

# CLINICAL CHARACTERISTICS AND TUMOR SIZE EVOLUTION IN PATIENTS WITH BILATERAL ADRENAL TUMORS

Simona Galoiu<sup>1,2</sup>, Raluca Pena<sup>1</sup>, Raluca Trifanescu<sup>1,2</sup>, Dan Alexandru Niculescu<sup>1,2</sup>, Anda Dumitrascu<sup>2</sup>, Andra Caragheorgheopol<sup>2</sup>, Carmen Iordachescu<sup>2</sup>, Catalina Poiana<sup>1,2</sup>

(1) Carol Davila University of Medicine and Pharmacy, Bucharest, Romania  
(2) C. I. Parhon National Institute of Endocrinology, Bucharest, Romania

## OBJECTIVES

To evaluate clinical, imagistic and hormonal characteristics of bilateral adrenal tumors.

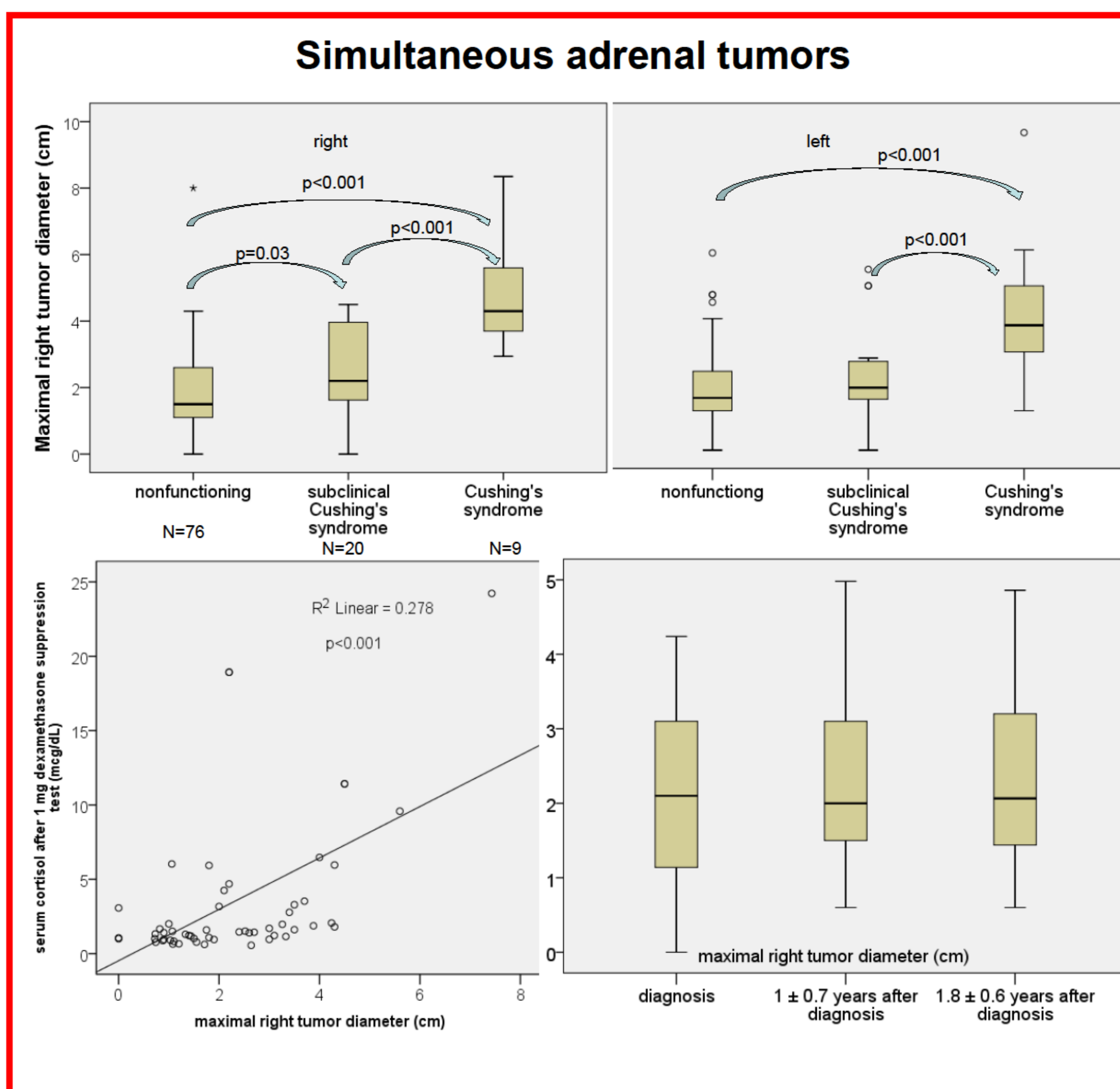
## DESIGN AND METHODS

- retrospective series of 150 consecutive patients (104F, 46M)
- bilateral adrenal tumors with maximal diameter of at least 1 cm
- evaluated from 2001 to 2015 in the endocrinology clinic of a tertiary university medical center
- clinical, hormonal and imagistic methods.
- diagnosis of subclinical Cushing's syndrome\* - serum cortisol levels >1.8 mcg/dl on 1 mg overnight dexamethasone suppression test and at least one another abnormal hormonal result at glucocorticoid axis evaluation.

## RESULTS

- age at diagnostic -  $57.26 \pm 10.32$  years (27-85).
- diagnosis of adrenal tumors –simultaneous (n=122)  
- metachronous (n=28)
- secretion 26.6%
- malignant 9.3% - adrenal carcinoma (n=4)  
-metastasis (n=10)
- follow up -  $1.84 \pm 0.89$  years in patients with synchronous tumors
- in patients with metachronous tumors, second tumor was diagnosed after  $5.44 \pm 9.37$  years (max. 49 yrs).

	Cortisol secreting tumors	Pheocromocytomas	Aldosteron secreting tumors	Nonfunctioning tumors	p (ANOVA) (posthoc)
n	29	8	3	110	
Age (years)	$55.01 \pm 10.98$	$44.90 \pm 12.98$	$56.75 \pm 7.35$	$58.54 \pm 9.53$	0.02 (0.01)
Blood glucose (mg/dL)	$123.7 \pm 52.2$	$105.8 \pm 24.7$	$98 \pm 10.1$	$103.3 \pm 37.2$	0.2 (0.03)
Systolic blood pressure (mmHg)	$137.1 \pm 26.6$	$154.2 \pm 41.5$	$141.6 \pm 12.5$	$134 \pm 26.6$	0.3
Max. tumor diam. -R (cm)	$3.48 \pm 2.22$	$2.86 \pm 2.05$	$1.55 \pm 1.22$	$2.23 \pm 2.42$	0.1 (0.02)
Max. tumor diam. -L (cm)	$3.86 \pm 2.23$	$2.46 \pm 1.70$	$1.05 \pm 1.13$	$2.31 \pm 2.43$	0.03 (0.007)



## CONCLUSIONS

- Cortisol hypersecretion is the most frequent hormonal abnormality in patients with bilateral adrenal tumours.
- Significant correlation between cortisol secretion and tumor size
- Most nonfunctioning tumours are nonevolutive
- 9.3% of patients have primary or secondary adrenal cancer
- Conservative long-term follow up is needed.

## References

\*E. Vassilatou, A. Vryonidou, D. Ioannidis, S. A Paschou, M. Panagou, I. Tzavara **Bilateral adrenal incidentalomas differ from unilateral adrenal incidentalomas in subclinical cortisol hypersecretion but not in potential clinical implications** Eur J Endocrinol 171 37-45

