

## Sentinel Node Biopsy by Indocyanine Green Retention Fluorescence Detection for Inguinal Lymph Node Staging of Anal Cancer: Preliminary Experience

We thank Mistrangelo and colleagues for their invaluable comments on our article on Sentinel lymph node biopsy (SLNB) by Fluorescence Navigation in anal cancer.

Radiotherapy or concurrent radiotherapy with chemotherapy are established as sphincter-preserving treatments for squamous cell carcinoma of the anal canal.<sup>1,2</sup> However, both may be associated with considerable systemic and local toxicity which may be avoided in selected patients with low risk tumors. SLNB may provide the possibility for a selective approach to the inguinal lymph nodes and thus to individually tailored therapeutic concepts.<sup>3,4</sup>

This study was performed to investigate the feasibility of Indocyanine Green (ICG) fluorescence imaging for SLN detection in anal cancer. ICG fluorescence imaging provided a detection rate of 83% which appears to be promising. The detection rate is comparable to those of other studies using the combined blue/radiocolloid method<sup>5</sup> but exceptional high rates of up to 100% have also been reported.<sup>6</sup> Clearly, a feasibility study involves a significant learning curve and other undetermined variables that can affect the results. Therefore, it is not worthwhile to compare these preliminary results with other more advanced diagnostic studies.

Mistrangelo et al. raised concerns over the study design with respect to the radiation therapy algorithm of this study. As stated in the section Patients and Methods, the standard protocol for the treatment of patients with anal cancer provided by the department of radio-oncology was used. Clearly, the concept of inguinal SLN in anal cancer has the potential to reduce radiation associated morbidity by identifying patients with negative inguinal lymph nodes as we have shown earlier.<sup>3</sup> However, in the context of a feasibility study with a new method it is not justified to modify the treatment regimen with respect to the absence of sufficient data or validated guidelines. Therefore, all patients were

treated according to the standard radiochemotherapy protocol of the hospital. The correct statement in the discussion should be: In this study none of the 10 patients with negative SLN who did undergo radiotherapy developed metachronous metastases after a median follow up of 44 months.

In conclusion, there is increasing evidence that ICG guided SLN biopsy is safe and accurate and may be used to avoid inguinal radiotherapy in selected patients with anal cancer.

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