

## **A FRIEND HAS STAGE THREE CANCER, WHAT DOES THIS MEAN?** ***Understanding Cancer Staging, Pathologist explains rating system***

Each year, more than a million new cases of cancer are reported. The seriousness of these cases ranges from low risk to life threatening. The process of determining which is which is called staging. "Staging provides a universal way for doctors to define the extent and severity of a cancer. Through staging, medical professionals can determine the best course of treatment for a patient," says Dr. George Hollenberg, a leading pathology expert and founder of Acupath Laboratories in New York.

In making a diagnosis, doctors look at the size and location of the tumor (T), whether the cancer has spread into any nearby lymph nodes (N) and whether it has spread to distant areas in the body, a process called metastasis (M). These three factors comprise the TNM classification system, developed by the American Joint Committee on Cancer, and is used by most doctors. Because of their special characteristics, some cancers, like leukemia or brain cancer, are not evaluated using the TNM system.

Within each category is a range of conditions, represented by X, O or numbers, generally from 1 to 4. 'X' is immeasurable, '0' means no disease was found and the numbers indicate tumor size and the extent to which it has spread into lymph nodes or other parts of the body. The higher the T number, the larger the tumor. The higher the N number, the more lymph nodes have been affected. The M assessment uses only the number 1, which means that the cancer has spread to distant organs or tissues.

Once the T, N, and M values have been learned, they are combined into an overall stage, using the Roman numerals I, II, III, or IV. Each cancer type has its own version of this classification system, so letters and numbers don't always mean the same thing for every kind of cancer. Classifications for some cancers can even employ subcategories.

How do doctors get the information they need to determine a cancer's stage? "Pathology is a very important component of cancer staging," notes Dr. Hollenberg. A lot of information can be gathered through physical exams, when a doctor looks, feels and listens for anything unusual. Doctors also use imaging technology, such as CT scans and MRIs to get a picture of the inside of the body. However, Hollenberg says, tissue and fluid samples after undergoing special laboratory techniques can reveal cancer markers, substances which occur if cancer is present. Lab tests on cancer cells can provide specific information about the make-up of the cells, which also helps in determining treatment. Many conditions can be confirmed or ruled out with non-invasive or minimally invasive procedures, he adds.

"Through lab tests, one of the most important pieces of information we can learn is the grade of the tumor," Hollenberg notes. "A pathologist mentally compares normal cells from those obtained from a cancer biopsy. The more abnormal-looking the cancer cells, the more likely it is that the tumor will behave aggressively." Doctors and patients need to know this as soon as possible so they can plan appropriate treatment."

"Be sure to ask your doctor to fully explain your cancer stage. Make sure you understand the three important aspects – tumor (T), whether lymph nodes are affected (N) and whether it has spread to other parts of your body (M)," he concludes.

### ***About Dr. George Hollenberg***

Dr. George Hollenberg, M.D. is an authority in the fields of pathology, clinical pathology and dermatopathology with expertise in the areas of dysplastic nevi, melanoma, prostate and gastrointestinal cancer. Board-certified in Pathology and Dermatopathology, Dr. Hollenberg is a Fellow of the College of American Pathologists, The American Society of Dermatopathology and the AMA. He has published articles on skin, prostate and gastrointestinal cancer, and is the Consultant in Dermatopathology to The North Shore University Hospital Center. As the founding director of Acupath Laboratories, Inc., Dr. Hollenberg supervises the analysis of tens of thousands of biopsies per year, using the latest cutting-edge technology in histology and immunocytochemistry, as well as the latest advances in computerized report preparation.