What is MRI

The magnetic resonance imaging machine looks like a long narrow tube that has both MRI technologist monitors you from another room. You can talk with the person by microphone. If you have claustrophobia you may be given a medicine to help you feel sleepy and more calm. Most people get through the exam without a problem.

The MRI machine creates a strong magnetic field around you, and radio waves are directed at your body. The procedure is painless. You don't feel the magnetic field or radio waves, and there are no moving parts around you.

In some cases gadolinium, may be injected through an intravenous line into a vein. The gadolinium enhances the appearance of certain details. The contrast used for MRIs is less likely to cause an allergic reaction than the contrast material used for CT scans.

An MRI can last anywhere from 15 minutes to more than an hour. You must hold very still because movement can blur the images.

Current application in Breast and Ovarian Cancer

Ovarian Cancer is a disease in which cells of the ovaries separate non-stop, attacking nearby tissues and possibly spreading to other areas of the body. Current applications to detect ovarian cancer include physical exam, blood test, ultrasound, laparoscopy, biopsy, and genetic screening. However, if any sort of cancer is found, additional tests like genomics testing, PET scan, CT or CAT scan, are done to determine the type and stage of the cancer and help determine the best treatment for the patient.

The most common cancer in women is breast cancer. Breast cancer causes a lump or thickening of the breast and changes to the skin or the nipple. There are two types of breast cancer: Ductal carcinoma and Lobular carcinoma. Current applications to detect breast cancer include CT, PET, MRI, Ultrasound, and mammography. An online article stated that breast parenchymal lesions were found in 100 percent of those who had MRI analysis compared to other applications.

Breast Cancer can affect women of every age, race and ethnic group. The rates of developing and dying from breast cancer vary among various racial and ethnic groups. According to the National Cancer Institute Caucasian have the highest incident rate for breast cancer among U.S racial and ethnic group. Asian/Pacific Islander have the lowest incident and death rates. The graph shown below demonstrates the breakdown of each ethnic groups incident and death rate in California from the years of 2010 to 2014 for both breast and ovarian cancer.

Future Application of Breast cancer and Ovarian Cancer

Future application of MRI in breast cancer and ovarian cancer MRI plays a huge role in detecting breast and ovarian cancer in the early stages, because MRI is one of the most powerful imaging techniques available in diagnostic imaging and preclinical results can be translated with relative ease to the clinic. The majority of ovarian and breast cancer will be diagnosed faster in the future with MRI machines we are going to be able to diagnose cancer in advance than any other exam. The role of MRI has yet to be established some studies have shown that high sensitivity may be achieved with contrast agent-enhanced MRI for detection of recurrent disease including demonstration of macroscopic. The majority of ovarian and breast cancer will be diagnosed in advanced for the physicians to help in any way possible and to start treating patients as soon as they know.

References


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