NECHPS Newsletter August 2012

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NRC License of Nuclear Plant Challenged by Massachusetts - Massachusetts, in an appeal of a Nuclear Regulatory Commission decision to relicense Entergy Corp. (ETR)'s Pilgrim nuclear power station, asked to have the extension for the facility 40 miles south of Boston canceled pending further review. The state seeks to require the commission to take steps to ensure the safety of the plant and the residents of the surrounding communities, Massachusetts Attorney General Martha Coakley said in a statement. "The NRC, over our objections, chose to relicense Pilgrim without fully considering the important safety issues raised in the aftermath of the Fukushima accident," she said, referring to the nuclear disaster last year in Japan. Separately yesterday, 22 groups and two individuals said they petitioned the NRC to suspend final licensing decisions for almost three dozen nuclear reactors, after an appeals court ruled that the agency failed to fully evaluate risks associated with its regulations on the storage of spent nuclear fuel and must draft new ones. The NRC shouldn't complete its licensing decisions until satisfying its environmental review obligations, they said in a statement.

New Therapies Show Some Promise Against Pancreatic Cancer - Giving four weeks of a targeted drug before starting chemotherapy improved response rates in a small group of patients with advanced pancreatic cancer, University of Michigan researchers report. The results are "very, very preliminary," said the chairman of hematology/oncology at Ochsner Health System in Baton Rouge, La., but may show "a modicum of progress at least in understanding the biology of the disease. Pancreatic cancer is an incredibly difficult cancer to treat." The findings were presented at the American Association for Cancer Research's conference on pancreatic cancer. The drug, GDC-0449, targets the Sonic Hedgehog signaling pathway, which is switched on when cancer is present. Activation of the pathway seems to contribute to the scarring characteristics of pancreatic cancer, which makes it harder for chemotherapy drugs to penetrate and do their job. The researchers hypothesized that giving GDC-0449 before chemotherapy might improve the efficacy of chemotherapy and their early findings indicate that may be the case.

"Sandwiched" Sequencing of Chemotherapy and Radiation Resulted in More Than 80% Survival Rates in Early Stage Patients - "Sandwich" therapy that uses chemotherapy and radiation treatment in sequence has been found to be extremely effective in treating aggressive forms of uterine cancer, according to two concurrent Montefiore Medical Center studies. These studies support that the combination therapy delivered in a "sandwich" fashion is well tolerated and leads to better outcomes in the adjuvant treatment of both completely surgically resected uterine carcinosarcoma (CS) and uterine papillary serous carcinoma (UPSC). Entitled "Phase II trial of adjuvant pelvic radiation 'sandwiched' in combination paclitaxel and carboplatin in women with uterine papillary serious carcinoma" and "Phase II trial of adjuvant pelvic radiation 'sandwiched' between ifosfamide or ifosfamide plus cisplatin in women with uterine carcinosarcoma," the studies were recently published in the journal, Gynecologic Oncology. "This research has transformed the way we treat these aggressive forms of uterine cancer," said Mark H. Einstein, MD, MS, Director of Clinical Research, Division of Gynecologic Oncology, Department of Obstetrics & Gynecology and Women's Health at Montefiore Medical Center and Associate Professor of Obstetrics & Gynecology and Women's Health and of Epidemiology & Population Health, Albert Einstein College of Medicine of Yeshiva University. "We are optimistic that this breakthrough treatment has the potential to save thousands of lives.

Radiation link to childhood leukemia discovered - A recent study carried out by the Childhood Cancer Research Group (CCRG) at Oxford University has shown that even low amounts of gamma radiation in the natural environment can increase the risk of childhood leukemia. The findings contradict the previously accepted idea that low amounts of natural gamma radiation produce no increased risk, adding to research on small cancer risks and other low doses of radiation, including medical X-rays and CT scans. The study is the largest that has ever been conducted on the links between childhood cancer and background radiation and was based on tens of thousands of records from a UK cancer registry. Dr Gerald Kendall, one of the leaders of the project, said, "What is new in our findings is the direct demonstration that there are radiation effects at these very low doses and dose rates. Natural gamma-rays account for about half the dose reaching children's bone marrow from all sources. So they account for approaching 40 childhood leukemias a year."

GAO: Isotope program needs help - The Government Accountability Office released a report that said the Dept. of Energy's isotopes program needs better planning, both in terms of pricing and in terms of managing the production risks. Oak Ridge National Laboratory, of course, is a major part of DOE's radioisotopes program, using the High Flux Isotope Reactor and other processing facilities to supply the otherwise-unavailable materials that are critical to the nation's needs. DOE's Isotope Business Office is located at ORNL and, as noted in the GAO report, "The Isotope Program produces most of its radioisotopes at three DOE production sites: the linear particle accelerators at Brookhaven National Laboratory in New York and Los Alamos National Laboratory in New Mexico, and the nuclear reactor at Oak Ridge National Laboratory in Tennessee." A smaller number of isotopes are produced in Idaho and Washington state, the report states. GAO said the Isotope Program could be shortchanging itself by the ways it sets prices for the commercial industry, not actually understanding whether it is achieving full cost recovery or not with its practices.

Massachusetts Congressman wants to know more about Palisades shutdown - A Massachusetts Congressman has sent a letter to the Nuclear Regulatory Commission, raising concerns about the Palisades Nuclear Power Plant near South Haven. Mlive/Kalamazoo Gazette reports that Democrat Edward Markey's letter requests more information about the leak in a cooling tank that caused the Palisades Plant to shut down June 12th. The plant was downgraded by the NRC earlier this year because of safety issues identified in 2011.

Pediatric Hodgkin lymphoma can be treated without radiation and intensive chemotherapy - A multicenter trial showed that nearly half of young patients with early-stage Hodgkin lymphoma can be cured without undergoing either irradiation or intensive chemotherapy that would leave them at risk for second cancers, infertility, heart and other problems later. St. Jude Children's Research Hospital investigators led this multi-institution study, which focused on pediatric Hodgkin lymphoma patients without widespread disease or symptoms such as weight loss, fever and night sweats. The findings will likely spur efforts to identify patients with even

more advanced disease whose cancer could be effectively treated with less irradiation. "This study adds to evidence that it is possible to omit radiation even in patients treated with a less intense chemotherapy regimen and still achieve excellent long-term survival," said Monika Metzger, M.D., an associate member of the St. Jude Department of Oncology. She is the first and corresponding author of the research, which is published in the June 27 edition of the Journal of the American Medical Association. "These results will help push efforts to further adapt therapies based on a patient's disease risk factors and early response to treatment with the goal of eliminating radiation for as many patients as possible," she said. Metzger said the findings point to the possibility that elderly Hodgkin patients with similarly limited disease and who are less able to tolerate intensive chemotherapy may also be candidates for the minimal treatment approach used in this study.

Weirdly wonderful: ORNL reactor's role sometimes veers from the norm - The High Flux Isotope Reactor has been a research workhorse since the 1960s, reliably producing radioisotopes for medicine and industry and generating a bountiful stream of neutrons for science experiments that explore the very essence of materials. But the Oak Ridge reactor also has a wild and crazy side and occasionally gets called upon for unusual tasks, such as determining whether POTUS No. 12 was poisoned or helping the Mars candy folks get the desired crunch out of their new Pretzel M&M's. Over the past two years, some rare archaeological artifacts — some of them excavated at the ancient city of Petra (in current-day Jordan) — were brought to Oak Ridge National Laboratory for 3-D neutron images that in some cases answered scholars' questions about an object's identity or shed new light on how they were made. "It was very exciting," Hassina Bilheux, ORNL's lead scientist for neutron imaging, said Wednesday. "You don't usually get to touch these things. These are museum collections that are behind glass. This is pretty amazing."

JOIN US!!!!!!!!!

THE NEW ENGLAND CHAPTER OF THE HEALTH PHYSICS SOCIETY

AND THE

CONNECTICUT CHAPTER OF THE HEALTH PHYSICS SOCIETY

Dinner Meeting with HPS President Elect Darrell Fisher

Wednesday September 26, 2012

PUBLICK HOUSE HISTORIC INN AND COUNTRY MOTOR LODGE

ON THE COMMON, ROUTE 131 STURBRIDGE, MA

Itinerary

- **5:00pm - Cocktail Hour**
  - Cash bar and hors d'oeuvres
- **6:00pm - Buffet Dinner**
  - Salad
  - Roast Native Turkey w/ cornbread sausage stuffing, cranberry sauce, and pan gravy
  - Pan Seared Salmon with Raspberry Thyme Beurre Blanc
  - Wide assortment of side dishes
  - Dessert: Indian pudding or deep dish apple pie w/ whipped cream
- **7:00pm - Presentation**
  - Relevancy of the Health Physics Society in the year 2012 and going forward
  - Priorities and federal legislative agenda
  - Revenue sources and expenses
  - Ways we can improve and grow
  - Opportunities for participation and service

NECHPS/CCHPS Members: $40
Non-Members: $50
Students: $10

Please register no later than Friday, September 21st , 2012
To register, email nbrashidifard@radsafety.com
or mail this section or to:
Nasser Rashidifard
Radiation Safety & Control Services Inc.
91 Portsmouth Ave
Stratham NH 03885

Name: ____

Organization: ____

Email address (for confirmation): ____________________________________

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