Analysis of Diagnosis and Growth Dynamics of Adrenal Incidentalomas in a Large General Hospital

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INTRODUCTION Adrenal incidentalomas are adrenal masses discovered incidentally on imaging studies originally not performed for suspected adrenal disease.

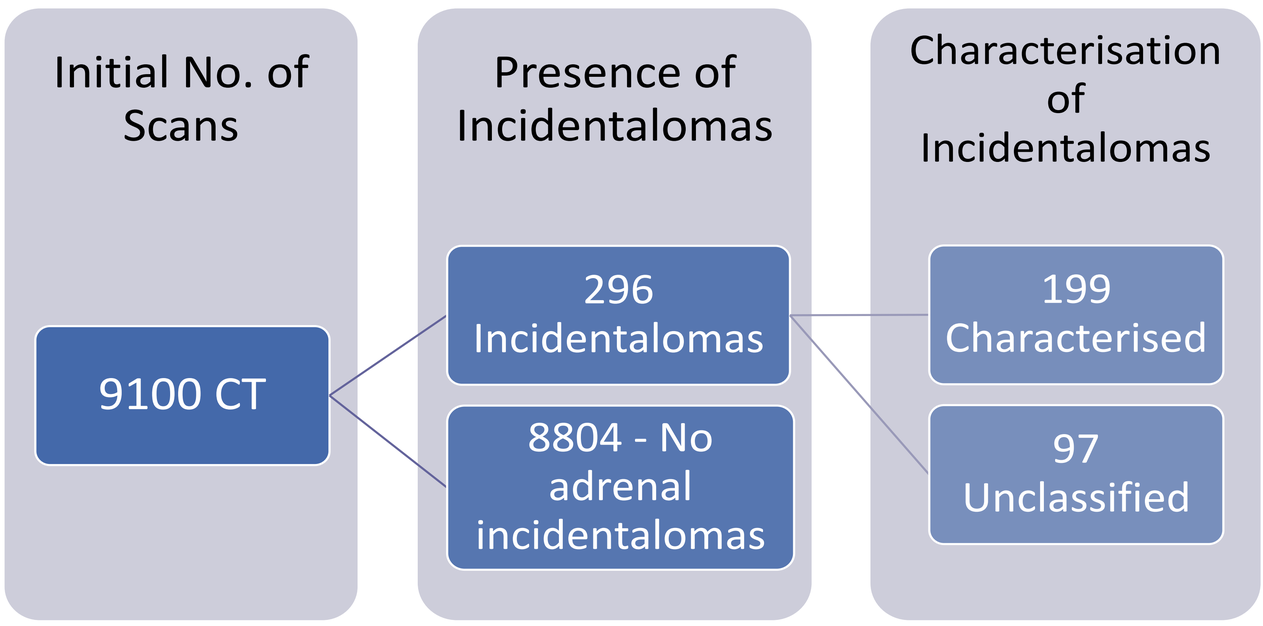
AIM Characterise a cohort of adrenal incidentalomas found on CT imaging of the adrenal region.

METHODOLOGY This was a retrospective analysis, taking into account all the adrenal incidentalomas discovered on CT between July and December 2014 at the main hospital in Malta. Only those with an adrenal lesion greater than 1cm were included in the study. The adrenal lesions were then classified according to these radiological features. Previous CT scans and any CT scans done after the study period were also reviewed to establish any change in size of the lesions.

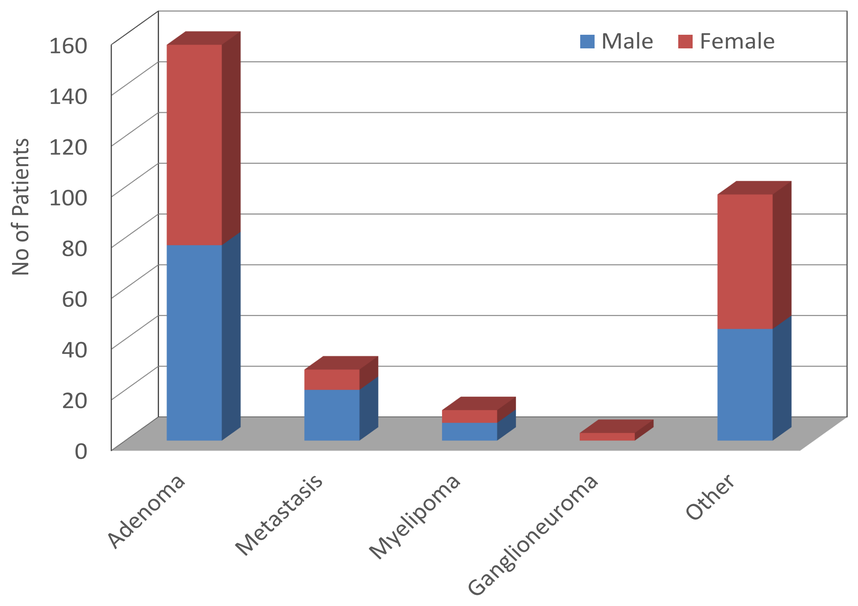
RESULTS A total of 9100 CT scans were reviewed and adrenal incidentalomas were identified in 296 patients. Mean age was 66.9 years (±12.2SD). 97 (33%) adrenal lesions could not be classified, as no unenhanced imaging or washout calculations were available. Of the remaining 199 incidentalomas, 156 (78%) were confirmed adenomas (Hounsfield units <10, relative or absolute washout values of >40% or 60% respectively), 28 (14%) were metastasis, 12 (6%) myelolipomas, 3 (2%) ganglioneuromas.

In the adenoma group, 49.4% were males whereas in the metastasis group 71.4% were males. In the adenoma group, 57% had a left-sided lesion, 34% had a right-sided lesion and 9% had bilateral lesions, whereas in the metastasis group 61% had left sided lesions, 21% right sided and 18% bilateral lesions. Longest mean diameter was 20.0mm (±7.4SD) in the adenoma group and 31.1mm (±18.7SD) in the metastasis group (P = 0.033) Median follow up in the adenoma group was 46.3 months (ICR 4.9-96.5) whereas in the metastasis group median follow up was 28 months (ICR 0-28.5). Mean change in size was 0.3mm (SD ±2.0) in the adenoma as compared to 20.8mm (SD ±19.7) in the metastasis group (P = 0.0001).

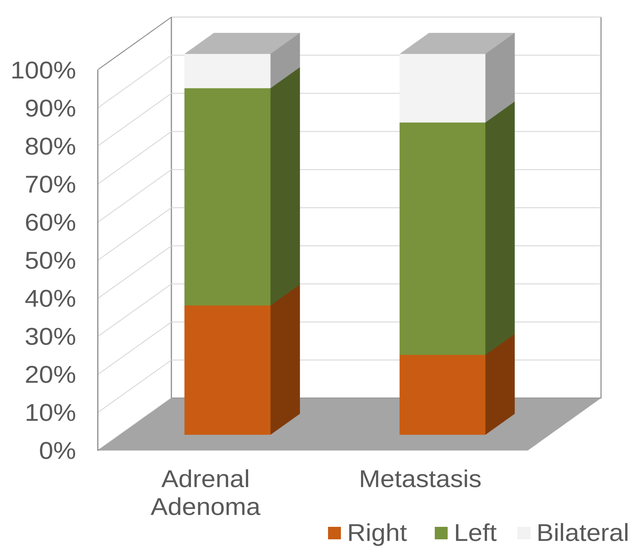
CONCLUSIONS This study continues to confirm that adrenal adenomas are the commonest adrenal lesion encountered in clinical practice and the majority, by far remain stable in size over time.

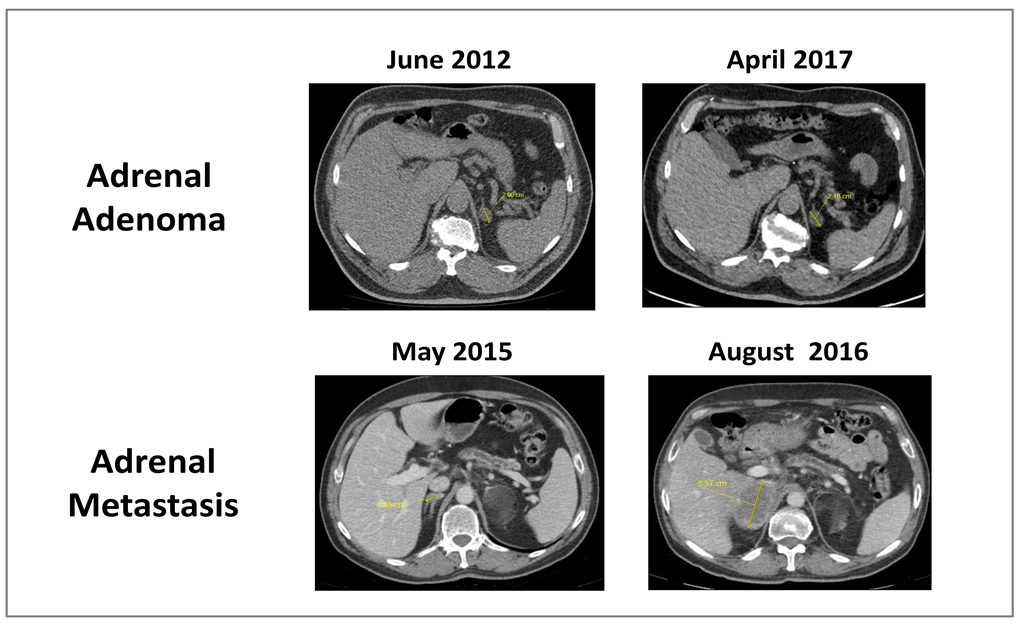


Characterisation of Incidentalomas



Laterality of Adrenal lesions





Longest Mean Diameter:

Adenoma 20mm vs Metastasis 31.1mm [P = 0.033]

Mean Change in size:

Adenoma 0.3mm vs Metastasis 20.8mm [P = 0.0001]