

PROGNOSTIC FACTORS OF PITUITARY GROWTH HORMONE-SECRETING TUMORS



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BACKGROUND

Acromegaly is the consequence of excessive growth hormone (GH) secretion, usually produced by a pituitary adenoma. Transphenoidal surgery is the first-choice treatment; however, the development of new drug therapies in the last years, specially the somatostatin analogues (SSA), has open new and promising avenues for the treatment of pituitary tumors.

OBJECTIVE

To determine whether a detailed knowledge of the clinico-pathological and radiological characteristics of the acromegalic patients and the adenoma molecular phenotype could help to predict the hormonal response to therapy in order to improve the management of patients with this pathology.

MATERIAL AND METHODS

Observational study including patients with acromegaly, diagnosed at the Endocrinology and Nutrition Unit of the Hospital Reina Sofía from 2007 to 2012, in which surgery, radiology and molecular phenotyping of the adenoma was carried out.

RESULTS

22 patients 65% Mean year: 38 15.

Figure 1. Differences between patients who meet and not meet cure criteria.

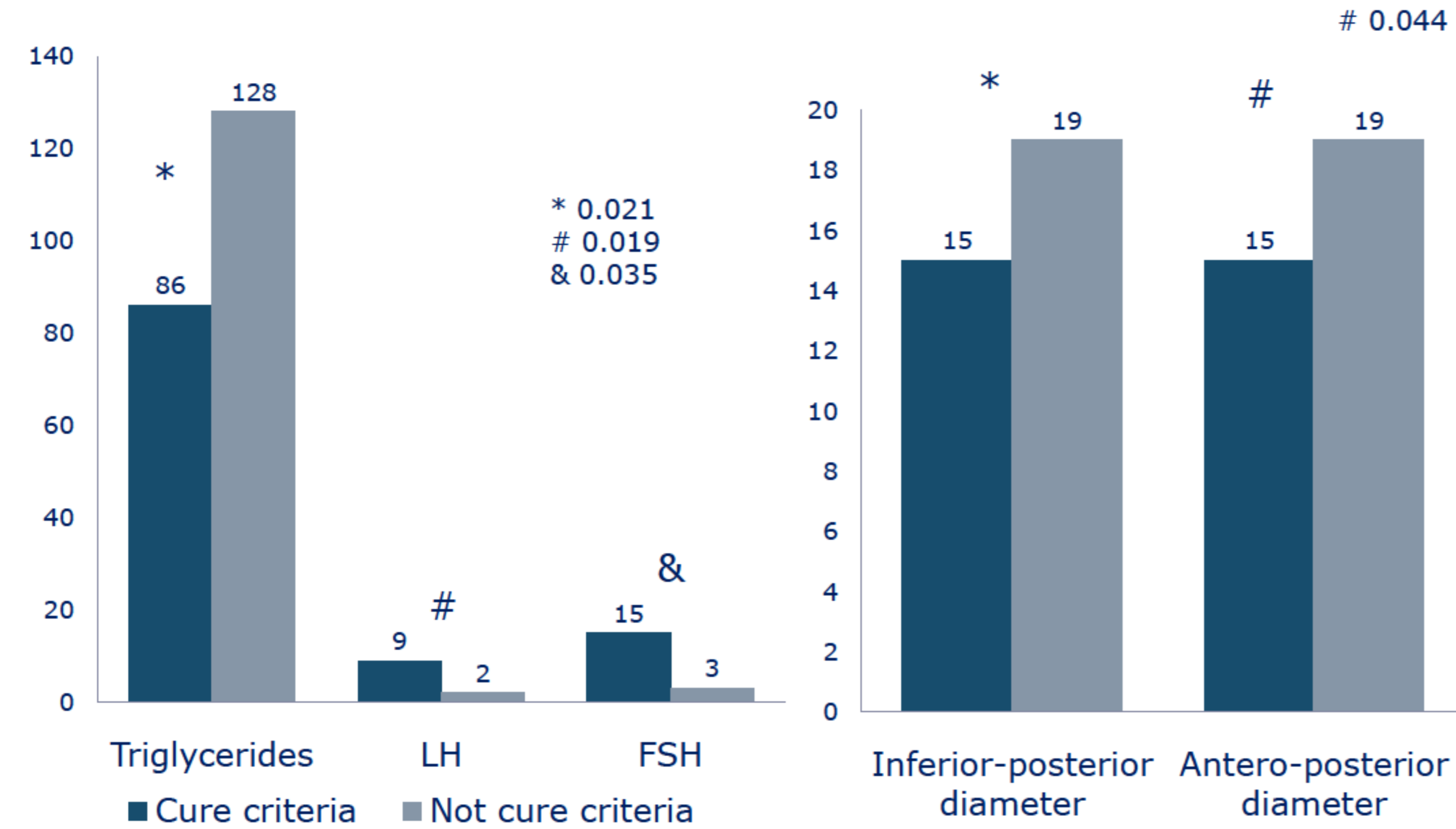


Figure 2. Molecular study of the surgical piece

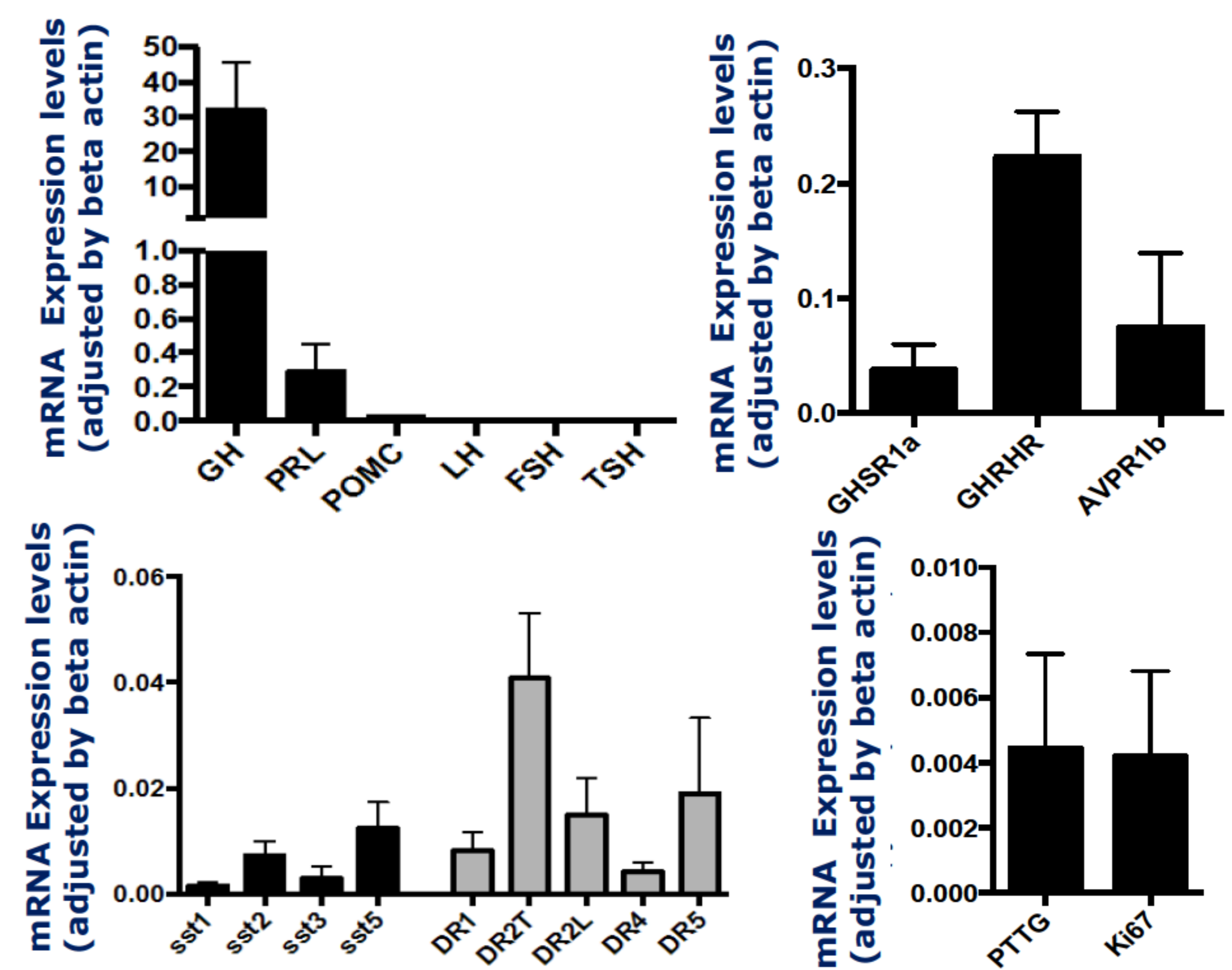


Figure. Expression level (mRNA) of different hormones, receptors and tumoral markers in the surgical pieces of acromegaly patients (n=22) measured by quantitative real-time PCR. Data represent average ± SEM adjusted by the expression level of a housekeeping gene (beta-actin).

Table 1. Differences between patients who meet and not meet cure criteria.

	Cure criteria	Not cure criteria	p
Age (years)	36 ± 18	38 ± 15	0.814
Sex (men/women)	1 / 2	5/9	0.728
BMI (Kg/m2)	27 ± 1	29 ± 5	0.519
GH ng/ml)	16 ± 12	9 ± 8	0.302
IGF-1(ng/ml)	657 ± 223	615 ± 248	0.793
Prolactin (mcg/L)	16 ± 8	80 ± 115	0.318

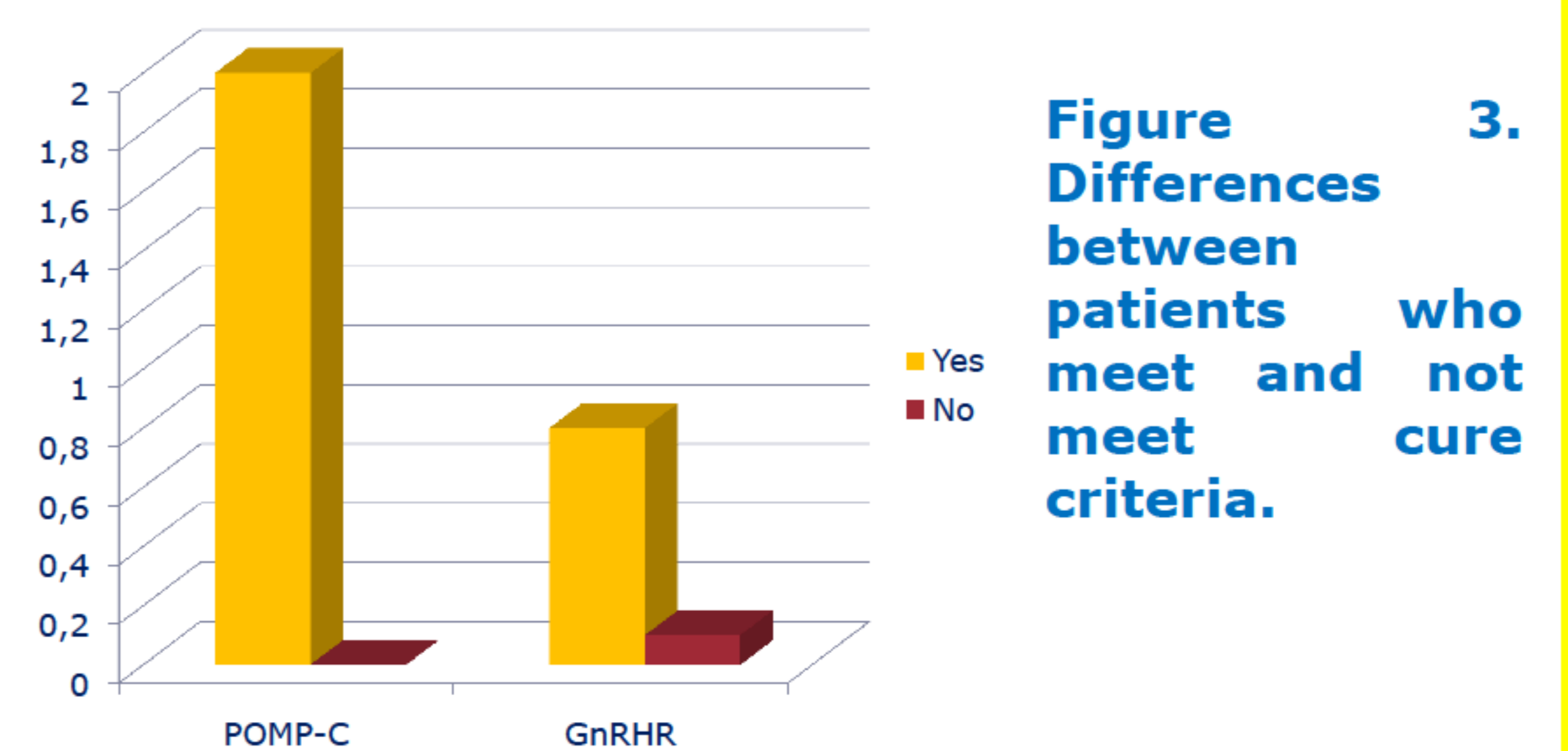


Figure 3. Differences between patients who meet and not meet cure criteria.

CONCLUSION

Overall, our results indicate that there is a significant correlation between several pre-surgical parameters and the disease cure. Patients who meet cure criteria have lower infero-posterior and antero-posterior diameter; and express more POMPC and GnRHR.