



## spotlight on health

### A New Way To Combat Cancer

(NAPSA)—To help win the battle against cancer, pathologists and molecular biologists have joined forces in their research efforts to improve cancer diagnosis and treatment.

Pathologists have long been able to determine whether cells from tissue biopsies are normal, pre-cancerous, malignant or metastatic. Based on a tissue sample viewed under the microscope, pathologists can observe, identify and document the precise location of normal and abnormal cells.

In parallel studies, molecular biologists have gained significant knowledge about cancer from DNA, RNA and protein analysis from cancerous tumors. These molecular findings, however, often come from whole tissue biopsies, containing a mixed collection of normal and disease cells. This can complicate the results.

Fortunately, a new research field of molecular pathology has evolved, which focuses on the molecular pathologic process, that is, how and why normal cells become abnormal and cancerous.

Traditionally, attempts at isolating single cells for DNA, RNA or protein analysis involved techniques using manual dissection under the microscope with syringe needles. This and similar methods, however, can be difficult to follow and are plagued by the risk of contamination. Isolating single cells or complex tissue regions is very difficult.

In response to the problem, Leica Microsystems has introduced a laser microdissection



**A new device that makes it easier to see and isolate specific cancer cells contributes to the diagnosis of cancer.**

microscope system, the Leica AS LMD (Application System Laser Microdissection) Microscope. This new device for cancer diagnostics has been called a revolutionary tool for the molecular pathologist.

The system represents a completely new approach compared to previous systems. While the new system's imaging results provide more accurate analysis, the laser beam steering and control technology is easy to use. Laser microdissected cancer cells or suspect tissue of any shape and size are simply cut and dropped via gravity directly into tubes for molecular analysis.

Now, the precise, direct and simple isolation of normal, pre-cancerous, malignant and metastatic cells within a whole tissue biopsy is not only possible but routinely performed. Coupled with rapidly advancing technology in the understanding of nucleic acids and proteins, it's a powerful weapon to aid the molecular pathologists in the diagnosis, prognosis and therapeutic treatment of cancer.

You can learn more online at [www.leica-microsystems.com](http://www.leica-microsystems.com).