



A CASE FILE FROM THE OPERATING ROOM · FOR GENERAL PRACTITIONERS

Cancer Found by Accident.

Kidney Saved by Design.

Robot-assisted partial nephrectomy for a 6 cm Bosniak IV solid-cystic right renal mass in an asymptomatic 69-year-old woman.



Actual CT scan from this case — right renal mass

Case at a glance

PATIENT

69-year-old woman, no symptoms

HOW IT WAS FOUND

Routine abdominal ultrasound

IMAGING

CT: 6 cm Bosniak IV solid-cystic mass, lower pole, right kidney

PROCEDURE

Robot-assisted partial nephrectomy with ICG (Firefly™) perfusion assessment

HISTOPATHOLOGY

Clear cell renal cell carcinoma, WHO/ISUP grade 2

STAGE · MARGINS

pT1b · Negative

DISCHARGE

Day 4, walking independently

KIDNEY FUNCTION

Serum creatinine 0.87 0.81 mg/dL at 10 days

INSIDE THIS CASE FILE

The Discovery · The Scan · The Surgery · The Verdict · The Recovery · Referral
Guidance for GPs

Written for: general practitioners and referring physicians who encounter incidental renal findings in practice.

STEP 1 — THE DISCOVERY

An incidental finding

A 69-year-old woman with no urinary or abdominal symptoms underwent a routine abdominal ultrasound. It showed a suspicious 6 cm solid-cystic lesion in her right kidney. She came to the OPD with her husband, understandably confused and anxious about what the finding meant.

“A CT will give us a direction. If it’s harmless, there’s nothing to worry about. If it’s a cancer, we can treat it. Whether we can save your kidney will depend on what the CT shows.”

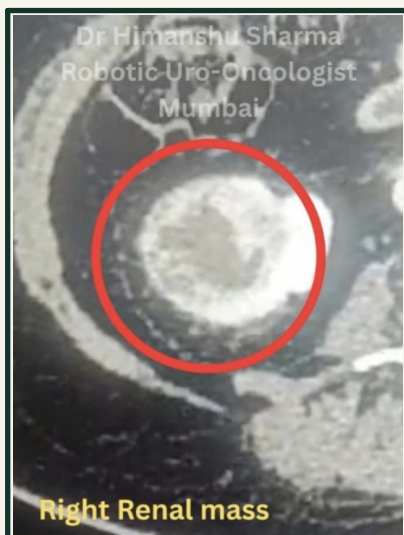
— Dr. Himanshu Sharma, at the first consultation

STEP 2 — THE SCAN

CT confirms a **Bosniak IV** solid-cystic mass

Contrast-enhanced CT characterised the lesion as a Bosniak IV solid-cystic mass in the lower pole of the right kidney, with roughly 40% of the tumour projecting outside the kidney and 60% lying within it. Further evaluation confirmed a localised renal tumour with no evidence of spread.

The imaging appearance was that of a malignant lesion. However, its size and position meant that a partial nephrectomy (nephron-sparing surgery) could still be performed while meeting every oncological goal.



Axial CT — mass outlined



CT — lower-pole right renal mass

What does Bosniak IV mean?

The Bosniak system grades cystic kidney lesions on CT or MRI from I to IV. Categories I and II are almost always benign. IIF lesions are monitored with imaging. Categories III and IV contain features such as thickened walls or enhancing solid tissue, and **category IV carries a high likelihood of cancer**, so surgical treatment is usually recommended.



THE CLINICAL CHALLENGE

Remove the cancer. Keep the kidney.

The goal was not only complete removal of the cancer, but preservation of as much healthy kidney tissue as possible. Many kidney tumours are still treated with **radical nephrectomy**, in which the entire kidney is removed. This is effective against the cancer, but losing a whole kidney can raise the long-term risk of **chronic kidney disease**, particularly as patients age and when conditions such as diabetes or hypertension are present.

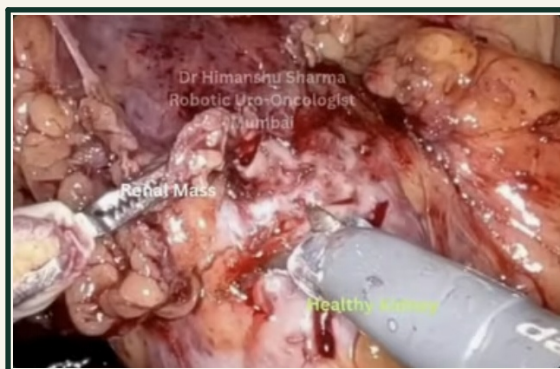
For this patient, the plan was complete tumour removal with clear margins while maintaining maximum kidney function.

STEP 3 — THE SURGERY

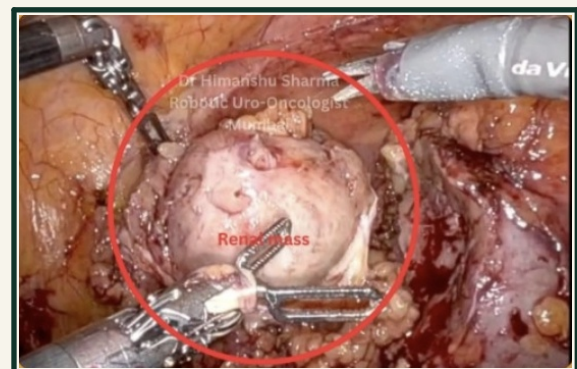
Robot-assisted partial nephrectomy

Using the robotic platform, the tumour was excised precisely with a thin rim of surrounding healthy tissue, maximally preserving functional renal parenchyma. The magnified 3D view and articulated instruments allow accurate dissection around a partly intrarenal tumour and careful reconstruction of the kidney afterwards.

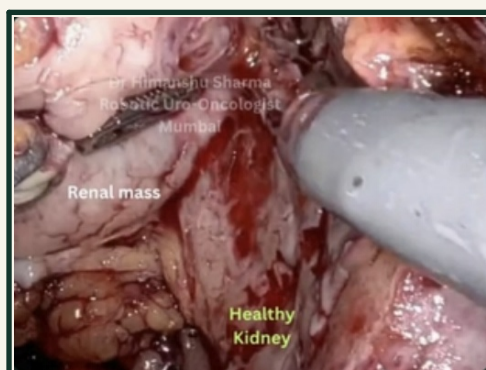
After excision, the remaining kidney was assessed with near-infrared fluorescence imaging using indocyanine green (ICG, Firefly™ technique). This gave a real-time view of blood flow and confirmed a healthy blood supply to the preserved kidney tissue.



Renal mass being resected



Tumour isolated robotically



Healthy kidney left behind



Excised tumour with ruler for scale



STEP 4 — THE VERDICT

Histopathology report

SPECIMEN	Right renal mass, partial nephrectomy
DIAGNOSIS	Clear cell renal cell carcinoma
NUCLEAR GRADE	WHO/ISUP grade 2
SURGICAL MARGIN	Negative
PATHOLOGIC STAGE	pT1b — tumour larger than 4 cm but not more than 7 cm, confined to the kidney

Confirmed: renal cell carcinoma, fully excised, with clean margins.

STEP 5 — THE RECOVERY

Pentafecta achieved

Surgeons judge partial nephrectomy against five linked goals, often called the “pentafecta”. All five were met in this case.

- ✓ Negative surgical margins
- ✓ Maximal preservation of healthy kidney tissue
- ✓ Minimal ischaemia and no major complications
- ✓ More than 90% preservation of estimated GFR
- ✓ No upstaging of chronic kidney disease

DISCHARGE — DAY 4

Walking independently

Serum creatinine **0.87 mg/dL**

10-DAY FOLLOW-UP

Back to routine

Serum creatinine **0.81 mg/dL**

STANDARD FOLLOW-UP

After surgery for kidney cancer, patients continue with scheduled reviews that include kidney function blood tests and periodic imaging. The interval is tailored to the tumour’s stage and grade.



KEY TAKEAWAYS

For general practitioners

- Most kidney tumours today are found **incidentally**, on scans done for unrelated reasons. An asymptomatic patient does not rule out a significant lesion.
- Any **solid enhancing renal mass**, or a cystic lesion reported as **Bosniak IIF, III or IV**, merits urological review rather than repeat ultrasound alone.
- **Size alone does not decide the operation.** Partial nephrectomy is preferred for small tumours and is considered for tumours up to 7 cm when anatomy allows, as in this 6 cm case.
- Early referral keeps nephron-sparing options open, which matters most in older patients and those with diabetes, hypertension or existing CKD.
- Visible haematuria, or imaging that suggests venous involvement or spread, warrants **urgent** referral.

Bosniak classification — quick reference

CATEGORY	TYPICAL CT / MRI FEATURES	SUGGESTED ACTION
I	Simple cyst: thin smooth wall, no septa, calcification or solid component	Benign. No follow-up needed
II	Few thin septa, fine calcification, or homogeneous hyperattenuating cyst	Benign. No follow-up needed
IIF	Multiple thin septa or minimal smooth wall or septal thickening	Imaging surveillance; urology opinion advisable
III	Thickened walls or septa with measurable enhancement	Refer to urology — surgery or surveillance discussed
IV	Enhancing soft-tissue nodular component	Refer to urology — surgery usually recommended

Summary based on the Bosniak classification (version 2019). Always read alongside the radiologist's report and local guidance.

CASE DISCUSSIONS WELCOME

If you are unsure whether a renal finding needs referral, share the imaging report on WhatsApp or email for an opinion. Contact details are on the last page.



“Cancer isn’t always about losing an organ. With the right diagnosis and the right hands, you can beat the disease and keep what’s yours.”

— Dr. Himanshu Sharma

ABOUT THE SURGEON

Dr. Himanshu Sharma

Consultant Urologist, Robotic Uro-oncologist & Kidney Transplant Surgeon

Dr. Sharma’s practice centres on robotic surgery for kidney, prostate and bladder cancers and on robotic and open kidney transplantation. He holds fellowships in robotic uro-oncology and in robotic and open kidney transplantation, and also treats kidney stones and prostate enlargement using advanced endourological and laser techniques.



HOSPITAL AFFILIATIONS

Reflecting both current practice and broader surgical experience

- ◆ Apollo Hospitals
- ◆ Saifee Hospital
- ◆ Max Super Speciality Hospital, New Delhi
- ◆ Aster DM Healthcare, Kochi
- ◆ Sir H. N. Reliance Foundation Hospital
- ◆ Wockhardt Hospitals
- ◆ Amandeep Hospital, Amritsar



Dr. Himanshu Sharma

Consultant Urologist, Robotic Uro-oncologist
& Kidney Transplant Surgeon

REFER A PATIENT

Refer a patient or discuss a case

Share imaging and reports on WhatsApp or email for an opinion, or send patients directly to the clinic. Patients may also book without a referral.



Scan with the WhatsApp camera
to message reports directly

WHATSAPP / CALL

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EMAIL

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CLINIC

Bloomwell Consulting Suites
Kemps Corner, Mumbai

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WHAT TO INCLUDE WITH A REFERRAL

CT or MRI report with images, recent serum creatinine or eGFR, urinalysis, a summary of comorbidities, current medication (especially anticoagulants and antiplatelets), and any relevant surgical history.

FOLLOW FOR MORE CASE FILES

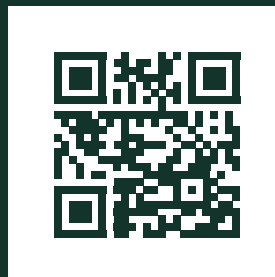
Website drhimanshusharma.com

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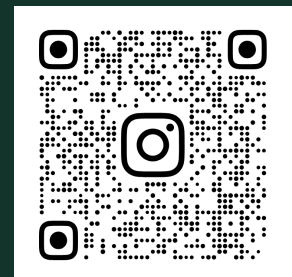
YouTube [@drhimanshusharmavlogs](https://www.youtube.com/channel/UCdrhimanshusharmavlogs)

Facebook Dr. Himanshu Sharma

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drhimanshusharma.com



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This case is shared for professional education. Patient identity has been withheld. Outcomes differ between individuals, and treatment decisions depend on a full clinical assessment by a qualified specialist.