



Sonar Medical Device

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GROUP :

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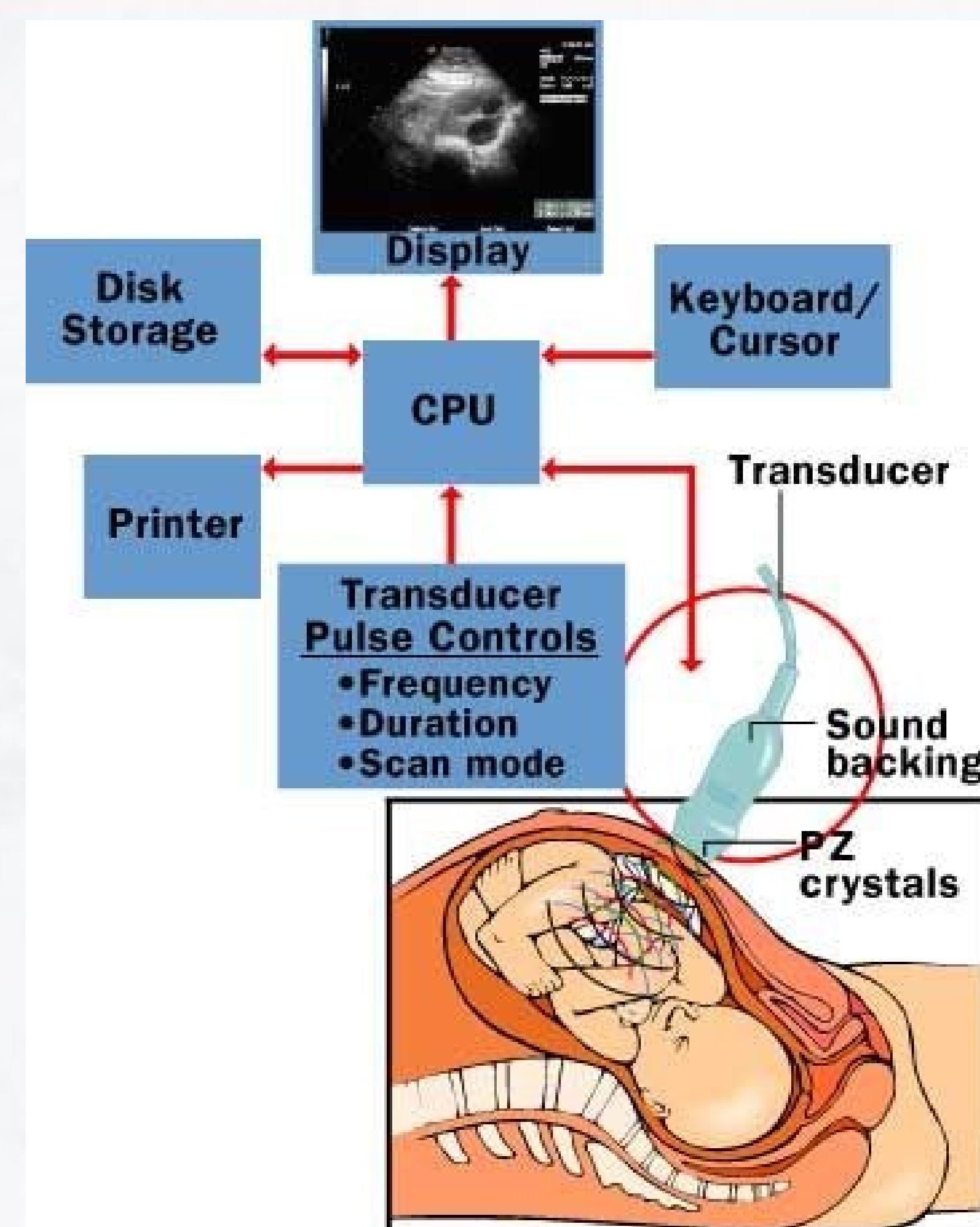
INTRODUCTION :

Ultrasound imaging is an imaging that relies on high-frequency sound waves that can capture live images of the inside of the human body. It is a technology somewhat similar to radar, and it is a method that enables the doctor to diagnose problems in different organs of the human body, blood vessels and tissues. Most ultrasound exams are done using an ultrasound machine outside your body, although some involve placing a device inside your body. Finally ultrasound is very safe.



Operation:

The ultrasound device sends sound waves with high sound frequencies ranging from 1 to 5 MHz in the form of pulses directed to the human body through a special sensor. Ultrasound waves penetrate the human body to collide with the separations and boundaries between the different components of the body, such as the fluids between the layers of the skin and the boundary between the skin and bone layer. Part of the waves are reflected from the boundaries separating the components of the human body and return to the probe, while the rest of the waves continue to penetrate deeper layers in the human body. The probe picks up the successively reflected ultrasound waves from the layers of the human body that it has penetrated and feeds the ultrasound device into them.



Components:

- 1- Displays
- 2- Control Panel
- 3- Transducers Probe
- 4- Transducers Cables
- 5- Linear Array
- 6- Convex Array
- 7- Anorectal Array

Uses :

- 1- View the uterus and ovaries during pregnancy
- 2- Monitor the developing baby's health.
- 3- Diagnose gallbladder disease.
- 4- Evaluate blood flow.
- 5- Guide a needle for biopsy.
- 6- Examine a breast lump.

