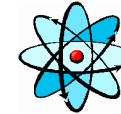


Radiopharmacy, Inc.

MONTHLY SCAN

Volume 14, IX

September, 2009



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Free Continuing Education. See info on page 4.



Radiopharmacy, Inc.
www.radiopharmacy.com

Evansville, IN 812 421-1002 Paducah, KY 270 442-9527

"Personalized Service"

FDA Approves Expanded Use of Zevalin®

Spectrum Pharmaceuticals, a commercial-stage biotechnology company with a focus in oncology, just recently announced ZEVALIN® received approval from the U.



S. Food and Drug Administration for an expanded label for the treatment of patients with previously untreated follicular Non-Hodgkin's lymphoma who achieve a partial or complete response to first-line chemotherapy. This new and expanded indication supplements the 2002 FDA approval of ZEVALIN® as treatment for patients with relapsed or refractory, low-grade or follicular B-cell non-

Hodgkin's lymphoma.

The approval of the new indication was based on data from the FIT Study with CD20-positive follicular NHL who had achieved a partial response or a

complete response after receiving a first-line chemotherapy regimen. Patients were treated with first-line chemotherapy regimens. At 3.5 years of

"We believe the approval of ZEVALIN as an effective treatment option following a first-line regimen represents a notable advance in the treatment of non-Hodgkin's Lymphoma, and significantly expands the addressable population for ZEVALIN," said Rajesh C. Shrotriya, MD, Chairman, Chief Executive Officer, and President of Spectrum Pharmaceuticals.

follow-up, the FIT trial demonstrated that when used as part of first-line chemotherapy for patients with follicular NHL,

ZEVALIN® significantly improved the median progression-free survival time from 18 months (control arm) to 38 months.

CE Meeting: Blood Pool Imaging: Multiple Gated Acquisitions (MUGA) & GI Bleeding Scans

Date: October 28, 2009
Refreshments at 5:30 p.m.
Presentation at 6:00 p.m.

Radiopharmacy, Inc.
1409 East Virginia
Evansville, IN 47711

Please RSVP by October 27, 2009 by calling Radiopharmacy, Inc. at (812) 421-1002. You may also fax your reservation at (812) 421-1004.

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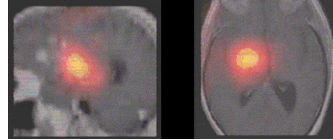
Approved for 1 hour technologist CE credit



Cotara® Performs Well

Peregrine Pharmaceuticals, Inc. recently reported interim Phase II data showing that its brain cancer agent Cotara® appeared well tolerated and demonstrated encouraging signs of efficacy in patients with glioblastoma multiforme (GBM), the deadliest form of brain cancer. The data from an ongoing Phase II study of Cotara® in patients with recurrent GBM was recently presented at the XIV World Congress of Neurological Surgery Annual Meeting.

Cotara®, is an antibody conjugated to Iodine 131. The radioisotope kills adjacent cancer cells and has an additional advantage over other therapeutics, since it can be tracked by scanning devices to be sure it is entering the tumor and not



dispersing in healthy tissues.

The report includes Interim data for 10 recurrent GBM patients at first

relapse. Eight males and two females with a mean age of 51 years received a single intratumoral infusion of Cotara®. At the time of this interim report, patients had been followed from between seven to 73 weeks. Interim median recurrence-free survival was 33 weeks and interim median overall survival was 41 weeks. Expected survival for patients with GBM is approximately 24 weeks from time of disease recurrence.

Based on this interim data, the study authors concluded that Cotara® therapy appears to be well-tolerated and effective for treating patients with recurrent GBM.

Patient Comfort Systems

Patient Comfort Systems has rolled out new positioner pads compatible with various modalities, including PET and nuclear medicine. The pads are meant to make patients more comfortable when undergoing procedures, as well as prevent the spread of infections from drug-resistant bacteria such as methicillin-resistant Staphylococcus aureus.



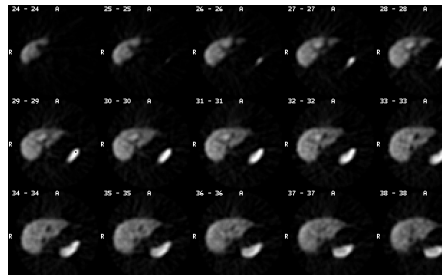
Case Study: Diagnosis: Focal Nodular Hyperplasia

Full history: 54-year old woman with a left hepatic lobe mass seen on computed tomography. Liver-spleen scintigraphy was requested to differentiate between focal nodular hyperplasia and another hepatic lesion, such as hepatic adenoma or hepatocellular carcinoma.

Radiopharmaceutical: 5.2 mCi Tc-99m sulfur colloid i.v.

Findings: SPECT images of the liver were obtained and correlated with a recent outside CT study. There is focally increased uptake involving the majority of the medial segment of the left hepatic lobe. This region of increased uptake corresponds to the abnormality identified on the CT study.

Discussion: Liver uptake of Tc-99m sulfur colloid is dependent on (1) hepatic perfusion and, (2) the distribution of functioning Kupffer



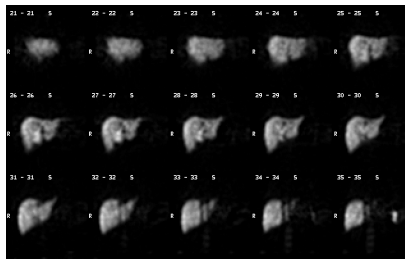
cells (normally uniform throughout the liver). Most focal hepatic lesions (benign or malignant) destroy or displace surrounding hepatic parenchyma resulting in a focal area of decreased Kupffer cell density. If the lesion is large enough to be detected (2 to 3 cm diameter for planar imaging or 1.5 to 2 cm for SPECT), a "cold" or "photon-deficient" region will be visualized on sulfur colloid (SC) images. Metastases, hepatocellular carcinoma, cavernous hemangioma, and hepatic adenoma are all examples of lesions which are typically

cold on SC imaging.

A focal region of increased hepatic SC uptake (i.e., a "hot" lesion) is a much less common finding and one with a short differential diagnosis. Examples of entities with increased uptake on liver-spleen scintigraphy include focal nodular hyperplasia (FNH), superior vena cava syndrome (SVCS), and Budd-Chiari syndrome (BCS). The increased uptake in each of these cases occurs where there is a focal region of relatively increased blood flow and/or density of Kupffer cells. In both SVCS and BCS, the increased uptake is flow related -- greater left portal venous flow from collateral drainage results in greater SC delivery to the quadrate lobe in SVCS, and relative sparing of the caudate (because of its direct venous drainage into the IVC) leads to proportionally greater tracer delivery to the caudate lobe in BCS.

FNH is a benign tumor, more com-

mon in females, which typically presents as an incidental finding on abdominal imaging studies. It is associated with normal or increased SC uptake in two-thirds of cases. Unlike SVCS or BCS, increased uptake in FNH is due to both its vascular nature and increased density of functioning Kupffer cells. The problem of differentiating FNH from the other causes of focally increased uptake does not frequently arise on liver-spleen scintigraphy -- the non-FNH entities are usually identified via other imaging modalities prior to any request for SC imaging. However, SC studies are sometimes performed in cases where the question of FNH verses hepatic



adenoma cannot be resolved via conventional imaging. Like FNH, hepatic adenomas are benign entities which occur more commonly in women. However, unlike FNH, they are frequently resected because of their tendency to hemorrhage. The majority of hepatic adenomas appear as cold lesions on SC imaging because they lack Kupffer cells. This allows them

to be easily distinguished from most cases of FNH. Two instances, however, where the results of SC imaging may be misleading include the unusual case where there is SC accumulation by an adenoma and in cases where SC uptake by FNH is less than the surrounding liver. Although these two scenarios pose a source of potential confusion, the results of SC imaging are usually helpful in differentiating FNH from hepatic adenoma. The bottom line is that a liver mass which accumulates SC is much more likely to be FNH than an adenoma -- the greater the uptake, the more likely it is FNH.

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SIGNIFICANT NRC ENFORCEMENT ACTIONS & EVENTS

Memorial Hospital of Sweetwater County

On May 14, 2009, the NRC issued a Notice of Violation to Memorial Hospital of Sweetwater County for a Severity Level III violation involving the failure to implement 10 CFR 20.1801. Specifically, on February 12, 2009, the licensee stored radioactive materials in a hospital hot lab, a designated controlled area, and did not secure the materials therein from unauthorized removal or access by failing to lock the hot lab door.

U.S. NRC LICENSEE NEWSLETTER SUMMER 2009

Event #2: Medical Event Involving Unintended Dose

Date and Place: October 15, 2008 Huntington, West Virginia

The licensee reported that a patient received an unintended dose



of 1,786 cGy (rad) to the esophagus. The patient was being treated for a thyroid condition

with a capsule containing 5.55 GBq (150 mCi) of I-131. The patient attempted to swallow the capsule on 10/15/2008, but it became lodged in the patient's throat due to an esophageal obstruction. The licensee's staff attempted to aid the patient in swallowing the capsule by having them drink soda and eat applesauce. The capsule eventually passed the obstruction after approximately 2.5 hours. The event was discussed with the patient during a follow-up visit with the physician on 10/22/2008. Potential adverse effects include esophagitis and radiation fibrosis. The NRC retained a medical consultant to review this event.

U.S. NRC LICENSEE NEWSLETTER WINTER 2008

Event #3: Medical Event In-

volving Wrong Patient Treatment

Date and Place: July 17, 2008, Allentown, Pennsylvania

The licensee reported that a patient prescribed to receive 0.74 GBq (20 mCi) of I-131 was administered 2.78 GBq (75 mCi) of I-131 on July 17, 2008. Two patients were scheduled for different I-131 therapy doses and the doses got switched. The patient was given a blocking agent of 130 milligrams of SSKI approximately one hour after the I-131 administration. The next day, measurements indicated a 74 MBq (2 mCi) uptake to the patient's thyroid and a 370 MBq (10 mCi) whole body retention. Both patients and their physicians were notified. Corrective actions included procedure modifications.

U.S. NRC LICENSEE NEWSLETTER FALL 2008

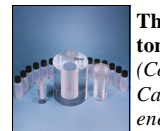
FOR SALE

Slightly used, heavily discounted



Lead Bricks.....\$60.00 each

Rectangular Lead Brick; 8" l x 4" w x 2" h (20 x 10 x 5 cm), 27 lb (12.5 kg)/each



Thyroid Uptake Neck Phantom....\$295.00

(Complete with Bottle Carrier, Capsule Holder and 12 Polyethylene bottles)



Lead Apron.....\$100.00

.....a protective shield of lead and rubber that may be worn by a patient, radiologic technologist or radiologist.

Technologist Job Line

If you are interested in the following position please feel free to contact the department directly, or give us a call at the pharmacy.

Technologists looking for full-time or part-time position.

Karen Foncannon: 731-661-9287 Wk: 731-541-7866

Contact info: Karen.foncannon@hotmail.com

Cameron Turpin: 618-262-6439

Contact info: camturp16@hotmail.com

Radiopharmacy Services

Survey Meter Calibration:

Radiopharmacy's price for survey meter calibration is **\$50.00/meter**. Shipping and handling from and back to your location is \$20.00. Shipping will be by FedEx ground unless otherwise specified. We will pick up the instrument, send it to certified vendor, and after calibration return it directly to you. If required, Radiopharmacy has rental survey meters while your unit is being calibrated.



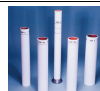
Co-57 Flood Sources and Dose Calibrator Reference Sources

Don't forget; Radiopharmacy, Inc. sells all types of radioactive sources for all types of cameras and equipment. We supply sources from a variety of major vendors in our efforts to pass along the best products at the lowest cost. Just give us a call for a price quote or for information about anything your department may need.



Linearity Check

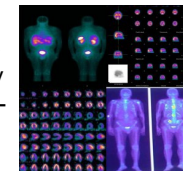
Radiopharmacy, Inc. has a Lineator for performing dose calibrator linearity. The Lineator allows linearity to be performed in minutes rather than days. Call Radiopharmacy for more information.



Free Continuing Education

There are currently

26 NucMed credits available on the Covidien www.nucmeded.org web site. All classes are free of charge. See below some of the offerings.



Anatomy and Physiology Review for Nuclear Medicine Technology - 2009 Update

Correct Coding for Diagnostic Nuclear Medicine Procedures, Part 1

Myocardial Perfusion Imaging - 2009 Update

Stress Testing in Cardiac Nuclear Medicine Technology - 2009 Update

Enrollment Instructions:

- Go to www.nucmeded.org
- Click on the self-enroll button
- Fill out the information and click on submit
- A link will pop up taking you back to main page
- Login into site.

Call Radiopharmacy with any questions.



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