 2 RCC and the recurrence has been occasionally discovered by chest CT performed due to back pain 93 months after surgery. This patient at the time of recurrence was still in the follow-up protocol and the last chest x-ray was negative. The other 2 patients had both a clear cell, pT1b, Fuhrman 3 RCC and the recurrence occurred at 97 and 54 months. None of the patients had a chest recurrence during the first year of follow-up and none of the patients with pT1 papillary and chromophobe RCC developed chest recurrence within the study follow-up time. A mean of 5,6 chest x-rays were performed per each patient. Due to the low incidence of chest recurrences in this series was not possible to identify statistically significant parameters in order to identify a class of patients who would not benefit from chest follow-up.

**CONCLUSIONS:** Chest follow-up for RCC could expose long life expectancy patients to the risk of



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radiation-induced tumours, emotional stress and also represent costs for the healthcare system. The chest follow-up should be tailored on a better defined prognostic groups of patients in order to avoid unnecessary examinations.