Algorithm for Management

**Patient with clinical T1 renal mass**

**INDEX PATIENT 1:**
Healthy; Clinical T1a

- **STANDARD–PN:** Complete surgical excision by PN is a standard of care and should be strongly considered.
- **STANDARD–RN:** Should be discussed as alternate standard of care if PN is not technically feasible as determined by the urologic surgeon.
- **OPTION–TA:** Cryoablation or RFA should be discussed as less-invasive treatment options, but local tumor recurrence is more likely, measures of success are not well defined, and surgical salvage may be difficult.
- **OPTION–AS:** AS with delayed intervention should be discussed as option for patients wishing to avoid treatment and willing to assume oncologic risk.

**INDEX PATIENT 2:**
Major comorbidities; Increased surgical risk; Clinical T1a

- **STANDARD–PN:** Complete surgical excision by PN is a standard of care and should be strongly considered.
- **STANDARD–RN:** Should be discussed as standard of care with increased risk of CKD and surgical complications in this patient.
- **RECOMMENDATION–TA:** Cryoablation or RFA should be discussed as less-invasive treatment options which may be advantageous in this high surgical risk patient, acknowledging the increased risk of local tumor recurrence compared to surgical excision.
- **RECOMMENDATION–AS:** Should be offered as an acceptable approach which can delay or avoid the need for intervention in this high-risk patient.

**INDEX PATIENT 3:**
Healthy; Clinical T1b

- **STANDARD–RN:** Should be discussed as standard of care for patients with a normal contralateral kidney.
- **STANDARD–PN:** Complete surgical excision by PN should be discussed as an alternative standard of care, particularly when there is a need to preserve renal function.
- **OPTION–TA:** Cryoablation or RFA can/may be discussed as a treatment option which is less effective due to an increased risk of local recurrence. TA may represent suboptimal management for this healthy patient.
- **OPTION–AS:** AS with delayed intervention can/may be discussed as an option in patients who want to avoid surgery and are willing to accept an increased risk of tumor progression compared to RN or PN. AS may represent suboptimal management for this healthy patient.

**INDEX PATIENT 4:**
Major comorbidities; Increased surgical risk; Clinical T1b

- **STANDARD–RN:** Should be discussed as standard of care for patients with a normal contralateral kidney, although it can be associated with surgical morbidity and an increased risk of CKD in this patient.
- **RECOMMENDATION–PN:** Complete surgical excision by PN should be discussed as a recommended modality when there is a need to preserve renal function, although it can be associated with increased urologic morbidity in this patient.
- **RECOMMENDATION–AS:** AS should be discussed with patients who want to avoid surgery or who are considered high risk for surgical therapy.
- **OPTION–TA:** Cryoablation or RFA can/may be discussed as a treatment option which is less effective due to an increased risk of local recurrence.

**GUIDELINE STATEMENT KEY**

1. Standard: A guideline statement is a standard if: (1) the health outcomes of the alternative interventions are sufficiently well known to permit meaningful decisions, and (2) an appreciable, but not unanimous majority agrees on which intervention is preferred.
2. Recommendation: A guideline statement is a recommendation if: (1) the health outcomes of the alternative interventions are sufficiently well known to permit meaningful decisions, and (2) preferences are unknown or equivocal.
3. Option: A guideline statement is an option if: (1) the health outcomes of the interventions are not sufficiently well known to permit meaningful decisions, or (2) preferences are unknown or equivocal.

**KEY:** AS, active surveillance; CKD, chronic kidney disease; CT, computed tomography; FNA, fine needle aspiration; MRI, magnetic resonance imaging; PN, partial nephrectomy; RFA, radiofrequency ablation; RN, radical nephrectomy; TA, thermal ablation

Standards are presented in green boxes; Recommendations are presented in yellow boxes; Options are presented in red boxes.