

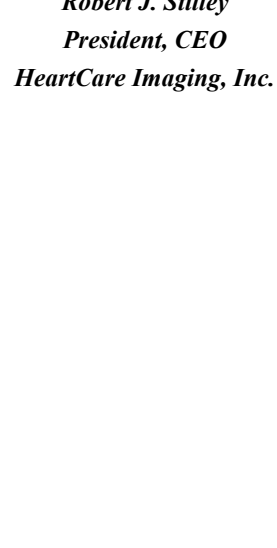
## THE HCI SPOTLIGHT

Dear Colleague—

Independence Day is here and summer is in full swing! Of course, the reason we celebrate this holiday is to commemorate America's decision to become independent from Great Britain. However, Independence Day represents more than the day the Declaration of Independence was signed. The Declaration was a result of years of discontent with how the British were governing their colonies and it was followed by a war in which many lives were lost. If you take the time to read the Declaration of Independence (<https://www.archives.gov/founding-docs/declaration-transcript>) you will realize the remarkable bravery (they put their lives on the line), thought, and foresight our founders had and how lucky we are to be living in the 'Land of the Free'.

HCI continues to expand with new sites set to open in Arizona and Kentucky. Our clients continue to appreciate the excellent services provided by HCI which frees up hospital capital and management's time. Our goal continues to be to provide a world class service that provides excellent diagnostic care for patients while helping the bottom line of our client.

Please enjoy this month's newsletter and have a happy and safe 4th of July!



**Robert J. Stille**  
President, CEO  
HeartCare Imaging, Inc.

## CARDIOLOGY

### SNMMI: PET can detect which plaques are at risk of rupture

Researchers have understood for some time that certain types of atherosclerotic plaque are more prone to rupture, leading to embolism and possibly death. Particularly dangerous are thin-cap fibroatheromas (TFCAs). Therefore, Raiyan Zaman, PhD, from Stanford University and colleagues developed a scanner that combines PET, optical, and photoacoustic imaging to evaluate for TFCAs, which can be small and difficult to detect

<http://www.auntminnie.com/index.aspx?bc=sp&db=ml&page=dl&itemid=117562>

### Moving Toward a better Blood Pressure Pill

Combining low doses of several different blood pressure drugs may be better than using a standard dose of just one medication, a new review of past studies suggests. Their conclusion: "Low doses can achieve large effects when used in combination," said review co-author Dr. Anthony Rodgers. "What we found was that four quarter doses [of different medications] give a lot of benefit with few apparent side effects."

<https://consumer.healthday.com/cardiovascular-health-information-20/high-blood-pressure-health-news-358/moving-toward-a-better-blood-pressure-pill-723243.html>

### Short Sleep Linked to Death in Patients With Heart Disease, Stroke

The risk for death associated with cardiovascular disease (CVD) and cerebrovascular disease (CBV) is significantly increased in adults who get fewer than 6 hours of sleep a night, a new study with objective sleep data indicates

<http://www.medscape.com/viewarticle/881103>

### PET/MR shows arterial CO2 as potent vasodilator for cardiac stress testing

More than 5 million cardiac stress tests performed annually in the U.S. employ injectable forms of pharmacological stress agents—such as adenosine or one of its analogues—to dilate blood vessels in the heart. However, these drugs can have severe side effects. Using PET/MR imaging, a new international study featured in the June issue of The Journal of Nuclear Medicine demonstrates that increases in partial pressure of arterial carbon dioxide (PaCO2) can safely and efficiently widen blood vessels of the heart during stress tests to help determine heart function.

[https://www.eurekalert.org/pub\\_releases/2017-06/sonnm-psa060517.php](https://www.eurekalert.org/pub_releases/2017-06/sonnm-psa060517.php)

### Status of Cardiovascular PET radiation exposure and strategies for reduction: An Information Statement from the Cardiovascular PET Task Force

Cardiovascular positron emission tomography (PET) imaging provides high-quality visual and quantitative myocardial perfusion and function images. In addition, cardiovascular PET can assess myocardial viability, myocardial inflammatory disorders such as cardiac sarcoid, and infections of implanted devices including pacemakers, ventricular assist devices, and prosthetic heart valves. As with all nuclear cardiology procedures, the benefits need to be considered in relation to the risks of exposure to radiation. When performed properly, these assessments can be obtained while simultaneously minimizing radiation exposure. The purpose of this information statement is to present current concepts to minimize patient and staff radiation exposure while ensuring high image quality.

<https://link.springer.com/article/10.1007/s12350-017-0897-9>

### Distinct Maternal, Fetal Risks for Anticoagulants in Pregnancy

Anticoagulation for mechanical heart valves during pregnancy is associated with distinct maternal and fetal risks, according to a review published in the June 6 issue of the Journal of the American College of Cardiology.

<http://www.physiciansbriefing.com/Article.asp?AID=723134>

### Lifestyle is key to healthy blood vessels, study says

If you eat right, exercise and stay trim, you have a shot at offsetting age-related blood vessel degeneration, according to this study of more than 3,000 adults. Genetics played less of a role than lifestyle in keeping blood vessels you, the researchers found.

<https://consumer.healthday.com/circulatory-system-information-7/coronary-and-artery-news-356/can-a-70-year-old-have-the-arteries-of-a-20-year-old-723167.html>

### Beta Blocker use not linked to reduced mortality after AMI

Beta Blocker use is not associated with reduced mortality after acute myocardial infarction (AMI) without heart failure or left ventricular systolic dysfunction (LVSD), according to a study published in the June 6 issue of the Journal of the American College of Cardiology.

<http://www.physiciansbriefing.com/Article.asp?AID=723136>

## HEALTH

### Theranostics takes center stage at SNMMI annual meeting

In his lecture, titled "Theranostics - Looking Back and Moving Forward" he too made the case that new radiotracer applications are revolutionizing cancer care, with personalized treatments — even "curing the incurable." He spoke specifically of the success of the radio tracer Ga-68 in providing new views and treatments of tumors. Baum also said that theranostics is shifting the focus of treatment for cancer away from the organ where the cancer occurs, to the type of tumor.

<https://www.dotmed.com/news/story/37738>

### Some Small Tumors in Breasts May Not Be So Bad After All

A study involving thousands of breast cancer cases, released Wednesday, concludes that a significant proportion of tumors detected through mammography are not small because they are found early. Instead, the tumors are small because they are biologically prone to slow growth.

<http://www.npr.org/sections/health-shots/2017/06/07/531786168/some-small-tumors-in-breasts-may-not-be-so-bad-after-all>

### Sleep apnea leads to three-fold increased risk of type 2 diabetes, researchers report

People with mild-to-moderate obstructive sleep apnea have a three-fold increased risk of type 2 diabetes, researchers have claimed. This new research, conducted by scientists from Pennsylvania State University College of Medicine, US also found that people with mild-to-moderate OSA were four times more likely to have hypertension.

<http://www.diabetes.co.uk/news/2017/jun/sleep-apnea-leads-to-three-fold-increased-risk-of-type-2-diabetes-researchers-report-92128928.html>

### SNMMI partnering with NDSC to disseminate appropriate use criteria

Clinicians referring patients for imaging with nuclear and molecular modalities will soon be able to do so with ready access to utilization assistance that's based on appropriate-use criteria developed by the Society of Nuclear Medicine and Molecular Imaging (SNMMI).

<http://www.healthimaging.com/topics/advanced-visualization/snmmi-partnering-ndsc-dissemination-appropriate-use-criteria>

### Simple way to boost cancer survival rates: diet and exercise, studies say

A healthy diet and exercise could reduce colon cancer patients' chance of death and simply walking could improve survival rates for breast cancer survivors, studies presented at the world's largest cancer conference have found.

<https://www.theguardian.com/science/2017/jun/04/breast-cancer-colon-survival-rates>

### Childhood cancer survivors have fewer long-term side effects: study

Better treatment strategies for pediatric cancers are helping survivors live longer, with fewer serious health problems related to their treatment, U.S. researchers said.

<http://www.reuters.com/article/us-health-cancer-children-idUSK8N18720M>

### Next-generation cancer drugs boost immunotherapy responses

An approach to unleashing immune responses against cancer is showing promise in early clinical trials, and may boost the effectiveness of existing therapies. The experimental drugs target a protein called IDO, which starves immune cells by breaking down the crucial amino acid tryptophan. IDO can suppress immune responses and rein in potentially damaging inflammation. But it can also halt the body's natural immune response to cancer and allow tumors to grow unchecked. Some tumors even express IDO to shield themselves from the immune system

<https://www.nature.com/articles/n-12336794>

### Baby teeth show how exposure to various metals may be linked to autism, study finds

Understanding why some children develop autism and others -- sometimes even their twins -- do not has stymied researchers for decades, but a new study says that baby teeth may provide some clues. The new study published in Nature Communications sheds light on some possible factors in autism risk, revealed in children's teeth: exposure to various metals, both toxic and nutritional, like lead and zinc and the changes in exposure at different stages in a child's development.

<http://abcnews.go.com/US/baby-teeth-show-exposure-metals-linked-autism-study/story?id=47767419>

### Aerobic Exercise Reverses Alzheimer Symptoms

Aerobic exercise can reverse the cognitive decline typical of Alzheimer's disease, at least in the short term, a new meta-analysis suggests. "It's not a huge improvement, but to be able to say there is any improvement is a pretty big deal," said Gregory Panza, a PhD candidate from the University of Connecticut in Hartford.

<http://www.medscape.com/viewarticle/881057>

### Learning to read and write alters brain wiring within months, even for adults

Let's hear it for the written word. In learning to read can have profound effects on the wiring of the adult brain, even in regions that aren't usually associated with reading and writing.

[https://www.washingtonpost.com/national/health-science/learning-to-read-and-write-alters-brain-wiring-within-months-even-for-adults/2017/05/26/0ba3b372-4193-11e7-8c35-4669ff554a8\\_story.html#hpid=hp\\_hp-top-table-main-smart-learn\\_learn-term\\_142abee85d9ewpsrc-nl\\_db\\_smartlearn\\_story\\_2017\\_05\\_26/0ba3b372-4193-11e7-8c35-4669ff554a8\\_story.html#hpid=hp\\_hp-top-table-main-smart-learn\\_learn-term\\_142abee85d9ewpsrc-nl\\_db\\_smartlearn\\_story\\_2017\\_05\\_26/0ba3b372-4193-11e7-8c35-4669ff554a8\\_story.html](https://www.washingtonpost.com/national/health-science/learning-to-read-and-write-alters-brain-wiring-within-months-even-for-adults/2017/05/26/0ba3b372-4193-11e7-8c35-4669ff554a8_story.html#hpid=hp_hp-top-table-main-smart-learn_learn-term_142abee85d9ewpsrc-nl_db_smartlearn_story_2017_05_26/0ba3b372-4193-11e7-8c35-4669ff554a8_story.html#hpid=hp_hp-top-table-main-smart-learn_learn-term_142abee85d9ewpsrc-nl_db_smartlearn_story_2017_05_26/0ba3b372-4193-11e7-8c35-4669ff554a8_story.html)

### Dreams and Brain Disease: REM sleep cells linked to disorders

Where do dreams come from? Researchers now say they know: A specific group of cells in the brain stem is responsible for controlling dreaming sleep, also called Rapid Eye Movement (REM) sleep, a new study says. The study also showed that damage to those cells could lead to a sleeping disorder called REM Behavior Disorder (RBD) which makes a person act out violent dreams.

<https://www.livescience.com/59300-brain-cells-linked-to-dreaming-found.html>

### PET/CT a sharp-eyed ally against comeback thyroid cancer

Postsurgical medullary thyroid cancer patients who have elevated calcitonin levels, which can indicate that the cancer has returned, are well served with follow-up PET/CT using the radiotracer <sup>18</sup>F-DOPA (fluorine-18-L-dihydroxyphenylalanine), according to a small study published online May 30 in *Nuclear Medicine Communications*.

<http://www.healthimaging.com/topics/molecular-imaging/petct-sharp-eyed-ally-against-comeback-medullary-thyroid-cancer>

### Thick Middle May Raise Risk of Some Cancers

An extra 4.3 inches on the waistline increased the risk of obesity-related cancers by 13 percent, and an extra 3.1 inches on the hips was associated with a 15 percent increased risk, according to the study. But the findings did not prove that excess fat around the middle causes cancer risk to rise.

<https://consumer.healthday.com/vitamins-and-nutrition-information-27/obesity-health-news-505/thick-middle-may-raise-risk-of-some-cancers-723091.html>

## BUSINESS

### Federal Task Force: Here's how to fix Healthcare Cybersecurity

The far-reaching report from the Health Care Industry Cybersecurity Task Force was mandated by the Cybersecurity Act of 2015. The task force convened 21 wide-ranging stakeholders in medical cybersecurity, ranging from device manufacturers to hospitals to consumer advocates

<http://thehill.com/policy/cybersecurity/336394-federal-healthcare-cybersecurity-task-force-releases-report>

### Study: Lack of Tools, Poor Physician Alignment Slowing VBC Adoption

While there continues to be progress towards increased adoption of value-based care and payment models, the pace has been slowed by poor alignment between health plans and providers, as well as providers lacking the right tools to close critical gaps in healthcare, according to a new study by Quest Diagnostics and Inovalon.

<https://www.healthcare-informatics.com/news-item/ehr/study-lack-tools-poor-payer-physician-alignment-slowing-value-based-care-adoption>

### APRNs Improve Quality Outcomes, Cost of Care

A large body of evidence has found that APPs produce quality outcomes similar to or better than physicians. For example, a systemic review of 71 studies published from 1990 to 2009 found that clinical nurse specialists, certified nurse midwives, and nurse practitioners produced quality, financial, and clinical outcomes that were equal to or better than physicians.

<http://www.healthleadersmedia.com/quality/aprns-improve-quality-outcomes-cost-care>

## POLITICS THAT AFFECT MEDICINE

### Drug Prices Become Target for FDA as Chief Expands Purview

The head of the U.S. Food and Drug Administration is considering using the agency's power to bring more price competition to the market for generic drugs, targeting high-priced products by prioritizing the approval of additional competing treatments. FDA Commissioner Scott Gottlieb said in an interview Monday that the agency is looking at how to push applications to the front of the line in cases where there are fewer than three competing generic manufacturers. The policy would target cases where there are few or no competing versions of drugs, which has led to high prices in some situations.

<https://www.bloomberg.com/news/articles/2017-06-05/drug-prices-become-target-for-fda-as-chief-expands-agency-view>

### Medicare to cover supervised exercise for heart disease

Following a request from cardiologists, the CMS will now offer national Medicare coverage of supervised exercise therapy for treating peripheral artery disease. The agency said in a coverage decision released that research has shown supervised exercise therapy can help alleviate common symptoms of the cardiovascular disease, including pain and discomfort in a patient's legs.

<http://www.modernhealthcare.com/article/2017/05/30/NEWS/170539995/medicare-to-cover-supervised-exercise-for-heart-disease>

## EDUCATION/CONFERENCES



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