## Improving the detection and management of

## cancer

BD is improving the clinical management of cancer—and establishing a source of future business growth.

BD expanded its presence in cancer diagnostics through the 2006 acquisition of TriPath Imaging, which gave the Company innovative oncology management tools that span cancer screening, diagnosis, prognosis and therapy monitoring. The TriPath platform provides BD with an effective tool for cervical cancer screening. In the U.S., approximately 90 percent of Pap smears are collected using liquid-based cytology. This approach is preferred because it produces a better picture of cellular-level conditions.

The *BD SurePath* Liquid-Based Pap Test uses collection devices that ensure all gathered cells are sent to the laboratory for analysis, which can mean the difference between finding

"Ovarian cancer is a very challenging disease to manage. Its prevalence is actually low, but its mortality rate is very high. However, if we had a routine test available to detect ovarian cancer in its early stages, it could provide physicians with a valuable tool to identify women afflicted by the disease, while it is still localized and surgically removable."

Andrew Berchuck, M.D.
 Director, Division of Gynecologic Oncology
 Duke University Medical Center

disease and missing it. Once at the lab, the *BD SurePath* sample creates a very clear slide that is easy to screen for abnormal cells. BD is working with physician thought leaders and government officials in other markets to encourage adoption of liquid-based cytology testing methods. In addition, BD currently has clinical trials underway to evaluate a product utilizing molecular markers aimed at improving the reliability of detecting cervical cancer.

Over the longer term, BD is pursuing serum-based screening and monitoring assays for ovarian cancer based upon the detection of proprietary biomarker panels. The Company plans to provide new tests that will help detect and improve the management of ovarian cancer. At present, ovarian cancer is rarely detected early and most often results in death within five years. BD is also researching the use of proprietary molecular biomarkers and reagents to predict a patient's risk of breast cancer recurrence and to help select treatment for patients in the early stages of disease.

Flow cytometry—a field in which BD is a recognized leader—is considered an effective technology for providing information used in the diagnosis and monitoring of "liquid tumors," leukemia and lymphoma. BD offers clinical laboratories distinct performance advantages with instruments such as the BD FACSCanto II System, which increases the number of parameters that can be measured simultaneously to give clinicians confidence in their diagnosis and treatment decisions.

The BD FACSCanto II
System offers flexible
applications that enable
clinical laboratories to
develop assays that aid
in the diagnosis and
monitoring of leukemia
and lymphoma.





An estimated 7.6 million people around the world died of cancer in 2005. Early detection and effective disease management are the keys to reducing cancer mortality rates and improving the quality of life for patients. This is particularly evident in the cases of cervical and ovarian cancers, which claim the lives of thousands of women each year. While most cervical cancers are caused by the human papilloma virus (HPV), a positive HPV test does not necessarily indicate cancer. The conventional Pap smear often does not provide conclusive information. As a result, doctors frequently order unnecessary biopsies. Most ovarian cancers are found only after symptoms appear – too late for effective treatment – because no reliable early screening test currently exists.

The *BD SurePath* Liquid-Based Pap Test, collection method and cell enrichment process offer laboratory professionals and clinicians a significant improvement over conventional Pap technologies. Together, they provide better visualization of clinically relevant cells that may indicate the presence of cervical cancer.



Conventional slide Bloody specimen



**BD SurePath Test** Same sample after cell enrichment