

Kidney Mass Workup

A practical guide for your first urology visit

Why you were referred

Many kidney findings are discovered by accident on an ultrasound, a CT without contrast, or an imaging test done for another reason - such as a spine MRI, abdominal MRI, or MRCP/gallbladder study.

A kidney finding does **not automatically mean cancer**. Many are simple cysts. Some are small tumors. The first step is getting the right scan so we know what we are actually treating.

1. Get the right scan

Most patients need a dedicated kidney CT or MRI called a **renal mass protocol**.

2. Sort the finding

The scan helps separate a simple cyst, complex cyst, or solid kidney mass.

3. Choose a plan

Surveillance, biopsy, ablation, radiation, or surgery may be considered based on your situation.

Step 1: Confirm what the kidney finding really is

The first test that found the kidney finding may not be detailed enough to make a treatment decision. We usually need a kidney-specific scan that looks at the kidney before and after contrast.

Common dedicated kidney scans	Why they help
CT abdomen with and without contrast Renal mass protocol	Often the fastest and clearest way to see enhancement and kidney anatomy.
MRI abdomen with and without contrast Renal mass protocol	A strong option when MRI better defines the finding or when CT contrast is not preferred.

What does 'renal mass protocol' mean?

It means the scan is timed to look at the kidneys during key contrast phases, including the arterial and nephrographic phases. This helps us see whether the area truly enhances, which is one of the most important clues in kidney mass evaluation.

Contrast questions

CT contrast allergy

An iodine or CT contrast allergy does **not** automatically mean you cannot receive MRI contrast. MRI contrast is different and usually uses gadolinium.

Kidney disease

Many patients with chronic kidney disease can still get the right imaging safely. If kidney function is very poor or you are on dialysis, we coordinate with radiology to choose the safest plan.

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What the scan is trying to sort out

After dedicated imaging, kidney findings usually fall into one of two broad groups: kidney cysts or solid kidney masses.

Type of cyst	What it usually means	Typical next step
Bosniak 1	Simple fluid cyst. Benign.	No treatment or routine follow-up unless symptoms.
Bosniak 2	Minimally complex cyst. Still considered benign.	Usually no treatment or routine follow-up.
Bosniak 2F	Slightly more complex cyst. Low risk, but worth watching.	Repeat imaging surveillance to make sure it stays stable.
Bosniak 3	More complex cyst. Some are cancer and some are not.	Shared decision-making: surveillance, biopsy in selected cases, or treatment.
Bosniak 4	More concerning cyst with a solid or enhancing part.	Often treatment is discussed, but the right plan depends on health, kidney function, size, and goals.

Solid kidney masses

A solid kidney mass can be benign or cancerous. Even when a kidney mass is cancer, many small kidney cancers grow slowly and are found early. The plan depends on the size, location, growth pattern, kidney function, overall health, and your preferences.

Possible management options

Observation or active surveillance	Repeat imaging, especially when the finding is small, slow-growing, or treatment risk is higher than watching.
Kidney mass biopsy	May help if the result would change the plan. It is not needed for every mass.
IR ablation	Minimally invasive radiofrequency or cryoablation for selected smaller tumors.
SBRT radiation	Focused radiation for selected patients who are not good candidates for surgery or ablation.
Robotic partial nephrectomy	Removes the mass while saving the rest of the kidney when possible.
Radical nephrectomy	Removal of the whole kidney when partial removal is not safe or appropriate.

How we decide together

There is not always one automatic answer. We balance the imaging appearance, size and location, kidney function, overall health, surgery/anesthesia risk, biopsy usefulness, and your goals.

The goal of the first visit is usually **not to rush into surgery**. The goal is to get the correct information and choose the safest plan together.