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Hemodynamic monitoring

Direct evaluation of cellular oxygenation is possible but currently highly impractical. Instead, clinicians seek several indirect markers to build a clinical picture of the patient's state of cell>tissue>organ perfusion. Whilst macrocirculatory markers (blood pressure) and microcirculatory markers (lactate) are essential tools for any ECC clinician, they do not give enough or sometimes even the correct information in our critically ill patients. In these more challenging circumstances, we may need to reach for alternative devices to evaluate perfusion. Such devices exist, but as with any diagnostic tool, an in-depth understanding of their mechanism of action, limitations, and any supporting literature will help users avoid the pitfalls of incorrect or inappropriate use of such tools.

This presentation will:

- describe the mechanism of action and surrounding physiology of old and new technology aiming to advance tissue perfusion monitoring
- review the current literature for sublingual videomicroscopy, urethral plethysmography, tissue capnography gradients, and urinary oxygenation