

# You can't tell a book by its cover, cancer by its appearance

**F**or generations, pathologists have relied on the appearance of cells to determine the presence of cancer.

Under the microscope, cancer cells typically present characteristics like irregular shape, atypical nuclei (the control center of the cell), growth into surrounding areas such as blood vessels, and abnormal relationships between the nucleus and the total volume of the cell, among others.

Reminding that “you can't tell a book by its cover,” Gerald H. Sokol, MD, of New Hope Cancer Centers, notes that such physical attributes offer no insights into the nature of the cancer, how it develops, or what can interrupt or end its life cycle.

“Research is changing that,” reports Dr. Sokol. “Scientists are learning about the molecular machinery that creates a cancer cell, going far beneath the surface appearance of cells to identify and even determine how to treat cancerous growths.”

Studying and identifying these molecular factors, doctors have opened up new dimensions of diagnostic and

prognostic possibilities, discovering effective mechanisms for controlling the growth of abnormal cellular function.

“We now have targeted therapies that we can direct to specific biochemical abnormalities in cells to correct abnormal cellular functions either by repressing harmful signaling or enhancing signals that have been

to prevent its growth by interrupting its signaling mechanisms. Patients with incurable diseases are surviving for decades following targeted treatments,” Dr. Sokol states, “and some patients show no evidence of disease following treatment.

“As in human relationships, looks may not be the most important con-



abnormally repressed,” reports Dr. Sokol.

Drugs such as Avastin, Herceptin, Cetuximab, Cantuzumab, and a multitude of other biochemicals have caused dramatic changes in the course of cancer treatment, response, and patient survival.

“The understanding of molecular biology, cellular cytogenetics, and cellular transduction signaling has been so successful that even when we can't cure cancer we may be able



## New Hope Cancer Centers

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sideration in identifying a cell's nature. Biochemistry may prevail as the most important component of cancer diagnosis and treatment.”

**FHCN**—Billie S. Noakes

## Know your options

*The doctors at New Hope Cancer Centers welcome your interest in radiotherapy and in their practice. New Hope Cancer Centers are located at **7651 Medical Dr. in Hudson, phone (727) 868-9208; 5411 Grand Blvd., Suite 102, in New Port Richey, phone (727) 846-0128; and 11063 County Line Rd. in Spring Hill, phone (352) 683-8178. For more information, or to schedule a consultation appointment, please call the office nearest you.***

*Gerald H. Sokol, MD, is board certified by the American Board of Internal Medicine in internal medicine with a subspecialty certification in oncology and by the American Boards of Radiology and Clinical Pharmacology. His undergraduate work was completed with honors at Indiana University, Indianapolis, and Temple University, Philadelphia, PA. He received his master's degree in pharmacology and his medical degree, graduating in the upper 10% of his class, from Indiana University. Dr. Sokol completed an internship at Temple University and a residency in internal medicine at the U.S. Public Health Services Hospital in affiliation with Johns Hopkins University, Baltimore, MD. He was fellowship trained in radiation medicine/oncology and clinical pharmacology at Massachusetts General Hospital, Harvard Medical School, Cambridge. Dr. Sokol is director of oncology for New Hope Cancer Centers and staff physician at Tampa General Hospital and Moffitt Cancer Center. He is widely published in his field and is frequently invited to speak at medical conferences. His professional affiliations include the American Society of Therapeutic Radiology, National Association of Advancement in Science, Florida Society of Clinical Oncology, Radiation Research Society, and American College of Radiology.*

*Arthur J. Matzkowitz, MD, is board certified by the American Board of Radiology. After completing undergraduate studies, Dr. Matzkowitz earned his medical degree at Albany Medical College, NY, and completed his internship in internal medicine at Brookdale Hospital, Brooklyn, NY. He completed a three-year residency in radiation oncology at Montefiore Hospital and the Hospital of the Albert Einstein College of Medicine, Bronx, NY. Dr. Matzkowitz was fellowship trained in radiation oncology at the State University of New York at Stony Brook Hospital. He has made a number of presentations in his field. His professional memberships include the American Society of Therapeutic Radiology and Oncology, American Society of Clinical Oncology, and American Medical Association.*