

April 2012

## What's New in Research?

By Dr. Richard Campeau

Our facility currently offers I-131 MIBG intravenous systemic and intra-arterial therapy. I-131 MIBG systemic therapy is given for metastatic NETs. To date, we have treated 47 patients and over 50% have shown a clinical and biochemical response to this therapy. Compared to the traditional intravenous administration, intra-arterial I-131 MIBG treatment can provide up to a 4-fold higher uptake in tumor metastases. However, this treatment modality is reserved for those NET patients with predominant hepatic metastasis. We are one of 13 centers in the U.S. preparing to offer a clinical trial of Lu-177 DOTATATE systemic radiotherapy. Lu-177 is a tumorcidal agent that is avid for at least 85% of metastatic NETs and has been used with high success throughout Europe. We expect to offer this therapy as part of an investigational trial by May, 2012.

## New Technology: The NanoKnife®

By Dr. J. Philip Boudreaux

The NanoKnife, a state-of-the-art surgical ablation system for soft tissue tumors, has recently been acquired by LSU at Ochsner-Kenner. The NanoKnife allows us to ablate unresectable tumors that may be close to vital structures such as bile ducts or other structures, which might not be treatable by radio-frequency or microwave ablation. The NanoKnife pinpoints and destroys tumor without adverse effects on the surrounding tissue. Evaluations to determine if a patient is a candidate are made based on pre-operative scanning and imaging studies with careful attention to the anatomic relationship of the tumor(s) to other surrounding structures.

## From the Lab...

By Dr. Eugene Woltering

Our lab has been investigating if there are differences between a primary NET and their nodal or organ metastasis. We compared the rate of cellular proliferation (Ki-67), degree of tumor differentiation (quantitative chromogranin A and synaptophysin stains) and angiogenic indices (CD31 and Factor VIII stains) between a primary tumor and its metastases. We observed considerable differences in primary tumor, lymph node and organ metastasis in tumor proliferation, differentiation, and angiogenic markers from the same patient.

## Nutrition Corner

### Herbal Supplements: Help or Hype?

By Leigh-Anne Burns

The NIH reported that in 2009, American's spent \$33.9 billion on complementary/alternative medicine. The government accountability office released a study in which they found that commonly used dietary supplements were deceptively marketed.\* Online retailers falsely claimed that herbal supplements could treat, prevent or cure conditions such as cancer. The American Cancer Institute has recommended against the use of supplements as a way to prevent cancer. If you are planning on using supplements, it is important to check with your physician before beginning any regimen because these supplements may interact in a potentially harmful manner with some prescription drugs.

\*GAO-662T, testimony before the Special Committee on Aging, US Senate, May 26, 2010: Herbal Dietary Supplements: Examples of Questionable marketing Practices and Potentially Dangerous Advice.

## Recent Publications from Our Clinic

### [Neurokinin A Levels Predict Survival in Patients with Well Differentiated Small Bowel Neuroendocrine Tumors:](#)

By Dr. Eugene Woltering

Recent European investigations demonstrated that persistently elevated (>50pg/ml) plasma neurokinin A (NKA) levels are associated with poor survival rates in patients with midgut NETs. We hypothesized that US patients with persistently elevated NKA levels will also have poor survival rates. We collected NKA levels from the charts of 183 patients with midgut NETs and grouped the patients according to their NKA values. Patients with NKA levels <50pg/ml (n=145) had a 24 month survival rate of 93%. 13/14 patients that at one point had NKA levels >50pg/ml but are currently <50pg/ml are still alive. Patients with NKA levels currently >50pg/ml (n=24) had a 24 month survival rate of 49%. Thus, patients with NKA levels <50pg/ml have an excellent short term prognosis, while patients with NKA levels >50pg/ml have a poor short term prognosis and require an immediate change in therapy.

### [A Prospective Evaluation of the Effect of Chronic Proton Pump Inhibitor Use on Plasma Biomarker Levels in Humans:](#) By Dr. Daniel Raines

Proton pump inhibitor (PPI)-induced achlorhydria increases circulating gastrin and chromogranin A (CGA). Pancreastatin is a fragment of CGA and all are commonly used to diagnose and follow NETs. We hypothesized chronic PPI use will increase circulating plasma gastrin, CGA, and pancreastatin levels. Thirty patients who used PPIs for six or more months were compared to a control group. Chronic PPI use resulted in significant increases in CGA and gastrin compared to controls. However, Pancreastatin levels in both groups were identical. Since pancreastatin levels did not change with chronic PPI use, pancreastatin levels may be used to distinguish between drug induced changes in biomarkers and tumor-related increases.

### [Cervical and upper mediastinal lymph node metastasis from gastrointestinal and pancreatic neuroendocrine tumors: The true incidence and their management:](#) By Dr. Yi-Zarn Wang

Historically cervical node and upper mediastinal metastasis from GI and pancreatic NETs have been regarded as asymptomatic and ignored. We hypothesized that these lesions have clinical implications and should be removed. 161 OctreoScans® of NET patients were performed at our institution, and reviewed to determine the incidence of these metastases. Fourteen (14/161, 8.7%) patients scanned positive for cervical and upper mediastinal lymph node metastases. Nine patients underwent surgical exploration, 8 had successful removal of their nodes, and 7 had clinical symptoms resolve after surgery. Our study clearly demonstrates that most, if not all, such metastases are symptomatic and can be easily and safely resected.

## Mark your calendars...

NANETS Annual Meeting ▪ San Francisco, CA; October 2012

AAES Annual Meeting ▪ Iowa City, IA; April/May 2012

### LA Carcinoid/NET Patient Support Group Meeting

Sunday, June 24, 2012 3:00 pm ▪ Ochsner Kenner Creole Room, Hospital, 1st floor ▪ 504-464-8500

### National NET Patient Conference

New Orleans, LA ▪ September 20 - 22, 2012

Register online at [carcinoidawareness.org](http://carcinoidawareness.org) or call 866-850-9555 for more information.

Book your room early!! AARP Convention in town at the same time - rooms **will** sell out!



## Interesting Facts

- ❖ Why the Zebra? In medical school, they are taught with common symptoms, think common diseases. If you hear hoof beats, think horses, not zebras. NET's are rare; they are the zebras.
- ❖ We have seen over **1,500** patients with NET primaries of the: appendix, cecum, colon, duodenum, ileum, jejunum, kidney, lung, ovary, pancreas, rectum, small intestine, stomach, and thymus.
- ❖ 200 of our patients have been living with a NET for 10 or more years, and 30 of our patients have been living for 20 or more years!

# Our Physician Team: A Multi-Disciplinary Approach



**J. Philip Boudreaux, MD, FACS**  
*Professor of Surgery at  
LSUHSC School of Medicine;  
Director of Liver/Pancreas  
Transplant Services*

Dr. Boudreaux's surgical interests include surgical treatment of neuroendocrine tumors, hepatobiliary and pancreatic surgery, radio frequency ablation of liver tumors, liver, pancreas and kidney transplantation, and organ donation.



**Richard Campeau, MD, FACNM**  
*Clinical Professor of Radiology  
and Internal Medicine at  
LSUHSC and Tulane University*

Dr. Campeau's clinical interests include diagnosis and staging of neuroendocrine tumors, nuclear medicine therapies, nuclear medicine imagining exams: 1-123 MIBG, In-111 octreoscans, PET/CT, thyroid scanning, hepatic imaging and others.



**John Cole, MD**  
*Acting Chief,  
Hematology/Oncology;  
Clinical Professor of  
Medicine at LSUHSC*

Dr. Cole has been on staff at Ochsner since 1989. He serves as Chairman of Community Oncology Practices. His clinical interests include breast cancer, lung cancer, general hematology and oncology and clinical trials.



**Ryan Majoria, MD**  
*Interventional Radiologist,  
Proctor for Y-90 SirSpheres  
Radioembolization*

Dr. Majoria specializes in Y-90 procedures, extending survival rates for patients with inoperable liver cancer. He has completed hundreds of treatments with SIR-Spheres® microspheres containing yttrium-90, a beta-radiating isotope.

## Featured Physician:



**Daniel Raines, MD**  
*Assistant Professor at LSUHS  
School of Medicine; Acting  
Section Chief for LSU  
Gastroenterology*

Dr. Raines specializes in evaluation and treatment of digestive disease, including both gastroenterology and hepatology. His current focus of research is in the field of small bowel disease.

He is one of the few gastroenterologists in the country that performs balloon enteroscopy to evaluate the entire small intestine.



**Yi-Zarn Wang, MD, DDS, FACS**  
*Professor of Surgery at  
LSUHSC School of Medicine*

Dr. Wang's clinical interests include neuroendocrine tumors and all types of cancer, including cancer of the liver, pancreas, esophagus, stomach, intestine, colon/rectum, soft tissue, retroperitoneal and melanoma.



**Eugene Woltering, MD, FACS**  
*James D. Rives Professor of  
Surgery and Neuroscience;  
Section Chief of Surgical  
Endocrinology at LSUHSC  
School of Medicine*

Dr. Woltering specializes in the diagnosis and management of all types of neuroendocrine tumors. His laboratory has produced over 150 peer reviewed publications and has 16 patents, most of which apply directly to neuroendocrine tumors.



**Virendra Joshi, MD**

Dr. Joshi recently joined Ochsner Kenner. He earned his medical degree from the University College of Medical Sciences and Affiliated Hospitals in New Delhi, India. He completed an Internal Medicine internship with Johns Hopkins University School of Medicine.

This was followed by an Internal Medicine Residency at the University of Illinois at Chicago and a Fellowship in the Department of Gastroenterology, Hepatology and Nutrition at the Medical College of Georgia. He is Board Certified in Gastroenterology & Hepatology and Internal Medicine. Dr. Joshi specializes in advanced interventional endoscopy.