

## MATRITECH FACT SHEET

### ABOUT MATRITECH

Matritech is using its patented proteomics technology to develop diagnostics for the detection of a variety of cancers. The Company's first two products, the NMP22<sup>®</sup> Test Kit and NMP22<sup>®</sup> BladderChek<sup>®</sup> Test, have been FDA approved for the monitoring and diagnosis of bladder cancer. The NMP22 BladderChek Test is based on Matritech's proprietary nuclear matrix protein (NMP) technology, which correlates levels of NMPs in body fluids to the presence of cancer. Beginning with a patent portfolio licensed exclusively from the Massachusetts Institute of Technology (MIT), Matritech's patent portfolio has grown to more than 15 other U.S. patents. In addition to the NMP22 protein marker utilized in the NMP22 Test Kit and NMP22 BladderChek Test, the Company has discovered other proteins associated with cervical, breast, prostate, and colon cancer. The Company's goal is to utilize these protein markers to develop, through its own research staff and through strategic alliances, clinical applications to detect cancer.

### ABOUT THE NMP22<sup>®</sup> BLADDERCHEK<sup>®</sup> TEST

The NMP22 BladderChek Test is the only in-office test approved by the FDA as an aid in the diagnosis of bladder cancer. The NMP22 BladderChek Test is a painless and non-invasive assay, performed on a single urine sample that detects elevated levels of Nuclear Mitotic Apparatus (NuMA) protein, which Matritech refers to as the NMP22 protein. Healthy individuals generally have very small amounts of NMP22 protein in the urine. However, the level of NMP22 protein is often elevated in the urine of patients with bladder cancer, even at early stages of the disease. The test can be performed in a physician's office with results delivered during the patient visit, allowing a rapid, accurate and cost-effective way to aid in the detection of bladder cancer in patients at risk. The use of the NMP22 protein has been FDA-approved four times for various formats and claims, most recently in April 2003 for point-of-care use for diagnosis.





## ABOUT THE TECHNOLOGY

We focus our research on finding differences in the types and amounts of proteins found in the tissue, blood and urine of patients with and without cancer. The products we have developed are based on our proprietary nuclear matrix protein (“NMP”) technology. The nuclear matrix, a three-dimensional protein framework within the nucleus of cells, plays a fundamental role in determining cell type by physically organizing the contents of the nucleus, including DNA. The increases in certain nuclear matrix proteins in the body fluids and tissues of cancer patients have been widely reported in scientific journals. Our product development efforts have been centered on creating clinically useful tests for diagnosing and monitoring cancer by obtaining NMPs from body fluids such as urine and blood. Tests like these measure certain NMPs in body fluids while minimizing patient discomfort and inconvenience. In addition to bladder cancer, Matritech is working to develop applications targeted to the detection of other cancers.

## ABOUT BLADDER CANCER

The American Cancer Society estimates that over 63,000 new cases of bladder cancer will be diagnosed in the United States this year (over 47,000 men and 16,000 women), and over 13,000 people will die of the disease (nearly 9,000 men and 4,000 women). Worldwide it accounts for 330,000 new cases and 100,000 deaths each year. It is also one of the most chronic cancers, recurring in almost 70% of patients. The most common symptom of bladder cancer is blood in the urine, a condition referred to as hematuria.

Bladder cancer occurs primarily in men age 60 and older and roughly twice as frequently in white men as in black men. Men are four times more likely to be diagnosed with bladder cancer than women, but a greater percentage of women are diagnosed at an invasive stage of the malignancy. Among U.S. males, the incidence of new bladder cancer cases is almost as large as the incidence of colon cancer.

The most common risk factor for bladder cancer is smoking. Smokers are twice as likely to develop bladder cancer as nonsmokers. In the United States, smoking is estimated to be associated with about 50% of bladder cancer deaths among men and 30% among women.

Occupational exposures to chemicals (aromatic amines) used in dry cleaning facilities and the production of dyes, paper, rope, apparel, rubber and petroleum products have been associated with increased risk for bladder cancer. Other industrial exposures implicated as risk factors for developing bladder cancer include combustion gases and soot from coal, chlorinated aliphatic hydrocarbons, and chlorination by-products in heated water.



If diagnosed in its early stages, bladder cancer has a five-year survival rate of 94%. If diagnosed at an advanced stage, however, the five-year survival rate can be less than 10%. It has been estimated that this year in the United States about 25% of bladder cancer patients will be diagnosed after their disease has become invasive or metastatic, significantly lowering the five year survival rate.

## **About Bladder Cancer in Women**

Among U.S. women, according to the most recent SEER data, the prevalence of bladder cancer (140,000) is comparable to the number of women with cervical (184,000) and ovarian (159,000) cancers. The five year survival rate of women is less than the ten year survival rate of men. It is postulated that diagnosis in women is delayed because symptoms are misinterpreted; this delay is correlated with a disproportionately higher death rate among women.

## **ABOUT OTHER PRODUCTS IN DEVELOPMENT AND DISCOVERY**

<b>Cancer</b>	<b>Protein</b>	<b>Partner</b>	<b>Stage of Development</b>
Cervical	NMP179®	Sysmex for flow cytometry application	Preclinical trials begun in 2004
Breast	NMP66	Mitsubishi in Japan. U.S. partner to be determined.	Test method optimization
Prostate	NMP48	TBD	Research and Development
Colon	NMP35	TBD	Research and Development



## NMP22<sup>®</sup> BLADDER CANCER MARKET SIZES IN THE U.S. & GERMANY

	<b>Bladder Cancer Market Opportunity</b>	<b>Unresolved Hematuria Market Opportunity</b>	<b>At Risk Market Opportunity</b>
Physician	Urologist	General Practitioner	General Practitioner
Market Opportunity	\$ 66,000,000 <sup>(3)</sup>	\$ 83,000,000 <sup>(3)</sup>	\$ 330,000,000 <sup>(3)</sup>

## NMP22<sup>®</sup> BLADDER CANCER TEST OPPORTUNITY IN THE U.S. & GERMANY

	<b>Bladder Cancer Test Opportunity</b> <sup>(1) (2)</sup>	<b>Unresolved Hematuria Test Opportunity</b> <sup>(4)</sup>	<b>At Risk Test Opportunity</b> <sup>(5) (6)</sup>
Physician	Urologist	General Practitioner	General Practitioner
Screening	2,000,000	5,000,000	20,000,000
Monitoring	2,000,000	-	-
Total Tests	4,000,000	5,000,000	20,000,000

### NOTE:

The above market size and market opportunities are based on the following assumptions:

(1) Based on prevalence of about 490,000 in U.S and about 250,000 in Germany, as reported by NCI-SEER and as derived by Matritech from incidence data reported by Robert Koch Institut, Berlin, respectively.

(2) Based on frequency of testing recommended by AUA Guidelines, but actual number of tests is dependent on physician and patient conduct.

(3) Based on projected Matritech pricing.

(4) Based on Matritech estimates.

(5) Additional regulatory approval not likely to be required in Germany, but may be required in the U.S. for Matritech to promote this application.

(6) Based on Matritech estimates, including estimates of the population of male smokers over the age of 40



## MANAGEMENT

<b>Name/Position</b>	<b>Years Industry Experience</b>	<b>Prior Companies</b>
Stephen D. Chubb Chairman and CEO	31	CEO T Cell Sciences, Cytogen; Baxter
David L. Corbet President and COO	28	T Cell Sciences, Baxter, AHSC
Richard A. Sandberg CFO	27	CEO DIANON; CFO Lifecodes
Franz Maier President, Matritech GmbH	21	Pharmacia, ADL
Melodie R. Domurad, Ph.D. VP, Clinical & Regulatory	17	Ergo Science, Beth Israel Deaconess
Gary Fagan, Ph.D. V P Research & Development	17	Ischemia Technologies, PB Diagnostics, Behring Diagnostics
Robert Johnson Director, Business Development	25	Bard Medical Division, C.R. Bard, Inc.
John E. Quigley VP, Sales & Marketing	21	Boehringer Mannheim, Bayer
Patricia Randall VP & General Counsel	5	Hadco Corporation, Robotic Vision Systems

## FOR MORE INFORMATION CONTACT:

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More information about Matritech is also available at [www.matritech.com](http://www.matritech.com).