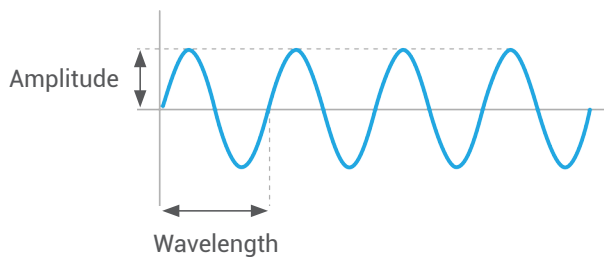


OVERVIEW

Understanding the essential imaging and Doppler modalities

The behaviour of the ultrasound within the body is described by the formula:

Propagation velocity = wavelength × frequency



Wavelength and frequency are inversely related. Increasing the frequency will decrease the wavelength, which is good for resolution. But there is a trade off: with increased frequency, penetration will also decrease.

Pulsed wave and color Doppler are similar: they are good for localization but unable to accurately display high velocities. In contrast, continuous wave Doppler is good for measuring high velocities

but cannot localize within the ultrasound beam. So make sure to use the Doppler modality best suited and swap between them as required.