



Experience.

MPLN

BLADDER CANCER

Molecular Pathology Laboratory Network, Inc. (MPLN) has been on the forefront of laboratory medicine since its inception. We offer a continually expanding selection of tests in molecular oncology, infectious diseases and human genetics to hospitals, medical laboratories and private physician groups nationwide. Experience. MPLN.

## Bladder Cancer Screen by Fluorescence *in situ* Hybridization

Bladder cancer testing is designed to detect aneuploidy for chromosomes 3, 7, 17, and loss or deletion of the 9p21 locus via fluorescence *in situ* hybridization (FISH).

The test is performed on urine specimens from individuals with hematuria or atypical cell morphology suspected of having bladder cancer, or on urine from patients previously diagnosed with bladder cancer.

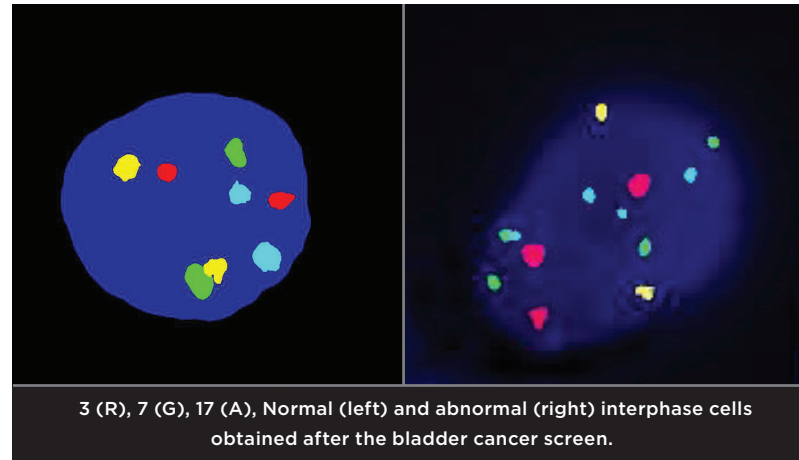
Bladder cancer testing is a non-invasive method to aid in the initial diagnosis of bladder cancer and in the early detection of tumor recurrence in patients previously diagnosed with bladder cancer. Results of the bladder cancer assay should be interpreted in conjunction with standard diagnostic procedures.

### Advantages of Bladder Cancer Testing

Bladder cancer testing enumerates specific chromosome regions to detect cancer-associated genetic changes.

Testing provides information that is complementary to results obtained by cystoscopy.

Direct analysis of cytogenetic changes reduces subjectivity in the interpretation of test results.



Less subjectivity affords more accurate monitoring of bladder cancer.

More accurate monitoring provides more information for therapeutic decisions.

**The first molecular cytogenetic test** for monitoring the recurrence of bladder cancer. Utilizes DNA probes and fluorescence DNA probe technology.

**Non-invasive** – Cells for analysis are harvested from voided urine. As few as four cells with certain genetic changes identified by testing can be indicative of bladder cancer recurrence.

**Highly sensitive** for the detection of higher stage, higher grade bladder cancer tumors (100% sensitive for stage T2 and Tis tumors). The testing also detects lower stage, low grade tumors (94% sensitive for grade 3 tumors). High sensitivity means few false negatives.

**Highly specific** for cancer cells. In 275 patients (59 normal volunteers and 216 non-healthy subjects), the testing showed 94.5% specificity. In healthy volunteers (smokers and non-smokers over age 50), the specificity was 100%. High specificity means fewer false positive results.

**Results unaffected** by Bacillus Calmette-Guérin (BCG) intravesical therapy.

**Readily reimbursed** by private and public payers.



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Bladder cancer testing detects abnormalities in chromosome copy number that can occur independent of significant changes in cell morphology, making it more sensitive than conventional urine cytology. Both tests look for cancer cells that have been shed into the urine, but the bladder cancer testing identifies potential cancer cells by specific cytogenetic changes.

**Bladder cancer testing helps identify the presence of the following:**

- *in situ* tumors that lie flat against the bladder wall
- Transitional Cell Carcinomas (TCCs)
- Suspected tumor sites in patients receiving BCG immunotherapy. (Often, the inflammation caused by BCG immunotherapy may mask or make it difficult to visualize a tumor. Bladder cancer testing can help clinicians determine whether or not a site is cancerous.)
- Other urinary tract related cancers beyond the view of the cystoscope, including ureter, urethra, renal or prostate, and indicates that additional follow up is warranted

### One Source

Coordinating laboratory tests and results within one facility, MPLN provides a single source for anatomic pathology, genetics, flow cytometry, cytogenetics, and molecular testing.

Using one source for your laboratory testing provides simpler logistics for ordering, molecular reflex testing, reporting, billing, and patient management.

### Contact Us

For more information visit us at [www.MPLNet.com](http://www.MPLNet.com) or contact Client Services at **800.932.2943**.

### References:

1. Phillips and Richardson (2006). Aneuploidy in bladder cancers: the utility of fluorescence *in situ* hybridization in clinical practice BJU Inter 98:33-37.
2. Sarosdy et al. (2006). Use of a multi-target fluorescence *in situ* hybridization assay to diagnose bladder cancer in patients with hematuria 176:44-47.

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