

Incidental Detection of Renal Masses Following Implementation of Abdominal Imaging in Prostate Multiparametric MRI Protocol

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Introduction



- Multiparametric MRI (mpMRI) of the prostate has become integral in the diagnosis and management of prostate cancer.
- Traditionally limited to the pelvis, recent protocol changes at Ashford and St. Peter's Hospitals (ASPH) from 4th July 2023 have included T2-weighted abdominal sequences to aid complete staging and to align the protocol to one used at Roval Surrev Countv Hospital (RSCH).



Why Focus on Renal Masses?

- RCC:** 9th most common cancer in men, 14th in women globally
- >50%** of RCC diagnosed incidentally
- 20.5%** positive predictive value for renal lesions on screening
- >25%** have metastases at presentation despite imaging



- This study assesses the impact of this addition on the incidental detection of renal masses.

Methods



- Study Design: Retrospective analysis of all mpMRI Prostate scans performed at ASPH between 4th July 2023 and 3rd July 2024.

Study Parameters:

- Total Scans:** 1004 performed
- Inclusion:** 999 scans met criteria
- Exclusions:** Repeat or incomplete scans

Analysis



- Renal findings reviewed and categorized
- Further imaging requirements recorded
- Interventions and management documented
- Scanner time impact calculated

Results



999

Total Scans Analyzed

2%

Required Additional
Imaging

0.7%

Diagnostic Renal Yield

7

Significant Lesions

Management:

- 6 solid renal masses** detected
- 1 Bosniak 2F cyst upgraded, awaiting repeat CT
- 3 patients: Nephrectomy completed
- 2 patients: Awaiting nephrectomy
- 1 patient: Active surveillance

Scanner Time Impact:

- 11.6 hours** per actionable lesion
- 116 total extra hours** across study period

Conclusion



Key Achievement: 0.7% diagnostic yield

Exceeds some screening programs

Benefits
Early Detection
Complete Staging

Trade-offs
↑ Scanner Time
↑ Workload

Additional Benefits:

- Patients already booked for prostate follow-ups - no extra appointments needed
- Target demographic: fit men with >10 year survival expectancy ideal for renal cancer treatment

Future Implications: The protocol enhancement demonstrates value in comprehensive imaging approaches, leading to improved patient outcomes while maintaining efficiency in radiological practice.