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## USE OF QUANTITATIVE FLUORESCENCE IN SYSTEMATIC RESEARCH OF FIRST NON-SENTINEL LYMPH NODE IN MELANOMA SENTINEL LYMPH NODE BIOPSY (FLASH-NODE PROJECT): PRELIMINARY DATA OF A FEASIBILITY STUDY.

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Backgrounds Indocyanine Green (ICG), already proved efficient in melanoma sentinel lymph node biopsy (SLNB), exhibits potential for diffusion to the following LNs, particularly to the first non-sentinel lymph node (NSLN)<sup>1</sup>. This study investigates quantitative fluorescence to identify NSLN in patients with melanoma undergoing SLNB.

Methods SLNB patients underwent Technetium-99m-MIBI scintigraphy 3-6h before and peri-scar intradermal injection of 1,5-3ml of ICG 15min before. SLN research was performed using the scintiprobe and the SPY-cam probe (figure 1), that defines the presence of fluorescence in the drainage LNs, both qualitatively and quantitatively. SLN was defined as LNs with fluorescence > 400% relative to the injection site (figure 2). After SLN removal, other lymph nodes — defined as NSLN - showing fluorescence rates beyond 250 % with respect to the injection site were sistematically researched and excised.



Fig.1





Fig.2

Results (table 1) 60 SLNB were done in 50 patients. SLN was positive in 28% (17/60). At least one NSLN was identified in 55 cases (91,7%) resulting positive in 8% (5/55) of cases. More than one NSLN was identified in 23 procedures. In two cases (3,6%) the NSLN was positive with SLN negative. Neither demographic nor histopathologic factors proved relevant to detect NSLN.

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Table 1

Conclusions NSLN search via quantitative fluorescence analysis proves feasible in 92% of cases. In two cases NSLN positivity was highlighted in the absence of disease in the SLN, hypothesizing that the systematic search for the NSLN can reduce the number of false negatives in SLNB. The study provides insights in possible upgrades of current SLNB standards, worthy of further investigation.

## BIBLIOGRAFIA

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