

## Diagnosis of a malignant adrenal mass:

Bancos, Irina; Arlt, Wiebke

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**Table 2. Studies comparing urine steroid profiling results in patients with adrenocortical carcinoma (ACC) and patients with adrenocortical adenoma (ACA)**

Author, year	Period of data collection	Type of study	Sample size (n)	Women (n, %)	Age of diagnosis (years)	Tumor size (cm)	ACC		ACA	
							n	Hormone excess	n	Hormone excess
Arlt, 2011 <sup>1</sup>	2003-2006	Retro-spective 6 centers	147	84 (57%)	ACA (median, ranges): 60 (19-84)  ACC (median, ranges): 55 (20-80)	ACA (median, ranges): 2.6 (0.9-7.8)  ACC (median, ranges): 9 (1.4-23)	45	None – 12 (27%) Cortisol – 11 (24%) Androgen – 7 (16%) Cortisol + androgen – 12 (27%) (2 also with aldosterone) Estrogen – 3 (7%) (in combination with cortisol in 2 and androgen in 1 patient)	102	None – 69 (68%) Cortisol – 14 (14%) Aldosterone – 13 (13%) Cortisol + aldosterone – 4 (4%) Androgen – 2 (2%)
Kerkhofs, 2015 <sup>2</sup>	2000-2011	Retro-spective 2 centers	152 (includes 18 non-cortical tumors)	100 (66%)	All adrenal tumors (mean, SD): 56(13)	All adrenal tumors (median, ranges): 3.5 (0.8-17)	27	None – 7 (26%) Hormone excess in 20 (74%) –single or in combination including: Cortisol – 18 (67%) Androgen in 14 (52%) Estrogen in 1 (4%)	107	None – 85 (79%) Cortisol – 19 (18%) Aldosterone – 3 (3%)
Velikova, 2016 <sup>3</sup>	2014-2015	Retro-spective 3 centers	139	83 (60%)	Non-functioning ACA (median, ranges): 55 (50-61) Cortisol-secreting ACA (median, ranges): 48 (21-54) ACC (median, ranges): 43 (33-57)	Non-functioning ACA (median, ranges): 3.3 (2.3-4.5) Cortisol-secreting ACA (median, ranges):: 3 (2.5-4.2) ACC (median, ranges): 9.1 (7.2-11)	31	Hormone excess reported for cortisol only in 13 (42%) patients; other hormonal excess was not reported	108	None – 52 (48%) Cortisol - 44 (41%) Aldosterone - 12 (11%)

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