

Using NMP-22 as a Quantitative Evaluation in the Treatment of Interstitial Cystitis

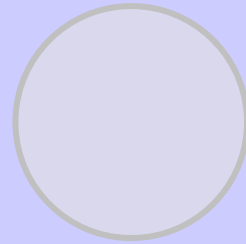
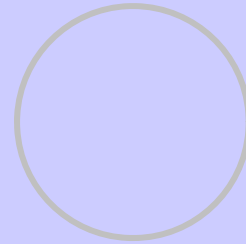
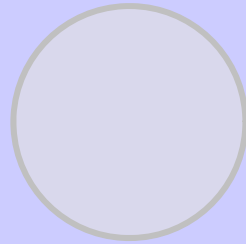
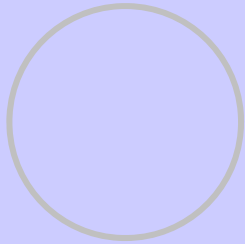
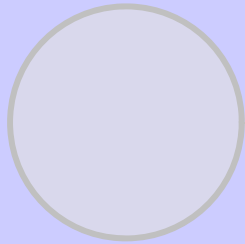
Francisco M. Dubocq, M.D. and Joseph V. DiTrolino, M.D.



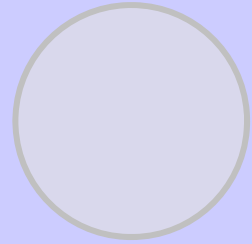
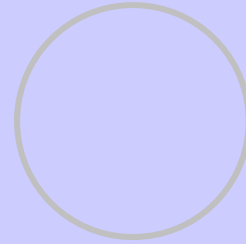
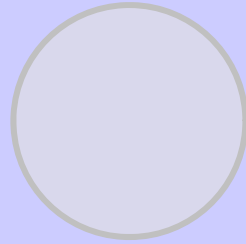
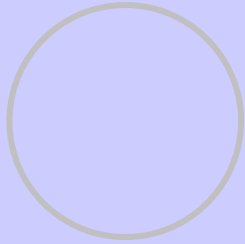
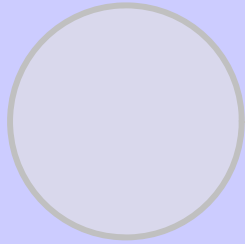
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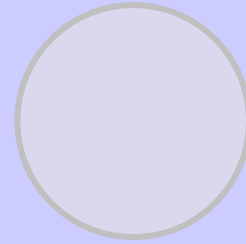
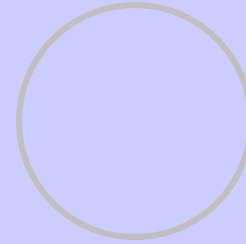
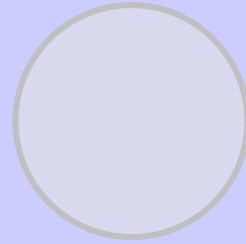
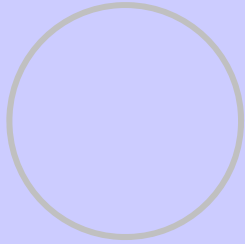
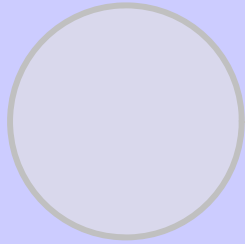
University of Medicine & Dentistry of New Jersey



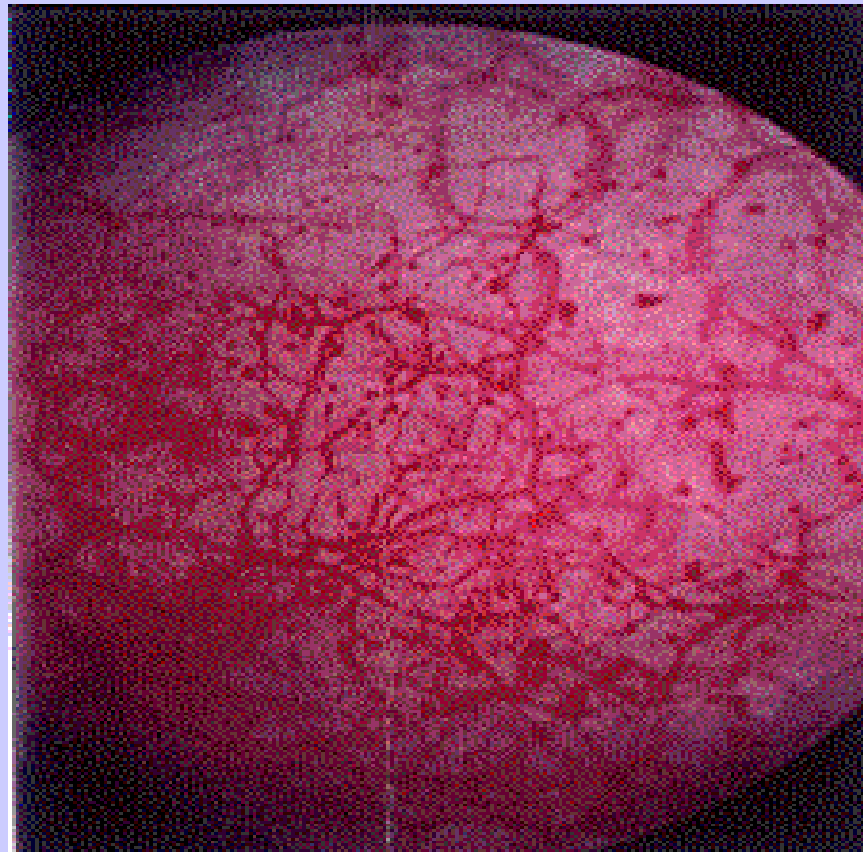
- The “Matritech NMP-22[®] BladderChek Test” is an FDA approved voided urine tumor marker. Nuclear matrix proteins (NMP) type 22 is found in human epithelial cells. NMP make up the internal structural framework of the nucleus and are associated with such functions as DNA replication, RNA synthesis, and hormone binding.

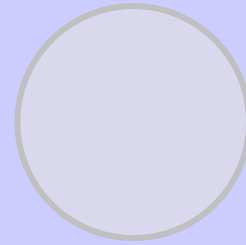
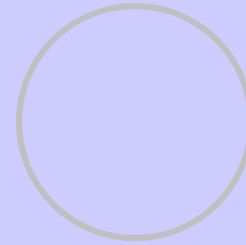
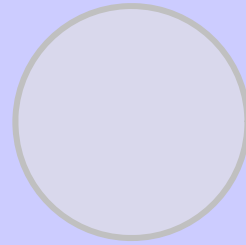
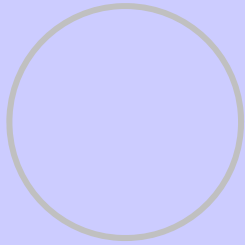
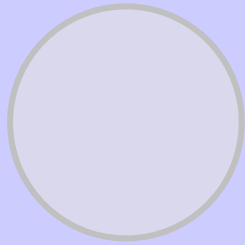


- **Interstitial Cystitis (IC) patients present with severe lower urinary tract symptoms and microscopic hematuria.**
- **A complete workup for hematuria might eventually include a urine analysis, urine culture and sensitivity, urine cytology, urine NMP-22, radiographic studies, cystoscopy and bladder biopsies.**



Acute Interstitial Cystitis

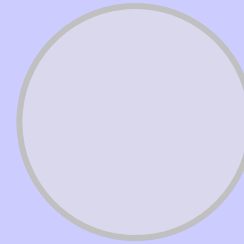
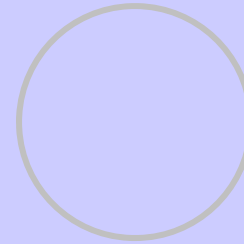
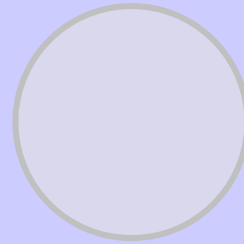
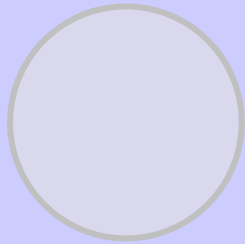




- **Once a diagnosis of IC is confirmed therapy is started:**

Preliel 2 tabs. p.o. TID and/or

Elmiron 100 mgs. p.o. TID



- **Repeat NMP-22 studies on several IC patients have shown an improvement in direct correlation to clinical condition.**



Case #1

68 year old white ♀ with previous breast cancer, on Tamoxifen therapy. Tumor free bladder bx.

Dates	NMP-22	Clinical Status	Treatment
03/01	16.3	+++ symptomatic	Prelief started
07/01	12.0	symptomatic	
10/01	10.7	asymptomatic	
01/02	6.1	asymptomatic	Prelief discontinued
04/02	11.5	symptomatic	Elmiron started
08/02	14.0	symptomatic	Prelief restarted
11/02	4.0	asymptomatic	
07/03	3.0	asymptomatic	



Case #2 and #3

40 year old white ♀ with previous breast cancer.
Tumor free bladder bx.

Dates	NMP-22	Clinical Status	Treatment
06/03	7.6	+++ symptomatic	Prelief started
07/03	2.1	asymptomatic	

53 year old white ♀

Dates	NMP-22	Clinical Status	Treatment
05/01	2.8	asymptomatic	Pt. on Prelief
03/03	7.2	symptomatic	Off medications



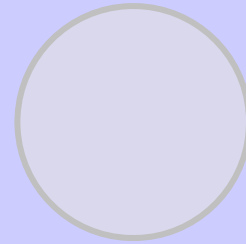
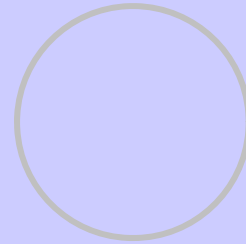
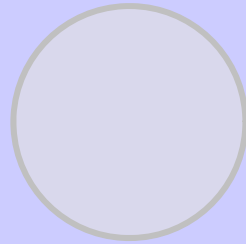
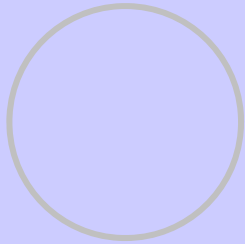
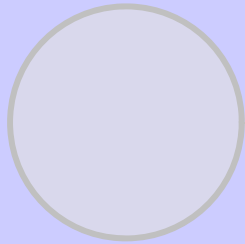
Case #4 and #5

60 year old white ♂

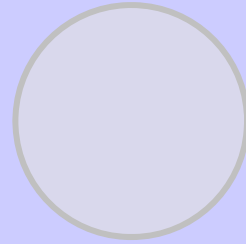
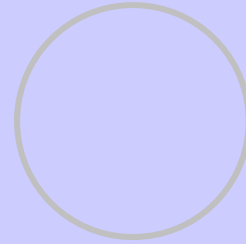
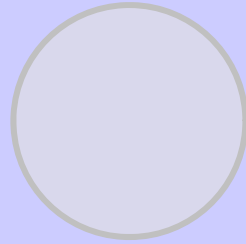
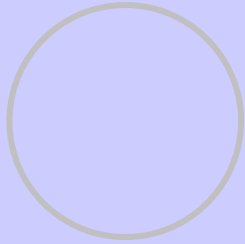
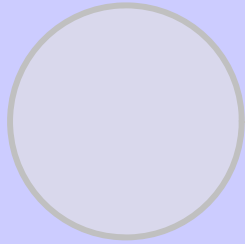
Dates	NMP-22	Clinical Status	Treatment
03/01	6.8	asymptomatic	On Prelief
06/01	11.3	+++ symptomatic	Off medications
08/03	2.6	asymptomatic	On Prelief

62 year old white ♂

Dates	NMP-22	Clinical Status	Treatment
06/01	5.7	+++ symptomatic	Prelief started
07/02	<2.1	asymptomatic	



- **Although NMP-22 is an excellent diagnostic test for bladder cancer, it might also give some insight into IC therapy success.**
- **Quantitative urinary analysis would better evaluate a patient with difficult to assess symptomatic findings.**
- **It also allows close observation of the urinary mucosal states should deterioration to a malignant process develop.**



- **UMDNJ/NJMS is currently compiling a study of 30 IC patients naive to treatment. Over 6 months time, patients will be regularly evaluated for treatment success with quantitative NMP-22 results while under therapy with Prelief and/or Elmiron.**