

The primary differences between 2MHz and 3MHz, as well as 4MHz and 8MHz Sonotrax probes, lie in their frequency and the corresponding clinical applications they are best suited for:

2MHz vs. 3MHz Sonotrax Probes [Codes 29496, 29497]

- **Frequency:**
 - 3MHz probe operates at 3 megahertz
 - 2MHz probe operates at 2 megahertz
- **Clinical Use:**
 - 3MHz is typically used for standard fetal heart rate monitoring in early to mid-pregnancy
 - 2MHz is often preferred for late pregnancy and labor due to its deeper penetration capabilities
- **Penetration:**
 - 3MHz offers moderate penetration, suitable for most routine checks
 - 2MHz provides deeper penetration, useful for monitoring through thicker tissue or in late pregnancy
- **Resolution:**
 - 3MHz provides slightly better resolution, capturing more detailed heart rate sounds
 - 2MHz may have lower resolution but better depth of penetration

4MHz vs. 8MHz Sonotrax Probes [Codes 29498, 29499]

- **Frequency:**
 - 8MHz probe operates at 8 megahertz
 - 4MHz probe operates at 4 megahertz
- **Clinical Use:**
 - 8MHz is often used for vascular and peripheral blood flow studies, such as detecting superficial blood flow
 - 4MHz is more general-purpose, suitable for deeper vascular studies and some fetal monitoring
- **Penetration:**
 - 8MHz provides shallower penetration, suitable for surface-level examinations
 - 4MHz offers deeper penetration, useful for deeper blood vessels or structures
- **Resolution:**
 - 8MHz has higher resolution, providing more detailed images of superficial structures
 - 4MHz has lower resolution but is effective for deeper structures

In summary, higher frequency probes (3MHz, 8MHz) offer better resolution but less penetration, while lower frequency probes (2MHz, 4MHz) provide deeper penetration but with less detail. The choice between these probes depends on the specific clinical requirements, such as the depth of the target area and the level of detail needed.