

Reply to 464-009-531: Re: ‘New horizons in colorectal cancer surgery’ ((2009)23:1–3)

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We appreciate the interest shown by Alexander and colleagues in our editorial. We especially appreciate their suggested proposal and offer our response.

The authors speculate about an ideal solution using a dye that identifies the primary tumor but also allows both visual and histologic identification of lymphatic drainage. Such a dye would have contrary characteristics. For tattooing, a dye is needed that stays localized at the injection site, whereas for visualizing lymphatic drainage, a dye is needed that migrates through the lymphatic system within a set time. For example, SPOT ink (GI Supply, Camp Hill, PA, USA) is designed for endoscopic marking or “tagging” of lesions in the gastrointestinal tract. Although SPOT is supposed to stay at the injection site for a long time, carbon particles wash through the lymph vessels over time.

In our clinic we noted that during surgery, various lymph nodes had a black discoloration after tattooing with SPOT: the longer the period between tattooing and surgical resection, the more discolored the lymph nodes found. For future local resection therapy for early colorectal cancer (CRC), a sentinel node (SLN) procedure to identify a limited number of SLNs (1–3) is warranted.

A SLN biopsy using ink, radioisotope tracers, or both has been validated for patients with breast cancer and melanoma. For patients with CRC, the results of SLN mapping with these techniques are less consistent [1] due to skipped lesions, poor visualization, small particle size, and the like.

The authors reference Haigh et al. [2] to address their suggestion that carbon may spot primary and lymphatic CRC spread. Haigh et al. mention in their discussion that carbon dye did not improve intraoperative identification of SLNs in cases of cutaneous melanoma. Accurate intraoperative detection of the SLN is crucial for abandoning total lymphadenectomy.

Furthermore, SPOT cannot overcome the problem of poor visualization in fatty mesenteric tissue. This problem is one of the assumed causes for the high false-negative rate associated with SLN biopsy for patients with CRC.

As we mentioned in our editorial, the most reliable technique for SLN detection in patients with CRC has not yet been validated [3]. Taking all mentioned considerations into account, we state that the fluorescent technique eventually combined with monoclonal antibodies could have the upper hand in SLN mapping for patients with CRC.

References

1. Des GG, Uzzan B, Nicolas P, Cucherat M, de MP, Morere JF, Breau JL, Perret G (2007) Is sentinel lymph node mapping in colorectal cancer a future prognostic factor? A meta-analysis. *World J Surg* 31:1304–1312
2. Haigh PI, Lucci A, Turner RR, Bostick PJ, Krasne DL, Stern SL, Morton DL (2001) Carbon dye histologically confirms the identity of sentinel lymph nodes in cutaneous melanoma. *Cancer* 92(3):535–541
3. Meijerink WJ, van der Pas MH, van der Peet DL, Cuesta MA, Meijer S (2009) New horizons in colorectal cancer surgery. *Surg Endosc* 23:1–3

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