

Clinical And Histopathologic Features And Follow-Up Of Paediatric Patients With Papillary Thyroid Cancer: A 10 Years Experience.

Zuart-Ruiz Roberto¹, Medina-Bravo Patricia¹,
Serrano Bello Carlos², Cortes Sauza Jorge³
dr.roberto.zuart@gmail.com



Endocrinology Department¹, Pathology Department², Surgery Department³.
Federico Gomez Children's Hospital of Mexico

Introduction and Objectives

The incidence of paediatric **papillary thyroid cancer (PTC)** is increasing. The aim of our study was to describe the clinical and histopathologic features at diagnosis, and follow-up of paediatric patients with PTC at Children's Hospital of Mexico in a 10 years period.

Methods

Comparative longitudinal study. We included 22 paediatric patients with histopathologic diagnosis of PTC between 2004-2014, divided into risk groups according to AJCC TNM classification system. Descriptive statistics were performed, Student's *t* test or Mann-Whitney U test for independent samples, Fisher's exact test to compare frequencies and Kaplan Meier estimator for disease free survival.

Results

Clinical, Biochemical and Ultrasound Characteristics of Paediatric Patients with Papillary Thyroid Cancer. 2004-2014.

| | Total (n=22) | High Risk (n=14) | Intermediate-Low Risk (n=8) | p |
|--------------------------------|-------------------|---------------------|--------------------------------|--------------------|
| Age at diagnosis (years) | 11.68 ± 3.09 | 12.0 ± 2.96 | 11.13 ± 3.44 | 0.06 ^a |
| M/F | 6/16 | 6/8 | 1/7 | 0.16 ^c |
| Time of symptoms (months) | 4 (0 – 60) | 2 (0 – 24) | 7 (3 – 60) | <0.01 ^b |
| Dysphonia | 4.5% | 7.1% | 0% | 0.99 ^c |
| Dysphagia | 9.1% | 14.3% | 0% | 0.51 ^c |
| Dysthyroidism | 18% | 21.4% | 12.5% | 0.99 ^c |
| Volume increase in neck | 100% | 100% | 100% | NS |
| TSH (µUI/mL) | 2.45 (0.6 – 15.2) | 4.56 (0.6 – 15) | 1.3 (1.3 – 5.0) | 0.26 ^b |
| T4L (ng/dL) | 1.15 (0.9 – 2.0) | 1.14 (0.9 – 2.0) | 1.23 (1.0 – 1.9) | 0.41 ^b |
| Anti Thyroperoxidase, positive | 31.8% | 38.5% | 20% | 0.43 ^c |
| Anti Thyroglobulin, positive | 36.3% | 46.2% | 20% | 0.32 ^c |
| USG (node) | | | | |
| Size (cm) | 2.5 (0.7 – 3.5) | 2.5 (0.8 – 3.5) | 2.5 (0.7 – 3.4) | 0.57 ^b |
| Microcalcifications | 40% | 50% | 25% | 0.26 ^c |
| Hipoechoogenicity | 60% | 58.3% | 62.5% | 0.61 ^c |
| Increased central vascularity | 77.8% | 90.9% | 57.1% | 0.13 ^c |
| Irregular border | 23.1% | 20% | 33.3% | 0.58 ^c |
| Adenopathy | 50% | 58.3% | 37.5% | 0.32 ^c |

^a Student's *t* test for independent samples

^b Man Whitney U test

^c Fisher exact test

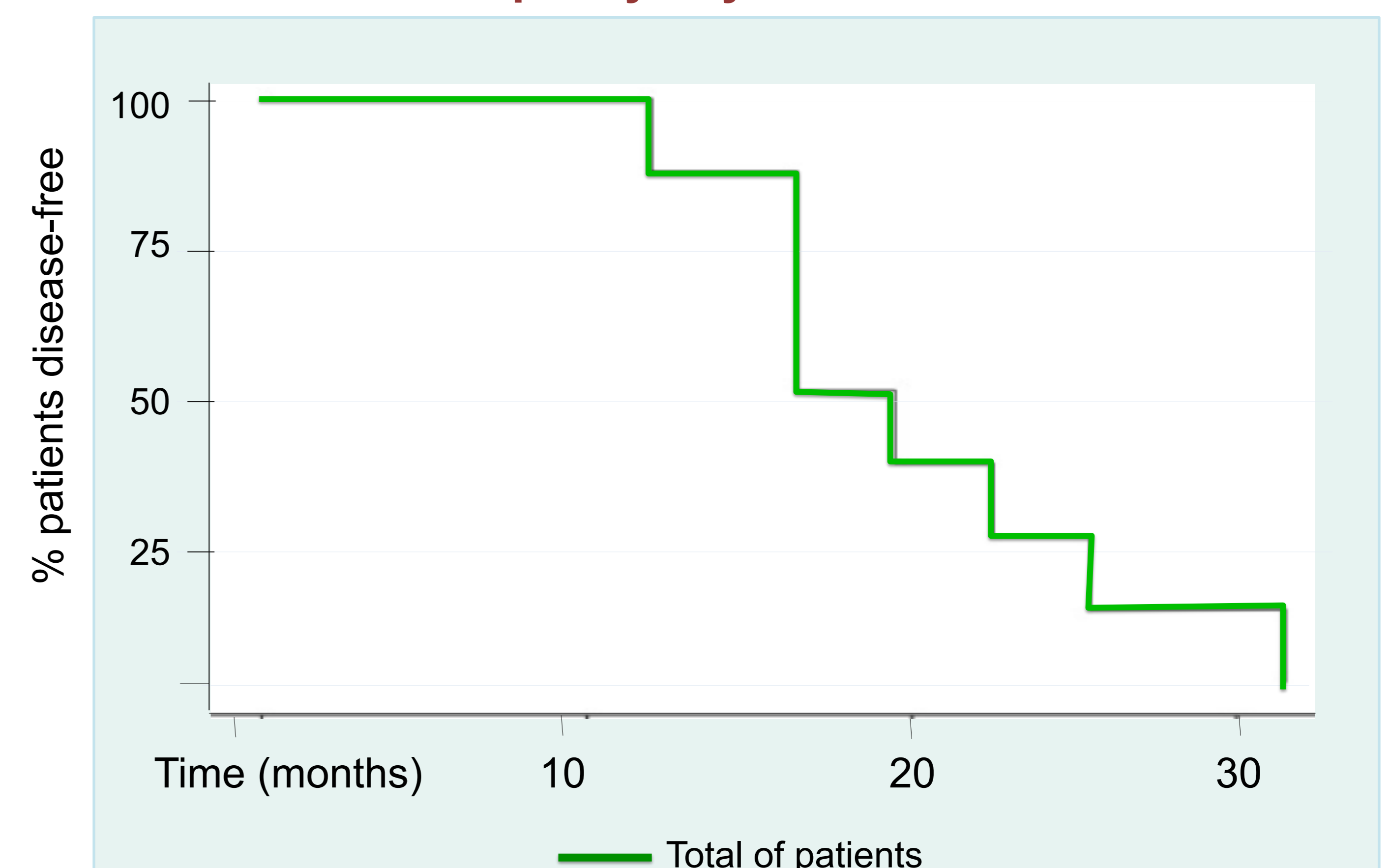
Histological Characteristics of Paediatric Patients with Papillary Thyroid Cancer. 2004-2014.

| | Total (n=22) | High Risk (n=14) | Intermediate-Low Risk (n=8) | p |
|------------------------------------|-----------------|---------------------|--------------------------------|-------------------|
| Aggressiveness of the tumor | | | | |
| Size (cm) | 2.7 ± 1.1 | 3.2 ± 0.95 | 2.11 ± 1.0 | 0.03 ^a |
| Lymph node metastasis (cervical) | 63.6% | 100% | 0% | <0.001 |
| Lung metastasis | 13.6% | 21.4% | 0% | 0.21 |
| Extra capsular invasion | 63.6% | 100% | 0% | <0.001 |

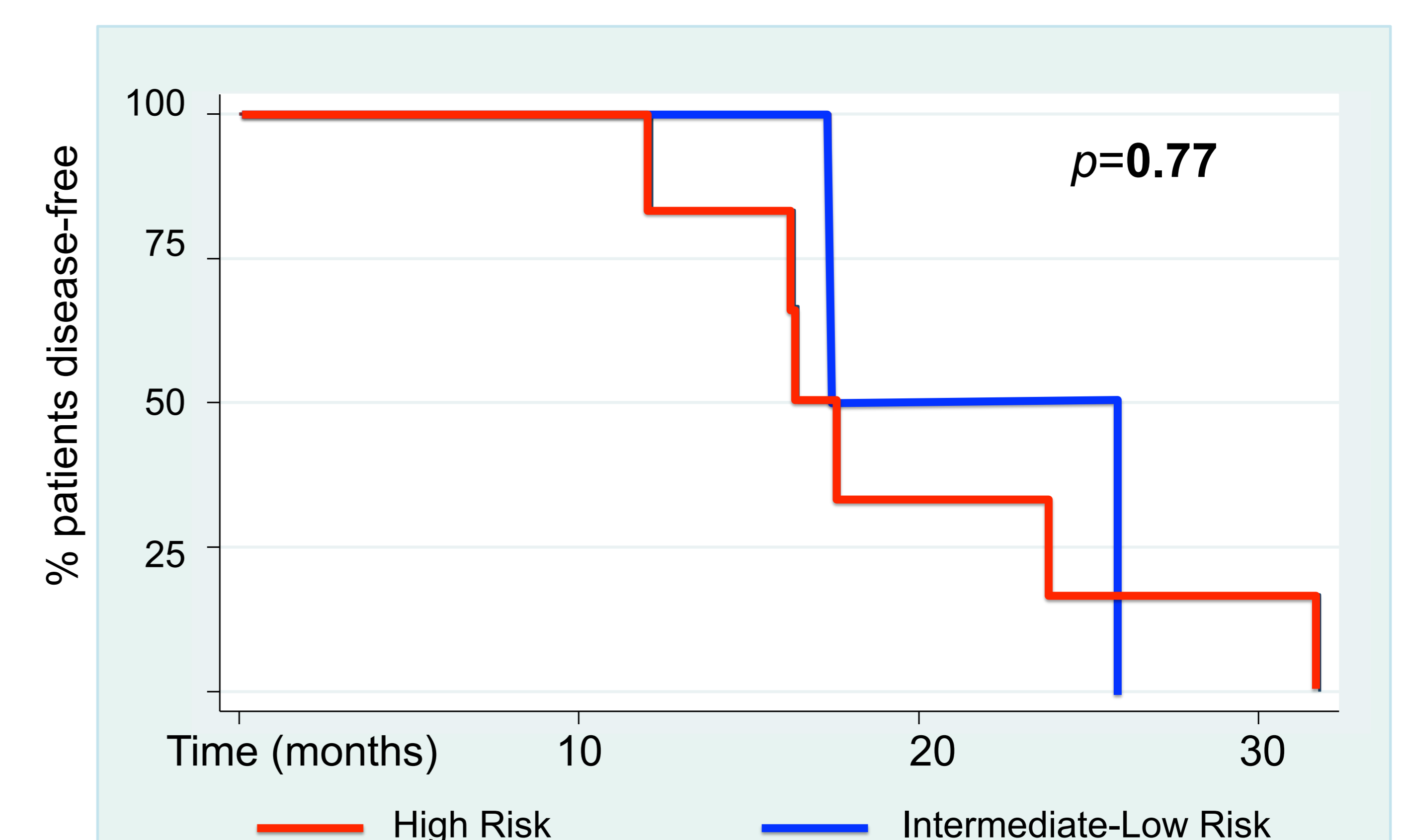
Fisher exact test

^a Student's *t* test for independent samples

Disease-free survival in Paediatric Patients with Papillary Thyroid Cancer.



Kaplan Meier, estimator disease-free survival (persistence and recurrence).



Kaplan Meier, estimator disease-free survival (persistence and recurrence) stratified by risk group.

Conclusions

In our series of patients, clinical features at diagnosis were similar to those described in the literature. In our study, the high-risk group had a higher frequency of persistence of disease at 3 years, different to reported in other series of patients.

References: *Clinical Endocrinology* 1998;49,619–628, *World journal of surgery* 2004;28:1088-1092