

DHMC is only center in New England to do new liver cancer therapy

Diamonds may be a girl's best friend, but glass beads are proving to be some liver cancer patients' best ally. Millions of tiny beads, called microspheres, are part of a new treatment at DHMC for patients with unresectable, or inoperable, hepatocellular carcinoma (HCC). This form of cancer is characterized by tumors that cannot be surgically removed and that originate and stay in the liver. Patients with HCC typically have a life expectancy after diagnosis ranging from 4 to 18 months.

Dartmouth's Norris Cotton Cancer Center is the only place in New England that offers the treatment, known as Therasphere. Bassem Zaki, M.D., a radiation oncologist, says that DHMC started doing the procedure in late 2004 and has treated eight patients so far.

Beads: The glass beads used in Therasphere are embedded with the radioactive isotope yttrium-90 (Y-90). The microspheres, in a saline solution, are inserted through a catheter into the femoral artery in the patient's thigh. From there, they travel into the hepatic artery and on into the liver. They then become trapped inside the tumor because the spheres are slightly larger than the surrounding microvessels. The Y-90 targets the tumor quickly and precisely. It affects only tissues within a range of less than a centimeter but delivers a dose five times higher than ex-

This *Grey's Anatomy* isn't gross—but it's a textbook case of a hit show

All of us at some time or other will go through the walls of a hospital," observes Shonda Rhimes, a 1991 Dartmouth College graduate and the producer of the hit TV series *Grey's Anatomy*. It's that familiarity, Rhimes thinks, that makes the hospital/doctor show such a perennial favorite on television. "There's something both distant and familiar about hospitals and doctors," she says. Her own interest in medicine springs from being, she says, "a sickly kid" who spent a lot of time in hospitals.

But being a doctor herself was a short-lived idea. "I planned to study medicine for about five seconds before I realized that I'm scientifically challenged," Rhimes says. The show is not, she emphasizes, a medical show *per se* but a relationship show set in a hospital—though Rhimes did do extensive research before writing the show's first episodes. She now calls on Dr. Karen Pike, a fellow Dartmouth alumna, to read all the scripts, and she has a coterie of other medical experts on call, including some at the Centers for Disease Control and Prevention and the National Institutes of Health.

Grey's Anatomy—named for its principal character, surgical intern Meredith Grey, by way of allusion to the famous anatomical reference book—includes enough grisly detail to be an accurate depiction of medical life and enough relationship drama to keep it romantically interesting. Its first-year surgical residents have already, in their first few months of training, confronted the death of a woman with a 60-pound

tumor, the need to extract a set of keys from a man who swallowed them when his wife threatened to leave him, and the awkward season-opener: Meredith's discovery that a man she had a one-night stand with was with the surgeon who will be her boss for the next four years.

Asked if she knows what will happen in future seasons, Rhimes says she knows exactly what's coming up, "but if I told you, I'd have to kill you," she laughs. Under the guidance of a woman with a sharp sense of reality, a gift for dark comedy, and a keen interest in the kind of medical drama for which the public seems to have an insatiable interest, *Grey's Anatomy* seems poised to become even better-known than its eponymous textbook. MEGAN McANDREW



ABC-TV / FRANK OCKENHELS

Dartmouth grad Shonda Rhimes is producer of the show.

ternal beam radiation. The Y-90 decays over 2.7 days into non-radioactive zirconium, and the tiny bits of by-then inert glass stay in the liver, causing no problems.

Patients who have had Therasphere have suffered minimal side effects, and their tumors have decreased substantially in size. Zaki says it is a very good alternative to the traditional treatment, transarterial chemoembolization (TACE). TACE combines anti-cancer drug therapy to shrink the tumor with emboliz-

ing, or blocking, the hepatic artery that feeds the tumor. However, TACE requires a hospital stay of two to five days and can cause more damage to surrounding tissue than Therasphere. In addition, most patients suffer post-embolization syndrome—a reaction to blood being cut off to a solid organ—as well as nausea, abdominal pain, and low-grade fever.

Organ: Furthermore, TACE is not an option for some patients if their liver is relying solely on the

hepatic artery for its blood supply, because the organ's other blood supply, the portal vein to the liver, has become clotted due to the disease. TACE would require blocking such patients' only functioning blood supply, which would damage the liver. Therasphere avoids that problem because it doesn't involve blocking the artery.

Therasphere is done on an outpatient basis, and the procedure takes just one hour, with a three- to four-hour recovery



TOP DOC: Dr. John Wennberg, director of DMS's Center for the Evaluative Clinical Sciences, was selected by *Modern Healthcare* magazine as one of the U.S.'s "50 Most Powerful Physician Executives." He ranked 14th.

time. Side effects are usually limited to a couple of weeks of generalized fatigue, mild nausea, and a temporary elevation of the liver enzymes. "That's about it," says Andrew Forauer, M.D., an interventional radiologist who assists with the treatments. The only complications, he explains, arise if some of the spheres migrate into the stomach or the small bowel, where they can cause ulcers. Such complications are not common, though, adds Forauer.

Side effects: "It looks like the Therasphere has a lot less side effects than the chemoembolization . . . and that's partly because it localizes mainly where the tumor is," says Zaki.

"The reason that we're able to [offer this treatment] is simply because of the culture here," explains David Gladstone, Sc.D., a physicist who sets up the delivery device and does the radioactivity measurements. At DHMC, he says, "disparate groups can easily interact with one another and they have a highly collaborative approach in order to deliver first-rate care to the patient."

The team has not yet fully analyzed its results with the new treatment. However, a study published in the *Journal of Vascular Interventional Radiology*, about the use of Therasphere at other centers in the U.S. and Canada, showed that a low-risk group of 88 patients had a median survival rate of 466 days—at the high end of the usual survival range; minimal side effects; and no confirmed cases of radiation-induced liver disease.

MATTHEW C. WIENCKE

Worthy of note: Honors, awards, appointments, etc.

Michael Simons, M.D., a professor of medicine and chief of the Section of Cardiology, recently assumed the presidency of the North American Vascular Biology Organization.

Kathryn Zug, M.D., an associate professor of medicine, was elected president of the American Contact Dermatitis Society.

William Wickner, M.D., a professor of biochemistry, was elected to the biological sciences membership committee of the National Academy of Sciences.

Harold Swartz, M.D., Ph.D., a professor of radiology, received the International Zavoisky Award, for outstanding applications or developments in electron paramagnetic resonance. In addition, he was recently elected a fellow of the International Electron Paramagnetic Resonance Society.

Claudia Zayfert, Ph.D., an associate professor of psychiatry, was appointed to the editorial board of the journal *Cognitive and Behavioral Practice*.

Adam Schwarz, M.D., an assistant professor of medicine, received the Leonard Tow Humanism in Medicine Award of the Arnold P. Gold Foundation.

Patricia Glowa, M.D., an assistant professor of community and family medicine, was named New Hampshire Family Physician of

the Year by the American Academy of Family Physicians.

Barry Smith, M.D., a professor emeritus of obstetrics and gynecology, received an Outstanding District Service Award from the American College of Obstetricians and Gynecologists. He has served the New Hampshire chapter as treasurer, secretary, vice chair, and chair. (See page 22 for more on Smith.)

Lawrence Kaplan, M.D. (pictured), an associate professor of pediatrics, just took office as president of the New Hampshire Pediatric Society. The Society also recently handed



out its annual awards—and every single one of the six individuals honored this year has a DMS tie. **Eugene Lariviere**, M.D., an adjunct assistant professor of pediatrics and a 1963 DMS alumnus, was named Pediatrician of the Year; **Gina Balkus**, DHMC's director of government relations, was named Public Citizen of the Year; and **Sam Dugan**, M.D., an adjunct assistant professor of pediatrics, received the Franklin Norwood Rogers Award, as the retired pediatrician of the year. And three New Hampshire pediatricians received a Special Achievement Award from the American Academy of Pediatrics (AAP): **George Little**, M.D., a professor of pediatrics, for his long-standing commitment to regional pediatric and perinatal care; **Gregory Prazar**, M.D., an adjunct assistant professor of pediatrics, for promoting New Hampshire's

participation in the AAP's collaborative, practice-based research program; and **Ardis Olson**, M.D., an associate professor of pediatrics, for her leadership in behalf of children with special medical needs. (See page 7 for more on Olson.)

Seddon Savage, M.D., an adjunct associate professor of anesthesiology, was appointed to the education board of the Chronic Pain Network.

Katherine Baicker, Ph.D., an adjunct assistant professor of community and family medicine and a specialist in health economics, has joined the White House Council of Economic Advisors.

James Varnum, M.H.A., president of Mary Hitchcock Memorial Hospital and a professor of administration at DMS, was the first faculty recipient of the C. Everett Koop Award for Courage—an award that will be presented annually to recognize a member of the DMS faculty who exhibits courage, vision, and leadership. Regional outreach and collaboration have been hallmarks of Varnum's 27-year tenure as president of

MHMH. (See the Summer 2005 issue for an announcement of his retirement, as of April 2006.)

Naj Wikoff, director of the Healing and the Arts Project at Dartmouth's Koop Institute, received a Fulbright Scholar grant. He will teach arts administration for a semester at the East Siberian Academy of Culture in the Re-



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