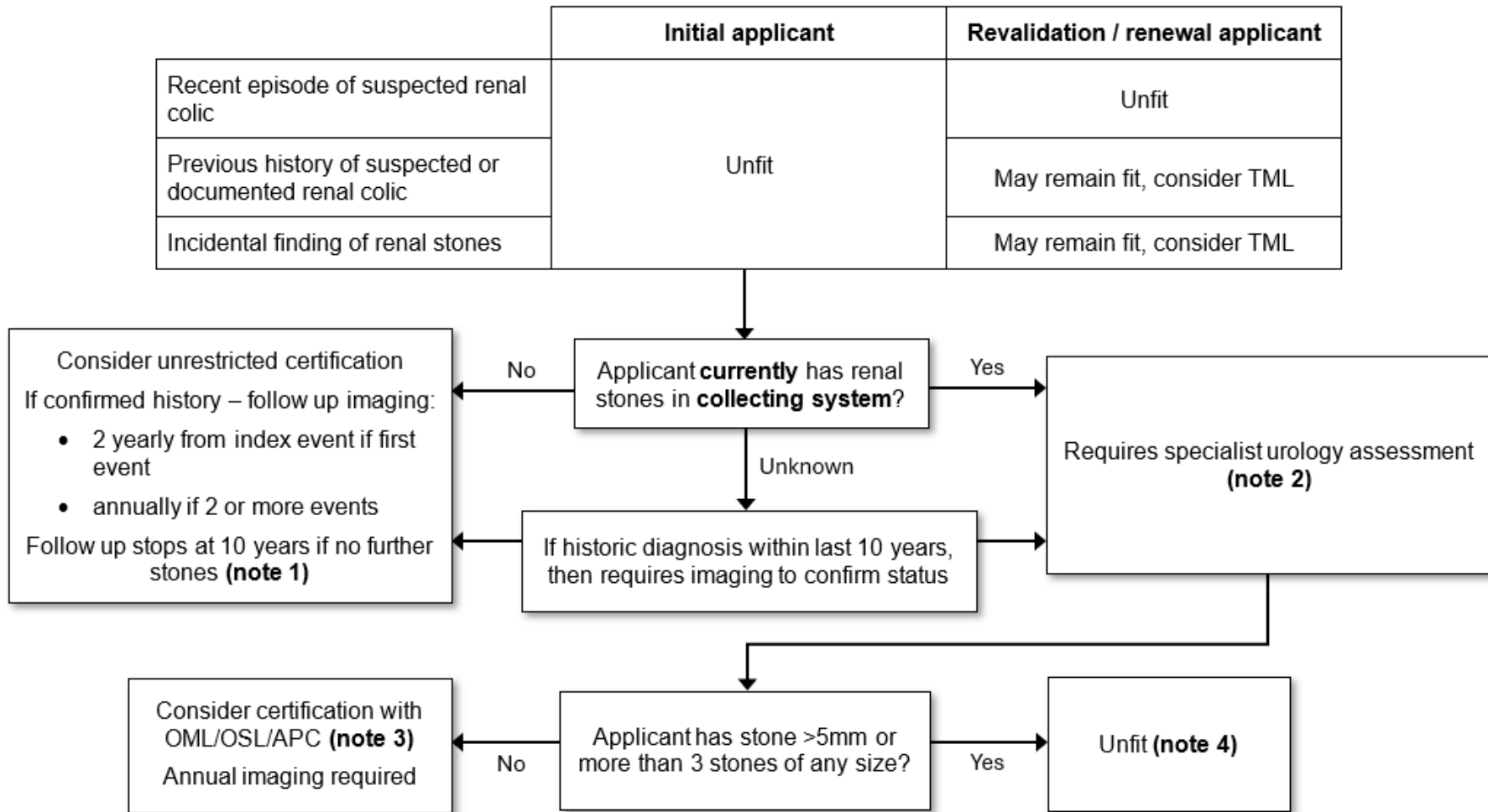


Class 1 / 2 / 3 certification – renal stones

This flow chart sets out the medical certification process for Class 1, 2 and 3 applicants with a history or following an episode of renal colic, or with an incidental finding of renal stones.



Imaging (note 1)

The most appropriate imaging modality (for example, ultrasound, CTKUB, AXR) should be decided by the applicant's treating specialist. This is particularly relevant in younger applicants where the risk of ionising radiation over a lifespan is more hazardous. Consideration may be given to avoiding occupational roles with higher risk of dehydration. Anatomical abnormalities predisposing to urinary stasis (for example, strictures or horseshoe kidneys) may require prolonged follow up.

Urology assessment (note 2)

Specialist urology review should include an assessment of risk factors, current stone burden (for example, size, number, composition and location) and proposed management plan.

Certification (note 3)

The estimated annualised risk of incapacitation for an individual with any existing renal stones will generally exceed the thresholds permitted for unrestricted certification of any class. As in note 1, the most appropriate annual imaging modality should be decided by the applicant's urologist considering benefits and harms.

Recertification (note 4)

Recertification may be considered following satisfactory recovery from any clinically indicated treatment(s). Randall's plaques, or stones **not** in the collecting system, present no significant risk of incapacitation and are acceptable for certification.

Background information

Renal stones are common; a person living in a developed country has a lifetime prevalence of approximately 4-20%. Risk factors include male sex, age range between 30-50 years, obesity, a positive family history and exposure to hotter climates. Additionally, any anatomical abnormality of the genitourinary collecting system causing urinary stasis (for example, horseshoe shaped kidney or urinary strictures) will increase the risk of stone formation.

The likelihood of experiencing a first episode of renal colic in an unscreened population in the UK is 1-2 cases per 1000 people per year. US data suggests this is 0.005% per year under 20, 0.03% between 20-30 years, 0.06% between 30 – 50 years and 0.45% between 50 – 70 years. As such, this does not support a screening programme in aircrew.

Approximately 50% of all patients with a history of a first episode of renal colic will, however, experience a recurrence within 5 years and 80% at 10 years, with further recurrence increasingly likely after each subsequent episode. Follow up frequency is therefore lengthened to account for this compared to previous guidance.