

## Cryoballoon Therapy Puts the Freeze on Esophageal Cancer



Almost 10 years ago, Johns Hopkins physicians and researchers were among the pioneers of a therapy that uses freezing gas to zap the cell clusters that can lead to cancer of the esophagus. Today, they are taking this therapy one step further.

Improving on the endoscopic technique that uses gases as cold as 320 degrees below zero to freeze precancerous cells and make way for new, healthy tissue, Johns Hopkins doctors are helping develop new cold balloons to better target problem spots with cryogen.

First-generation cryotherapy, while effective, freezes everything in the endoscope's path. The newer balloon-assisted technique spares healthy tissue and allows endoscopists to take more direct aim at patches of irregular cells.

The small, clear, coldproof balloon emerges from the endoscope and inflates inside a sedated patient's esophagus, bringing the surface into clear view and making contact with the esophageal lining. Through the scope and the balloon, a physician fires several blasts of frozen gas directly at the abnormal areas, flash-freezing the surface of the esophageal lining and destroying the precancerous cells.

Before cryotherapy, a precancerous condition known as Barrett's esophagus meant a painful endoscopic procedure using heat energy to burn the top layer of esophageal tissue.

But Johns Hopkins gastroenterologist Mimi Canto says this treatment, called radio frequency ablation therapy, has its downsides. Pain, bleeding, scarring and difficulty swallowing are all side effects of burned esophageal tissue.

According to Canto, side effects from cryotherapy heal in as little as a week. The treatment reduces side effects, shows greater clinical success and is less expensive.

Canto and colleagues authored an article to be published in the journal *Endoscopy* reporting outstanding results using cryotherapy in patients with Barrett's esophagus.

Three years after cryotherapy, none of the 20 patients studied suffered a recurrence of Barrett's.

Canto also studied 44 patients who had cryotherapy following unsuccessful radio frequency ablation therapy. After one year, 91 percent of those patients had no recurrence; at three years, 84 percent remained free of Barrett's esophagus.



ANDRÉ DA LOBA, MARLENA AGENCY

## Innovation Fellowship Teams Clinicians with Techies



Got an idea to revolutionize the delivery of health care in America? If you have a concept for a program, product or gadget, the Johns Hopkins Technology Innovation Center may be your new best friend.

A new one-year fellowship has just been announced that aims to help clinical inventors develop and grow a new health care information technology company—without quitting their day jobs. The fellowship, which begins in October, requires fellows to commit 400 hours over 12 months to create a strategy for their product so they can move on to the next stage and incorporate.

"We're creating this avenue for inventors to succeed and make an impact," says Paul Nagy, associate professor of radiology and director of the Johns Hopkins Technology Innovation Center. "They want to participate, but they shouldn't have to give up their clinical practice. That's where highly entrepreneurial engineering, business and

design students can come into play."

Nagy and Dwight Raum, chief technology officer for the Johns Hopkins Health System and the university, believe it is the ideal time for Johns Hopkins Medicine to become the leader in health care IT innovation. "We have developed more than 40 applications in the past four years that have become innovative clinical IT tools," says Gorkem Sevinc, the center's manager.

Fellows will be teamed with top candidates from the Whiting School of Engineering, Carey Business School and Maryland Institute College of Art under the guidance of the center's staff and will receive mentorship from local health care IT CEOs and entrepreneurs. The goal is

to build multidisciplinary leadership teams that can craft an idea, deploy it clinically and then take it to market. Once the value has been demonstrated clinically, the new company is ready for a business accelerator like the DreamIT Health Baltimore program.

The market for health care IT companies has exploded from \$1 billion to \$5 billion per year in just four years. The new Technology Innovation Center hopes to be a launching pad for new companies in the local Baltimore community.

Learn more and apply for the fellowship by emailing [tic@jhmi.edu](mailto:tic@jhmi.edu).



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A look at innovative developments outside the halls of Johns Hopkins Medicine

## Mobile App Connects Patients to Epic EMR

**S**tanford Health Care has launched MyHealth, a mobile app connected to the Epic electronic medical record system. The app is designed to make it quick and simple for patients to manage their care right from their smartphones, including reviewing test results and medical bills, managing prescriptions, scheduling appointments and conducting video visits with a Stanford physician.



The MyHealth app also supports Stanford's new ClickWell Care, which delivers the services of a Stanford primary care physician online, combined with customized wellness coaching from a dedicated Stanford Health Care certified personal trainer, plus an online review of home health data.

**M**AYO CLINIC has teamed with Google to improve search results on health-related topics. One in 20 Google searches is for health-related information. If you've Googled the flu or pink eye recently, for example, you might have noticed a dramatic new addition to the search results.

With the expansion of what it calls a "Knowledge Graph," Google's medical results now include a high-quality illustration from licensed medical illustrators paired to clickable tabs with relevant medical facts, symptoms and treatments—all reviewed by clinicians at Mayo Clinic.

**B**ETH ISRAEL DEACONESS MEDICAL CENTER in Boston and Geisinger Health System

in Pennsylvania are part of a multisite study allowing patients to add notes to their electronic medical record. Following the OpenNotes initiative—which lets patients read their physicians' electronic medical record notes—OurNotes will initially focus on patients with chronic health conditions.

Researchers envision a range of opportunities, from patients adding a list of topics or questions they'd like to cover during an upcoming visit, creating efficiency in that visit, to inviting the patient to review and sign off on notes after a visit as a way to ensure that patients and clinicians are on the same page.

## JHBox Improves Collaboration and Work Flows



JHBox, a new cloud-based file-sharing application, has been launched to help staff at all Johns Hopkins member organizations improve collaboration and increase work flow efficiency.

Replacing JShare, which was retired March 31, JHBox is a safer, more secure file-sharing platform. Members of the Johns Hopkins community can share documents, images or other files on a desktop, laptop, tablet or cellphone—both inside and outside the institution—anytime, anywhere. So far, approximately 11,000 people across Johns Hopkins are using the program.

"We use JHBox for our Comprehensive Unit-based Safety Program experts," says Paula Kent, the Armstrong Institute for Patient Safety and Quality's patient safety coordinator. "There are experts in various roles and at many locations. We do not have access to the same shared drives, so it is incredibly helpful to have the most up-to-date working documents in one consistent place. It has improved communication and efficiency."

While JHBox is HIPAA compliant and protected, the JHBox team is continuing to develop best practices and policies around sharing sensitive data.

"We encourage people to use JHBox instead of JShare, Dropbox or Google Docs for work purposes," says Dwight Raum, chief technology officer for the Johns Hopkins Health System. "It's the only cloud-based file-

sharing service now supported by Johns Hopkins."

Each user receives 50 gigabytes of storage in JHBox and end-user support and documentation from the JHBox team specific to Johns Hopkins users. If needed, files can be recovered 90 days from when they were deleted.

Users can collaborate with internal and external colleagues by clicking "Share" or tapping the icon that looks like a chain link next to the file. From there, choose who to email a link and, if applicable, an expiration date for the link so it can be accessed for a limited time.

All JShare users will need to move any content they want to keep to their JHBox accounts or to another storage location.

### To start using JHBox:

1. Log in to my.jh.edu with your JHED ID and password.
2. Go to the Cloud apps quick link and click on JHBox.
3. Once you have accepted the Terms of Service, begin using JHBox.
4. Download apps, including Box Edit and Box, from JHBox to use on all of your mobile devices.



To learn more, visit [it.jhu.edu/jhbox](http://it.jhu.edu/jhbox) or email [jhboxsupport@jhu.edu](mailto:jhboxsupport@jhu.edu).

## Meaningful Interactions Build Trust with Patients Online



Just like in a doctor-patient relationship, trust is the most important element in social media marketing.

When it comes to connecting with potential patients online, smaller-scale campaigns are often the best. Instead of efforts focused on capturing the most eyes, Johns Hopkins Medicine's Web marketing team is focused on meaningful interactions. This targeted approach to smaller and more relevant audiences may lead to a desired action, such as making an appointment, watching a video, registering for a seminar or subscribing to an e-newsletter.

The aim is to build trust.

"We want people to know that Johns Hopkins understands their needs and that when they have a problem or question, we will supply them with helpful information from our clinical and research experts," says Therese Lockemy, director of Internet marketing and social engagement. "Understanding what our audience cares about enables us to deliver them meaningful content. When we do that, we

see big increases in engagement."

The key to success is twofold: First, know the audience. Second, build trust.

Let's look at how Facebook's sponsored posts work. "We start by understanding the audience," says Lockemy. "We create helpful content and use smart targeting capabilities—that's how you can create meaningful interactions. This turns a catchall approach into a data-driven digital marketing approach."

So, instead of a sleep medicine billboard campaign on the highway, tailored posts go to a smaller number of people who, because they've posted about sleep issues in the past, are more inclined to be interested in Johns Hopkins-branded content, says Lockemy.

Social media site preferences offer insights into what people are interested in. "For example, on Facebook, we know the gender, age and location of our followers," says Lockemy. "Even better, we know their health interests based on what they've liked, so we can see who's most interested in heart health versus diabetes."



**People Are Talking**  
Feedback  
from visitors to  
[hopkinsmedicine.org](http://hopkinsmedicine.org)

"This site is a wonderful source for obtaining accurate and understandable information on a vast amount of medical conditions."

"Your website is very user-friendly and easy to navigate, even for us older folks."

"The site is perfect. It's nice to see a picture of the doctor and watch a video prior to an appointment."

"Johns Hopkins has a sterling reputation, and the information on triple-negative breast cancer far exceeds WebMD and other recommended sites for accurate information. Thank you for the excellence!"