

# Pheochromocytomas and paragangliomas: association between tumor size and measurements of metanephrines and catecholamines

H. Luiz<sup>1</sup>, B. Pereira<sup>1</sup>, T. da Silva<sup>1</sup>, A. Veloza<sup>1</sup>, C. Matos<sup>1</sup>, I. Manita<sup>1</sup>, M. Cordeiro<sup>1</sup>, L. Raimundo<sup>1</sup>, & J. Portugal<sup>1</sup> <sup>1</sup> Department of Endocrinology and Diabetology, Garcia de Orta Hospital, Almada, Portugal

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#### INTRODUCTION

- Pheochromocytomas (PHEO) and Paragangliomas (PGL) are rare catecholamine-secreting tumors.
- Some authors proposed that there is a positive linear relationship between tumor size and measurements of metanephrines, and an absence of association with catecholamine levels.

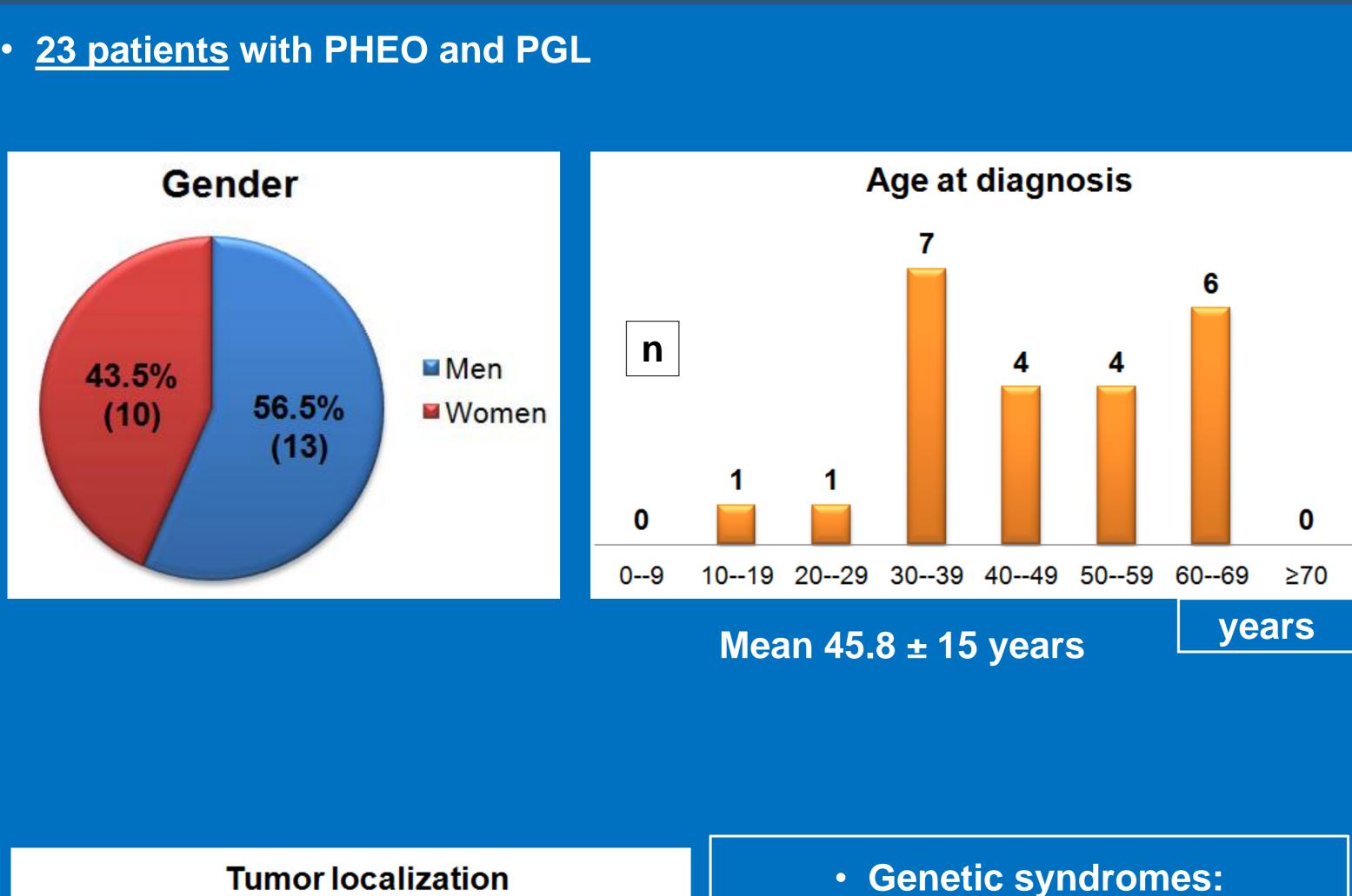
### **OBJECTIVES**

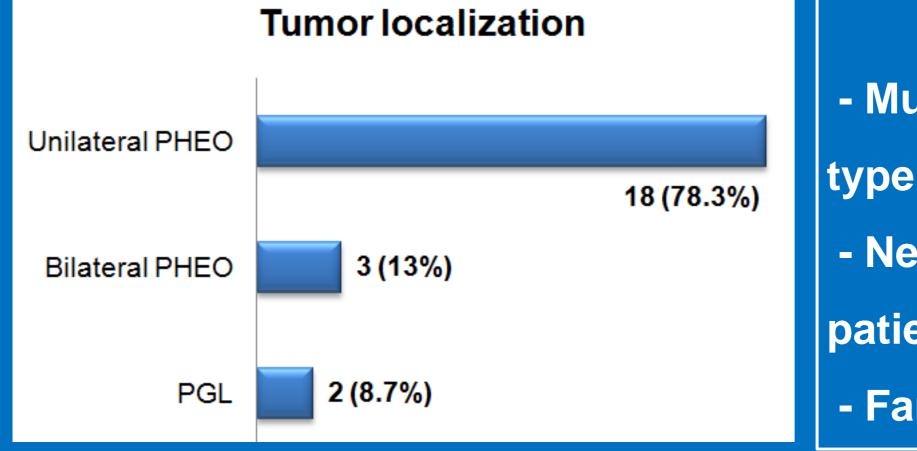
- To review and characterize patients diagnosed with PHEO and PGL in Garcia de Orta Hospital.
- To determine the relationship between tumor size and measurements of urinary total metanephrines and total catecholamines.

#### **METHODS**

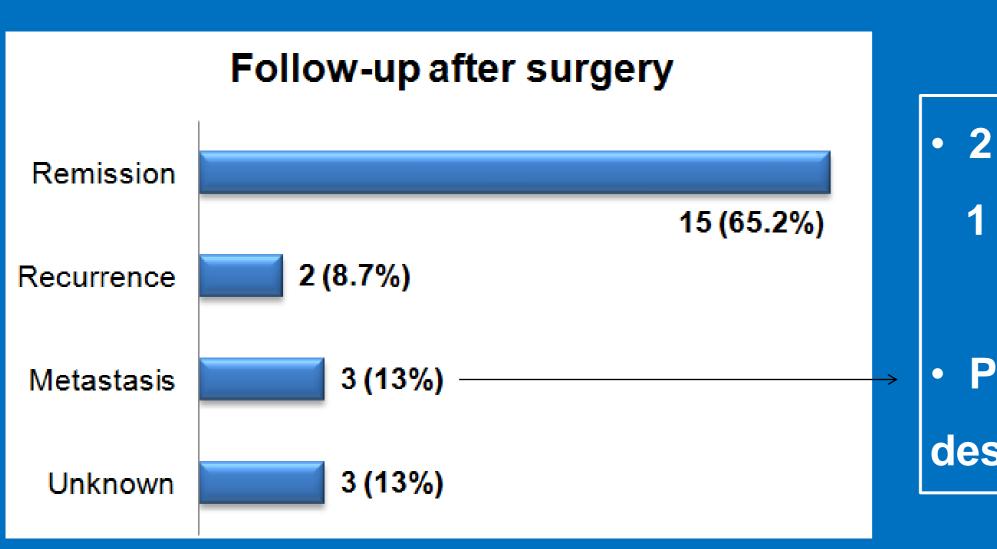
- Retrospective study with revision of medical records, between 1992 and 2013.
- Statistical analysis was performed by simple linear regression using SPSS 20.

## RESULTS

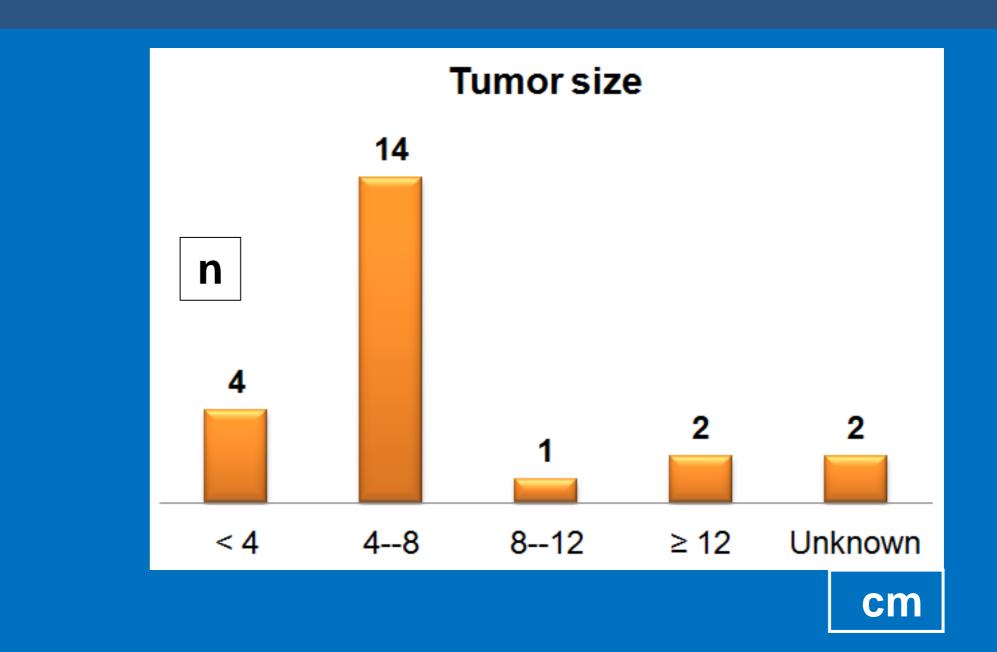




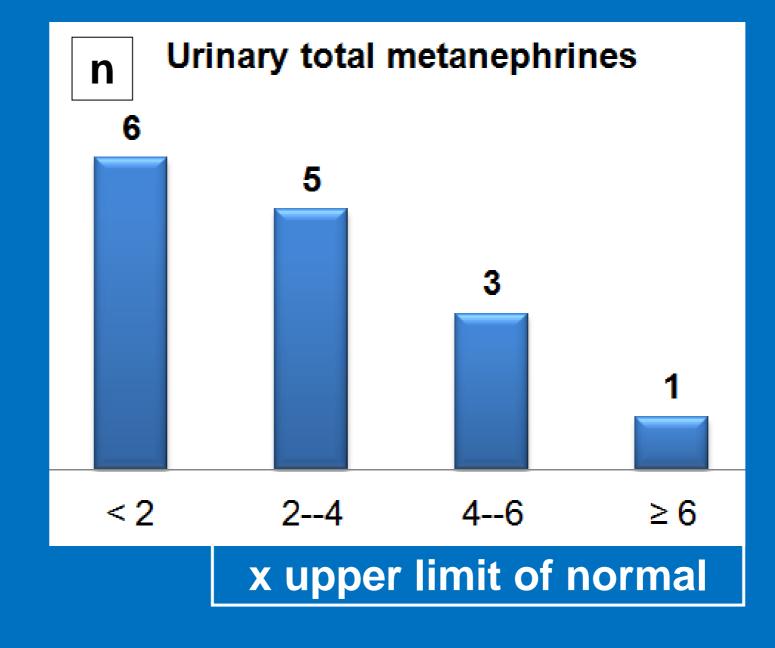
- Multiple endocrine neoplasia type 2A (3 patients)
- Neurofibromatosis type 1 (2 patients)
- Familial PGL type 4 (1 patient)



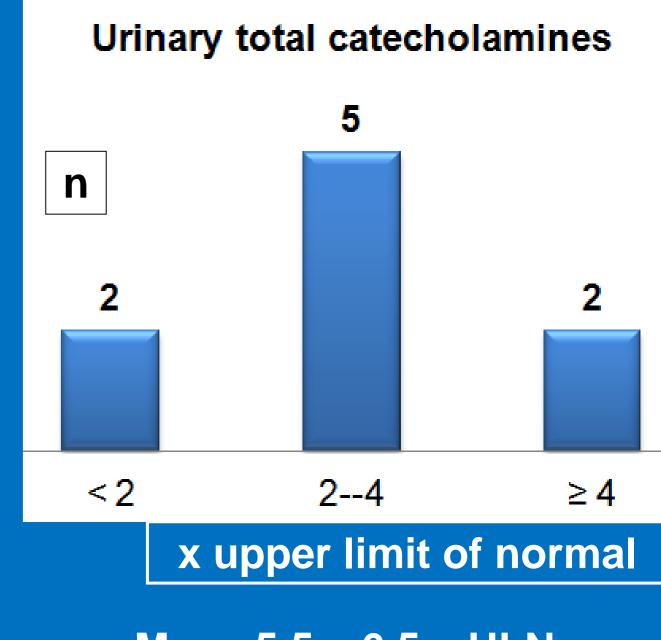
- 2 bone (multiple)
  - 1 lymph node (multiple)
- Persistence of disease despite additional therapy







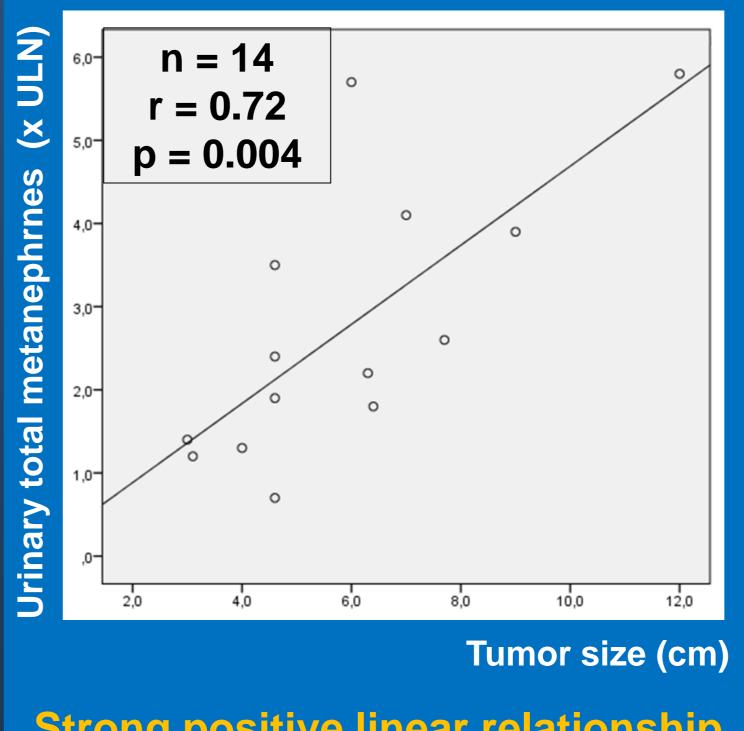
Mean 4.1 ± 5.6 x ULN



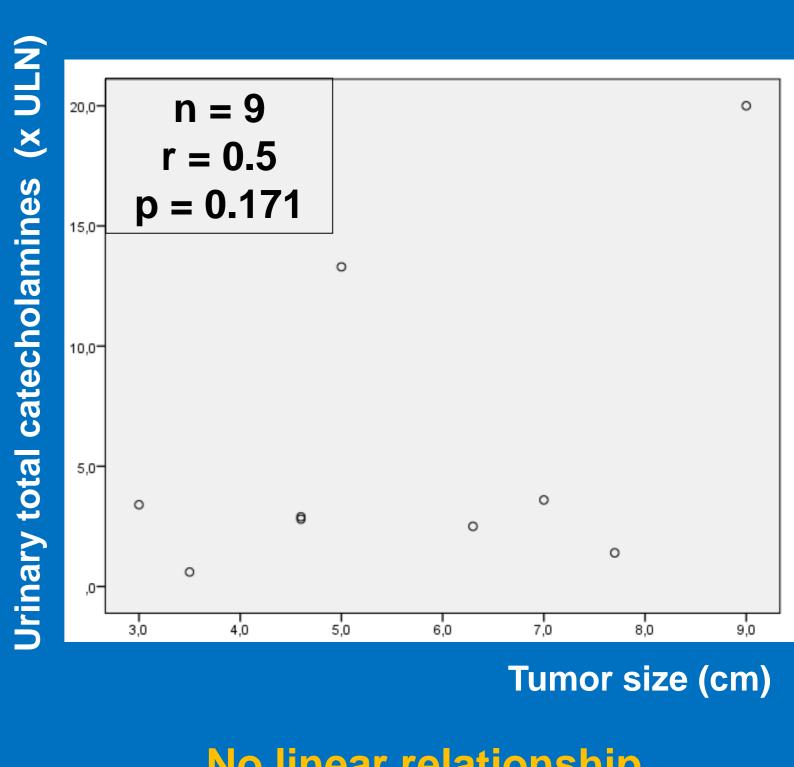
Mean 5.5 ± 6.5 x ULN

# **Association size and metanephrines**





Strong positive linear relationship



No linear relationship

# CONCLUSION

• This study suggests that an increase in the size of PHEO and PGL is related with a rise in metanephrine levels; an association with catecholamines was not demonstrated. These differences may be related to the fact that the secretion of catecholamines is intermittent, whereas metanephrine formation is a more continuous process.