

Cleveland Clinic announces its top 10 medical innovations of the year

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The Cleveland Clinic's top 10 medical innovations for 2011 were announced today, and include breakthroughs in Alzheimer's diagnosis, cancer therapy, and weight loss surgery.

CLEVELAND, Ohio — A radioactive dye that can detect and highlight brain plaques that signal Alzheimer's disease is the medical innovation of the year, chosen from more than 90 candidates by physicians at the **Cleveland Clinic**.

The top 10 medical innovations for 2011, to be announced this morning at the **Clinic's eighth annual Innovation Summit**, includes groundbreaking drugs for cancer, hepatitis and multiple sclerosis, as well as technical innovations like incision-less bariatric surgery.

The Summit, in its third and final day today, was expected to draw more than 1,000 health care leaders from across the country to discuss innovations in treating obesity and diabetes.

In the spring, more than 60 physicians at the Cleveland Clinic nominated innovations they felt would change the face of medicine. Since then, they narrowed the field several times, focusing on drugs and devices that could show a significant potential for patient benefit or improved health care delivery, a high probability of success and good quality data to support its nomination.

Nominees must have **Food and Drug Administration** approval, or a great chance of approval by early 2011.

Here are the Top 10:

- 1. Molecular imaging biomarker for early detection of Alzheimer's Disease:** A new brain imaging compound called AV-45 will soon make it possible to detect the very earliest stages of the brain damage caused by Alzheimer's, and is expected to become the dominant way to diagnose the disease.
- 2. Targeted T-cell antibody for metastatic melanoma:** A new anti-cancer drug, ipilimumab, allows the body's own immune system to more effectively fight cancer. It was given priority review by the FDA after it improved the survival rates of patients with previously treated advanced melanoma.
- 3. First cancer vaccine approved by the FDA:** Provenge (Sipuleucel-T), the first cancer vaccine to show a survival benefit, is a prostate cancer treatment that works by stimulating the immune system. Its April approval means it will likely be available for use earlier in the treatment process.

4. Jupiter Study: Statins for healthy individuals: Through a large international study, researchers have found that cholesterol-lowering drugs called statins drastically cut the risk of heart disease and death for people with normal levels of cholesterol but elevated levels of inflammation.

5. Hepatitis C protease inhibiting drugs: Two drugs awaiting approval, boceprevir and telaprevir, were developed specifically to target the hepatitis C virus and have shown a vast improvement over the cure rates of existing treatments.

6. Telehealth monitoring for individuals with heart failure: An implantable, miniature, permanent monitor that can measure and communicate daily pulmonary artery pressure, as well as in-home devices that record and send real-time weight, blood pressure and heart rate data are allowing for closer monitoring of costly medical conditions, potentially reducing hospitalization.

7. Endoscopic weight-loss procedure: Transoral Gastroplasty (TOGA). An incision-less option for bariatric surgery, TOGA uses two flexible endoscopes to pass instruments through the mouth, reducing the size of the stomach to a small pouch.

8. Exhaled nitric oxide (NO) breath analysis for diagnosing asthma: A hand-held diagnostic testing device that allows precision and accuracy in diagnosing and managing asthma, the device measures levels of exhaled nitric oxide, a gas produced by cells in the lungs during inflammation.

9. Oral disease modifying treatment for multiple sclerosis: Fingolimod, approved this year by the FDA, is the first oral treatment available to MS patients, a major breakthrough in treatment that reduced attacks and brain lesions in clinical trials.

10. Capsule endoscopy for diagnosis of pediatric GI disorders: A safe and painless alternative to endoscopic imaging and X-rays, the pill-sized capsule takes hundreds of pictures and short video clips of the inside of the digestive tract and transmits them to a data recorder during transit.

Go to clevelandclinic.org/innovations for more information on the summit and the Clinic's top 10.

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