EP017 Progression of category 2F bosniak renal cysts

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Introduction & Objectives: Renal cysts are common incidental findings on imaging. Majority are benign and asymptomatic; however, some progress to RCC. The Bosniak classification was developed to categorise cysts as 1,2, 2F, 3 or 4 based on CT appearance. Category 2F cysts are indeterminate with a wide range of rate of progression to malignancy reported (5-27%). These cysts are recommended to be followed-up for 5 years for progression although this is based on inconsistent evidence. The objective of our study is to determine the percentage of Bosniak 2F cysts which progress to malignancy in our centre and identify factors which may predict progression.

Materials & Methods: All CT examinations which reported a 2F renal cyst between January, 2011 and July, 2019 were obtained from the hospital database. Ultrasound, CT and MRI examinations performed after cyst categorisation were reviewed for progression. Patients with follow-up examinations for ≥ 6 months were included. Changes in cyst appearance were categorised as stable, showing resolution or increase. Cysts showing increase in complexity were reported as malignancy.

Results: 99 patients (66 M, Mean age 69 years) were included in this study (average follow-up 2.4 years, range 6 months -10 years). 5/99 (5.1%) cysts progressed to RCC. The average time for progression is 1.4 years (6 months – 3 years). The remaining cysts had shown resolution, remained unchanged or showed an increase. No association was found between progression to malignancy and age and sex of patients or initial size of cyst (p-values >0.05).

Conclusions: The rate of progression to malignancy of Bosniak 2F cysts is 5.1% in our centre, in keeping with previous literature. We have identified that malignant transformation occurs within 3 years of follow-up, in contrary to 2 years mentioned in a previous study. Based on our findings, we propose that radiological follow-up could be restricted to 3 years.