

Medical Innovations in 2019

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Pharmacogenomic Testing

Through this procedure, patient's genetic makeup can be accurately determined by a medical practitioner and one can find out how the patient would react to a specific drug. He can make a prescription according to the metabolism of the drug. Response to antibiotics, for example, can be correctly established.



Source: psychiatrictimes.com

Artificial Intelligence

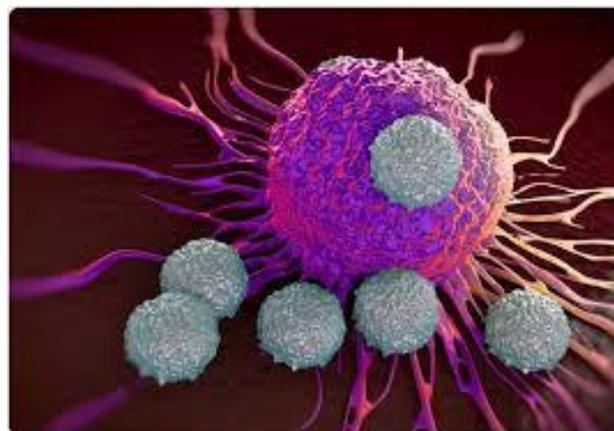
It uses a robot controlled by computer or a digitalized computer system directed to perform many different functions. In medical field, it can aid in diagnosis of different diseases and help practitioners in finding abnormalities on radiological scans as well as elucidate masses of electronic health data.



Source: geeksforgeeks.org

Immunotherapy

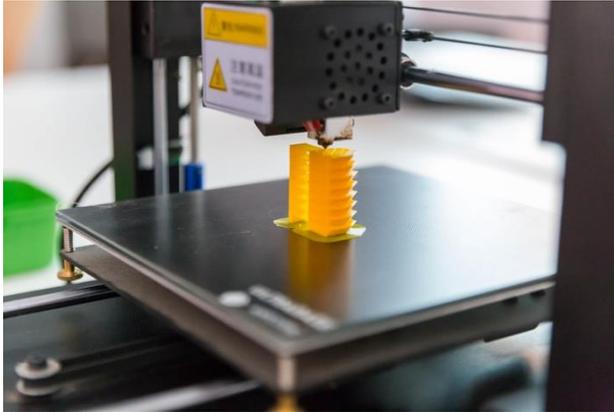
Immunotherapy is a modern solution to treat malignancy by promoting immunity of a person's body. It is useful in different types of cancers for example Melanoma and lung cancers. It is expected to treat all types of tumors by immunotherapy in the future.



Source: news-medical.net

3-D Printing

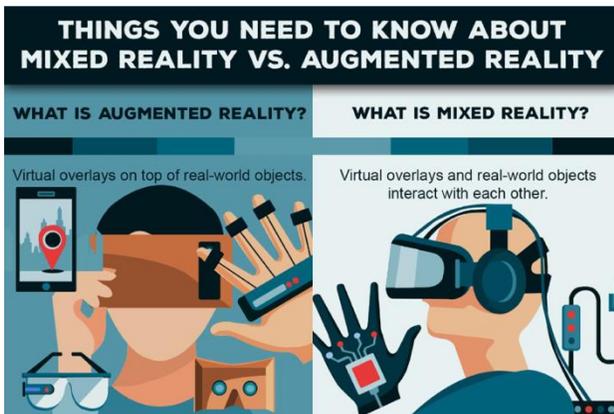
3-D Printing now enables experts to provide prosthetics, implants, and airway stents to health personnel. They have minimal complications as they are created after taking body measurements ensuring ease and better performance. It is now applicable in cardiac surgeries, face transplants and many more surgical procedures.



Source: it.toolbox.com

Virtual Reality/Mixed Reality

This is a popular technique in medical education and displays images or sounds generated by computer onto a screen. It is useful for different types of learners such as those who learn by vision or hearing sound. It is economical way to teach medical students from different life and death scenarios.



Source: authorstream.com

Stroke Visor

It is a portable visor-like device which is used to detect emergent large-vessel occlusion and used to measure cerebral fluid distribution, detection of brain tumors,

swelling and most importantly stroke and other brain pathologies. This new technology helps to detect early pathologies of brain such as hemorrhagic stroke which accounts for about 40% of stroke deaths.



Source: cerebrotechmedical.com

Robotic Surgery

This is a type of surgery which is assisted by robots and allows physicians to perform numerous complex surgeries with less effort, more accuracy and control. The patients experience less pain and recovery time is reduced. Robots assist doctors in every possible way in the operating room. Over 3 million patients worldwide use da Vinci Surgical System. All the procedures are visualized via laparoscopy.



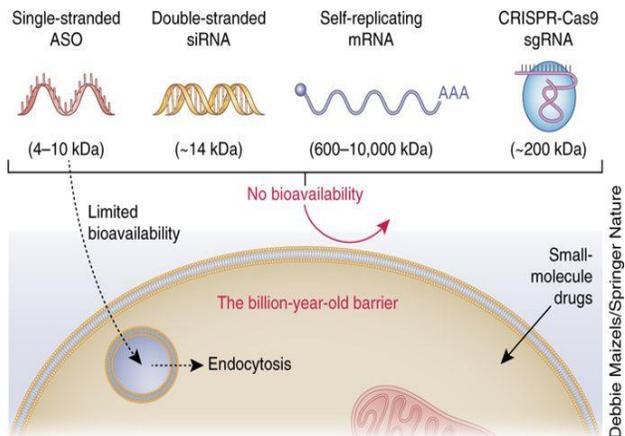
Source: surgery.ucsf.edu

Heart Valve Replacement

Due to all the new technologies and advanced measures in the medical sciences, it is now possible to remove the defected heart valve and replace it with a mechanical valve. The technique of heart valve replacement is greatly improved and advanced, so that open-heart surgery is not needed anymore as it is now performed via a catheter.

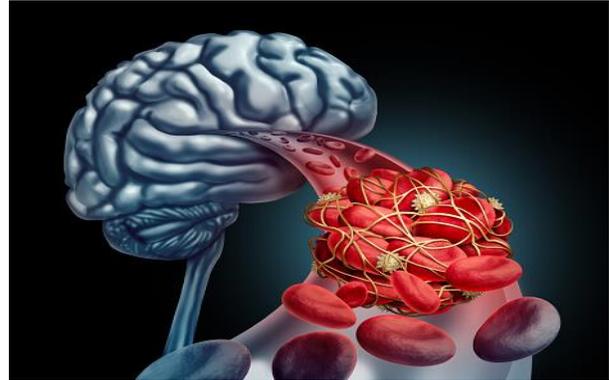
RNA THERAPEUTICS

RNA therapeutics is a new innovation in medical sciences which interferes with RNA genetic abnormalities to stop the progression of the RNA from translation into abnormal proteins with abnormal functions. Examples of this are cancer, rare genetic diseases, neurologic illness etc.



Treatment of Acute Stroke

A new guideline was released for patients with acute stroke by the American Stroke Association (ASA) & American Heart Association (AHA). Patients with large vessel obstruction requiring treatment within 16-24 underwent the two trials (DAWN and DEFUSE 3) clearly showing benefit treatment.



Source: jems.com