KidneyCancerAssociation®

Active Surveillance

What is Active Surveillance?

Active surveillance (AS) is a type of treatment plan used for certain types of cancer, including kidney cancer. AS (sometimes called active monitoring) uses scheduled blood tests and imaging (CT scans, ultrasound, MRI, etc.) to monitor smaller kidney tumors while delaying action by surgery or drugs due to the possible risks of those treatments compared to the risks from the tumors.[1]

What is the difference between AS and watchful-waiting or observation?

Sometimes people confuse the term active surveillance with watchful waiting (also called observation or expectant management). Although both mean no initial surgery or drug treatment, they are not the same. AS is different from watchful waiting because it involves a highly personalized follow-up plan with various scheduled tests and visits to monitor the tumor. Watchful waiting is less intensive (not as routinely scheduled) and additional tests are usually only done when there is a change in a person's symptoms.

Why is AS considered?

AS is an option to help monitor lower risk tumors while minimizing risks of treatment. Imaging techniques continue to improve and get better at detecting small abnormalities. The use of imaging has increased for a variety of medical workups, leading to an increase in finding of tumors/growths in many organs. These are often small tumors (referred to as incidental tumors) found when looking for some other problem and not due to symptoms related to the tumor. When these tumors are found in the kidney and are 4 cm or less in size, they are referred to as small renal masses (SRMs). [2]

TUMOR SIZE COMPARISON

1 cm Cereal
2 cm Penny
3 cm Strawberry
4 cm Cracker
5 cm Lime slice
6 cm Garlic
7 cm Tennis ball
10 cm Bagel

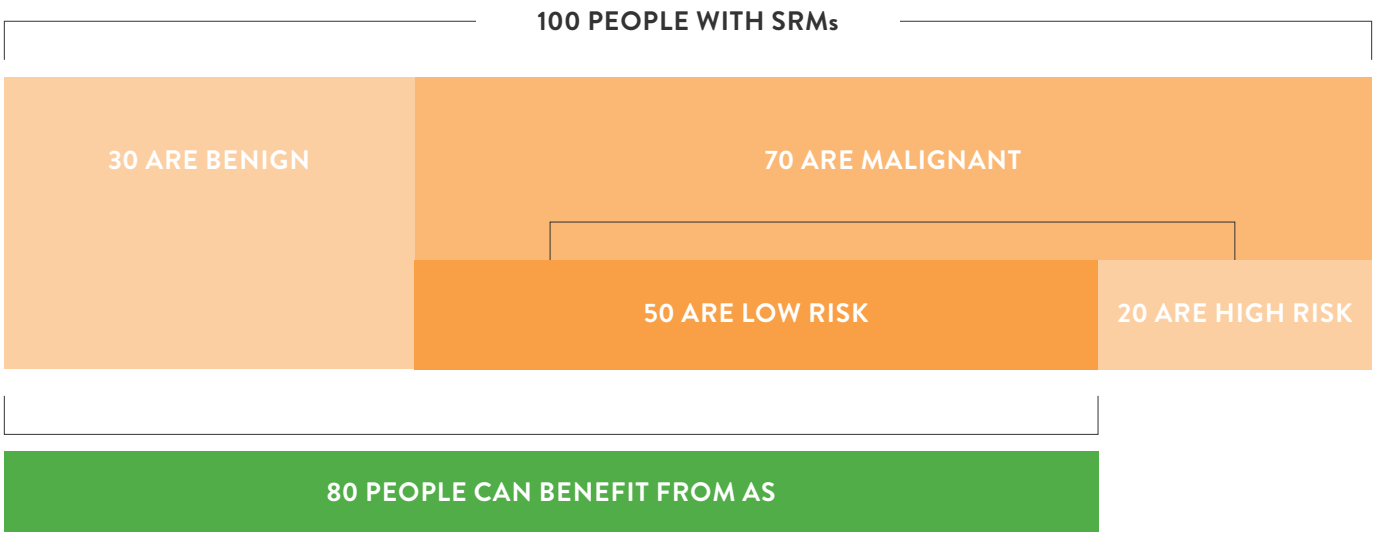
Among SRMs, 20-40% turn out to be non-cancerous (benign).[2] Even in those that are cancerous (malignant), over 70% are usually lower risk tumors with <5% risk of spreading to other organs.[2,3] There is no good way to tell from imaging or other blood tests which SRMs are benign or malignant. Even a biopsy (examining a piece of the tumor under a microscope) can be inconclusive or inaccurate 15-30% of the time.[2] Surgery and/or drug treatment was previously recommended as the first option since there was no good way to know which tumors were high risk. However, kidney cancer drugs can have serious side effects, and some people may have a greater risk of complications from surgery than from the risk from the tumor itself.

It should also be noted that AS is not just done for kidney tumors. AS is also recommended for slow growing prostate and thyroid tumors. Although the use of AS has been increasing over last 5 years, there still is not 100% agreement on how to manage AS. Various professional medical societies, like the National Comprehensive Cancer Network (NCCN) and others[1,4-6] as well as many individual hospitals have their own guidelines to follow, which differ slightly on the specifics of how to handle AS. However, almost all agree that the decision needs to be customized for each person based on his/her medical histories and that an individual's anxieties and preferences should be considered.

Who may benefit from AS?

- People with masses only seen in the kidney (stage 1) that are less 2-4cm in size (specifically stage T1a)
- People who are in poor health, have other medical conditions or are recovering from a medical condition that could be made worse by treatment (even if at a younger age)
- Someone with a shortened life expectancy due to age or medical conditions who may be more likely to die of other reasons before the SRM becomes a concern, thus making cancer treatment the riskier option.

POTENTIAL SRMS THAT COULD BENEFIT FROM AS



GENERAL CARE FLOW FOR ACTIVE SURVEILLANCE

BASELINE ASSESSMENT

Patient Factors

- *Medical conditions/general*
- *Health, life expectancy*
- *Surgical*
- *Risk assessment*
- *Renal function*
- *Patient preference*

Tumor Factors

- *Tumor size (<2-4cm) – stage T1a,*
- *Presence of other tumors*
- *Imaging characteristics**

**Concerning imaging characteristics include degree of inhancement, infiltrative appearance, vascular or fat invasion.*

Discussion & Shared Decision-Making between Patient and Provider

ACTIVE SURVEILLANCE

Blood Work

Every 6 months for 2 years

Then every 6–12 months

Abdominal Imaging

(CT/MRI/Ultrasound/X-ray)

Every 3–6 months for 1–2 years

Then every 6–12 months

SURGICAL AND/OR DRUG TREATMENT

POTENTIAL TRIGGERS FOR RE-ASSESSMENT

Tumor grows > 3-5 mm in a year
Tumor size becomes >2-4cm
Concerning changes on imaging
Progression beyond stage T1a
Health and/or medical condition changes in patient
Change in patient preference

Rediscuss options to consider more aggressive treatment

This flow is adapted from a combination of various medical society and hospital guidelines. Exact flow may differ depending on where you receive care.

What types of tests and visits are done during AS?

Tests for kidney function, other blood tests, and imaging are needed at the start of AS in order to assess someone's baseline health and tumor characteristics. Each of these will be repeated every few months early on but will become less frequent if there is no major change. It is important to stick to the monitoring schedule to catch any changes in the tumor that would indicate treatment is needed. If you do not think you will be able to keep up with that schedule or find yourself too anxious in between each visit, AS may not be right for you, and you should discuss this with your doctor.

When should AS end?

Significant growth of an SRM would prompt a doctor to consider ending AS. Both cancerous and non-cancerous SRMs can grow at a similar rate, but if there is growth of more than 0.3-0.5 cm in a year or the overall size becomes greater than 4 cm, taking action with surgery or drugs will be considered. Certain changes to the tumor's appearance could also lead to other treatment suggestions. Even with these changes, other medical concerns, anxiety about treatment risks, and life expectancy should still be considered to make sure the benefits of treatment changes are greater than the risks. Just because your provider recommends ending AS, this does not automatically mean that your risks for severe disease are high, but it does mean that there is enough of a change to the tumor to consider doing something more to treat it.

Is AS safe?

Yes, AS is considered a safe treatment option for certain SRMs. Tumors come in many different types, sizes, and shapes, and it is important to understand that not all tumors come with the same risks for being cancerous, spreading to other organs (metastasis), or causing death. Scientists continue to study ways to find out which SRMs pose higher risks and work on safer surgery/drug treatments.

Most SRMs will grow slowly (average, 0.2-0.3 cm per year), and approximately 40% do not grow enough to be considered high risk for at least 3 years - even in ones that are cancerous.[2] Regardless of the statistics, the finding of a kidney tumor, no matter how small, can understandably cause anxiety. Your first reaction may be "get this out of me". Not all people are good candidates for surgery and treatment with drugs can cause side effects or make someone sicker. Therefore, it is important that you talk to your healthcare provider about the best care plan for you that balances out your diagnosis, medical history, treatment risks and anxieties. This should be done when you are first diagnosed, but also throughout your care because your tumor may change or you may decide you want to have surgery.

[1]NCCN Clinical Practice Guidelines in Oncology: Kidney Cancer, Version 4.2021. https://www.nccn.org/professionals/physician_gls/pdf/kidney.pdf [2] Ray S, Cheaib JG, Pierorazio PM. Active Surveillance for Small Renal Masses. *Rev Urol.* 2020; 22 (1):9-16. [3] Patel HD, et al. Surgical Removal of renal tumors with low metastatic potential based on clinical radiographic size: A systematic review of the literature. *Urol Oncol.* 2019 Aug;37(8):519-24. [4]Finelli A, et al. Management of Small Renal Masses: American Society of Clinical Oncology Clinical Practice Guideline. *J Clin Oncol.* 2017 Feb 20;35(6):668-80. [5] Escudier B, et al. Renal Cell Carcinoma: ESMO Clinical Practice Guidelines for diagnosis, treatment, and follow-up. *Ann Oncol* 2019; 30(5): 706-20. [6] Campbell S, et al. Renal Mass and Localized Renal Cancer: AUA Guidelines. *J Urol.* 2017 Sep; 198(3): 520-9.

KidneyCancerAssociation™

CONTACT THE KCA'S PATIENT LIAISON

1-800-544-3KCA | patients@kidneycancer.org

THE KIDNEY CANCER ASSOCIATION

The global community dedicated to serving and empowering patients and caregivers, and leading change through advocacy, research, and education in order to be the universal leader in finding a cure for kidney cancer.

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