

CANCER CONSULTANTS OF AMERICA

BRIDGING THE GAP BETWEEN CANCER AND UNDERSTANDING®

Cancer Answers

Neuroendocrine Tumors

One of the many fascinations of the human body is the sheer complexity of how it works. Many microscopic cells are arranged in a certain way that enables them to perform a particular function that is required for life. The cell is considered to be the most basic unit of life and the human body has trillions of them. Cells of a common type are neatly arranged to form tissues. These tissues are layered in a specific pattern to form organs. Next, these organs are connected in a certain way to function as organ systems. Finally, multiple organ systems working in concert make up the organism. Taken together, the hierarchy from simple to complex is organized in following manner: cells -> tissues -> organ -> organ system -> organism.

Two very important organ systems within the body are the endocrine system and nervous system. The endocrine system includes glands that secrete hormones such as estrogen, testosterone, and insulin. Equally important is the nervous system, which provides a means of almost instantaneous communication from one part of the body to another. In some areas of the body, the nervous system is connected to the glands of the endocrine system. In this fashion, the nervous system sends messages to the glandular cells of the endocrine system to release hormones. Located within the body are a rare type of cells that function in a manner that is similar to neurons and endocrine cells. These cells are aptly named neuroendocrine cells.

Neuroendocrine cells can experience a sequence of events that results in their conversion from a healthy neuroendocrine cell to a cancer cell. Neuroendocrine tumors (NETs) are a cancerous mass of unhealthy neuroendocrine cells. The human body has many different types neuroendocrine cells throughout the body and therefore many different kinds of NETs are known. The most common location for NET development is within the gastrointestinal (GI) tract, specifically the large intestine and small intestine. The second most common occurrence is within the lungs and third is connected to the pancreas. These tumors are more often seen in older adults and rarely seen among children and young adults. The signs and symptoms of NET development vary significantly but each relates to abnormal function of the organ system to where the NET is located. For example, abdominal cramping and diarrhea may be connected to NETs within the GI tract whereas wheezing and coughing may be associated with NET development in the lungs.

Following a NET diagnosis, the cancer tissue will be assigned a grade: Grade 1 – slow growing, Grade 2 – intermediate growth rate, Grade 3 – fast growth rate. It is likely the tumor will also be assigned a type of differentiation: well-differentiated – appears to have more healthy cells than cancerous cells, or poorly-differentiated – more cancerous cells than

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healthy cells. The most common approach for treating NETs is the surgical removal of the tumor followed by chemotherapy or immunotherapy to eliminate any remaining cancerous cells that were not removed by the surgical procedure.

The 5-year survival rates for NETs vary depending on the location of the tumor and whether it has metastasized (spread) from the primary site of tumor development. For gastrointestinal tract NETs, the 5-year survival rate is approximately 95% for tumors that have not spread. The rates for stomach NETs are nearly 100% for the lowest grade tumors but the survival rates decline to nearly 75% and 65% as the tumor grade increases, respectively. Pancreatic NETs that are confined to the primary site have a 5-year survival rate of approximately 95%, regional metastasis 72%, and about 25% for distant metastasis.

While the exact causes of NET development remain unknown at this time, there are steps that can be taken to lower the risk of developing this form of cancer. These steps include adopting a lifestyle that avoids both smoking and heavy alcohol consumption. In contrast, a not so obvious lifestyle practice relates to protecting the skin from sun exposure. Indeed, the skin contains neuroendocrine cells that can develop into Merkle Cell Carcinoma which is an aggressive type of cancer located | | within the skin. Additionally, maintaining a healthy weight and regular exercise are always good lifestyle choices for lowering the risk of developing a variety of cancers, including NETs.

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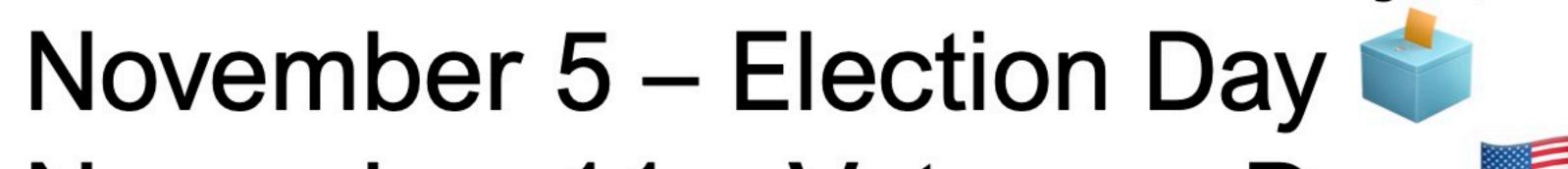
- Individual and Family Cancer Education
- Medical Appointment Liaison Services
- Information Seminars and Public Speaking Events

Fun Facts – November

Cancer Awareness Month:

- Neuroendocrine Cancer (Black & White) 🍇
- Lung Cancer (White)
- Stomach Cancer (Periwinkle)
- Pancreatic Cancer (Purple) 1

November 1 – All Saints' Day







November 21 – World Hello Day 😂



November 28 – Thanksgiving

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