

Diagnosis of a malignant adrenal mass:

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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 ¹	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%)
Kerkhof s, 2015 ²	2000- 2011	Retro- spective 2 centers	152 (include s 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%)
Velikan ova, ³ 2016	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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