

## A COMPARISON OF WHITE-LIGHT CYSTOSCOPY AND NARROW-BAND IMAGING CYSTOSCOPY TO DETECT BLADDER TUMOUR RECURRENCE

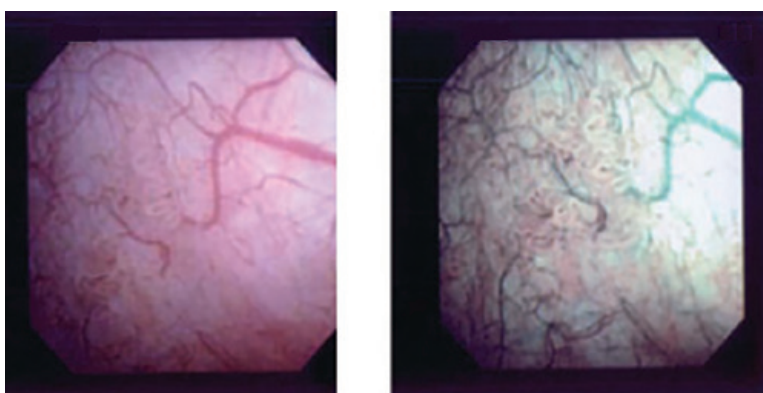
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### SUMMARY

The objective of the study was to determine whether narrow-band imaging (NBI) cystoscopy enhances the detection of non-muscle invasive bladder tumours over standard white-light imaging (WLI) cystoscopy, as surveillance WLI is the standard method used to diagnose patients with recurrent bladder tumours, but they can be missed by WLI cystoscopy, possibly accounting for early recurrences.



**WLI (left) initially appeared normal, but a cluster of papillary tumours is clearly visible on NBI cystoscopy (right).**

### METHODS

The study evaluated 427 patients for recurrent bladder tumours by WLI cystoscopy, followed by NBI cystoscopy as a further procedure, using the same video-cystoscope. Recurrent tumours visualized by WLI or NBI cystoscopy were mapped, imaged, biopsied and subsequently treated by transurethral resection (TUR) or fulguration. Biopsies or TUR specimens obtained by WLI and NBI were examined separately for presence of tumour.

### RESULTS

- Out of 427 patients, 103 patients (24%) had tumour recurrences; 90 (87%) were detected by both WLI and NBI and another 13 (100%) only by NBI cystoscopy.
- NBI detected extra papillary tumours or more extensive carcinoma in situ in 58 (56%) patients found to have recurrences.
- The mean number of recurrent tumours visualized on WLI cystoscopy was 2.3, vs to 3.4 seen on NBI cystoscopy ( $P=0.01$ ).
- Bladder tumours detected only by NBI cystoscopy included pTa (four patients), CIS (eight) and pT1 (one).

## EQUIPMENT USED

Each patient had standard flexible WLI cystoscopy using a video-cystoscope (Model CYF-V2/VA2, Olympus American Medical, Center Valley, PA, USA).

## CONCLUSIONS

This study concluded NBI cystoscopy improved the visualization of recurrent non-muscle-invasive bladder tumours over standard WLI cystoscopy. Additionally, NBI flexible cystoscopy subjectively and objectively improved the visualization of recurrent flat and papillary superficial bladder tumours.

NBI is not intended to replace histopathological sampling as a means of diagnosis.

## CONFLICTS OF INTEREST

No conflicts declared.

Note: This summary is for informational purposes only. Publication abstract and access to full article can be found at: <http://www.ncbi.nlm.nih.gov/pubmed/18778359>