Outcome and visual prognosis on a series of patients, stage T1 post choroidal melanoma treated with proton therapy at ICPO

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METHODS

Between 11/1991 to 12/2010, 8399 patients treated for a choroidal melanoma were recorded in the Institut Curie database. 3886 patients had undergone an irradiation with proton beam in Orsay center. Among them, all patients with stage T1 choroidal melanoma treated with proton irradiation and with a minimal follow up of 5 years, were selected.
They were divided in two groups depending on the distance between Tumor and Macula or Papilla (T-M/P).
Group 1: T-M/P > 3 mm
Group 2: T-M/P < 3 mm.
Survival and functional impact on vision were analyzed.

IC_Data base: **8399 pts** with a choroidal melanoma

Stage T1+ Posterior Tumor : **841pts**

Diagnostic – Follow up > 5years: **594pts**

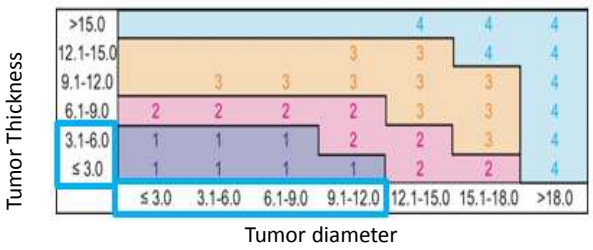
Proton therapy: **424pts**

Brachytherapy: **170pts**

Group1 (distance T-Macula or papilla ≥ 3mm): **75pts**

Group2 (distance T-Macula or papilla < 3mm): **317pts**

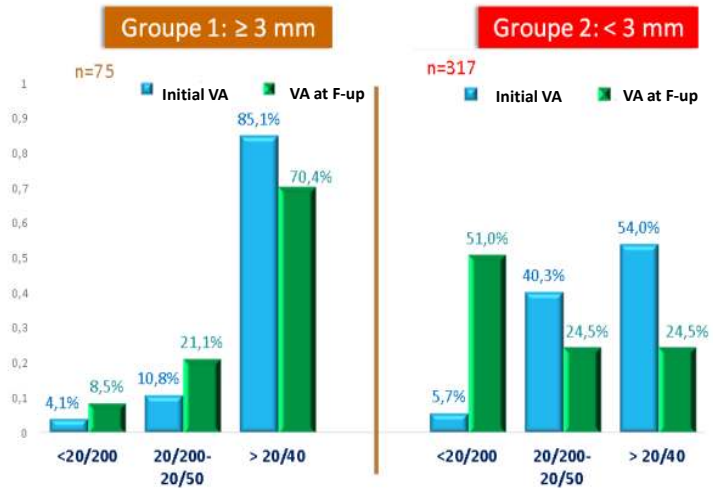
TNM: T1



RESULTS

- The median follow up: **10,2yrs** (5,1 – 23yrs)
- Local recurrence: **0%**
- Overall survival: **91,7 % at 10 yrs** [88,6%- 94,9%]
  77,4 % at 20 yrs [69,6%-86,0%]

Visual Acuity



- Initial VA: Group 1 > Group 2.
- At last -Fup: Group 1 > Groupe 2 (p=0,03).

Impacts of the proton therapy on VA were related to the distance between tumor border and macula or papilla limits.

Population

Gender	51.9% (F)	48,1% (M)
Mean Age	56,2 yrs	(14 – 88 yrs)
Tumor Thickness	Median: 2,8 mm	(0,7 - 5,8 mm)
Tumor Diameter	Median: 8,8 mm	(3 - 12 mm)
Tumor–Macula Distance	Mean: 3,3 mm	(0- 23 mm)
Tumor – Papilla Distance	Mean: 2,6 mm	(0 – 23,5 mm)

Vision Loss - Multivariate analysis

Documented tumor increase	0,002
Post irradiation cataract	0,0008
Post irradiation maculopathy	<0,0001

Conclusions

This analysis of a series on selected patients with T1 posterior choroidal melanoma with a long follow up shows excellent local and overall survival rates; and significant visual function conservation depending on the distance between the tumor and the macula / papilla.