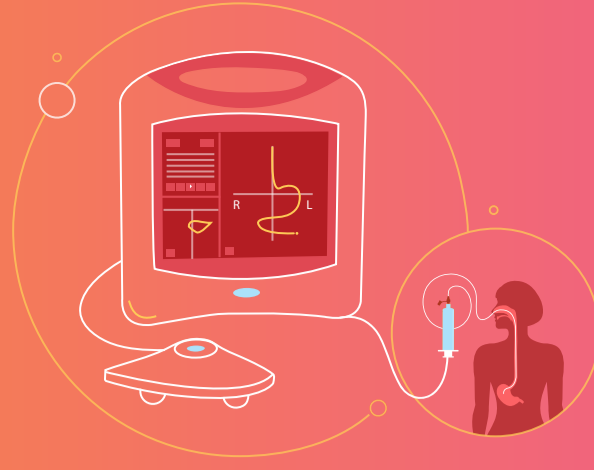


# CHALLENGES OF TUBE PLACEMENT CONFIRMATION: pH



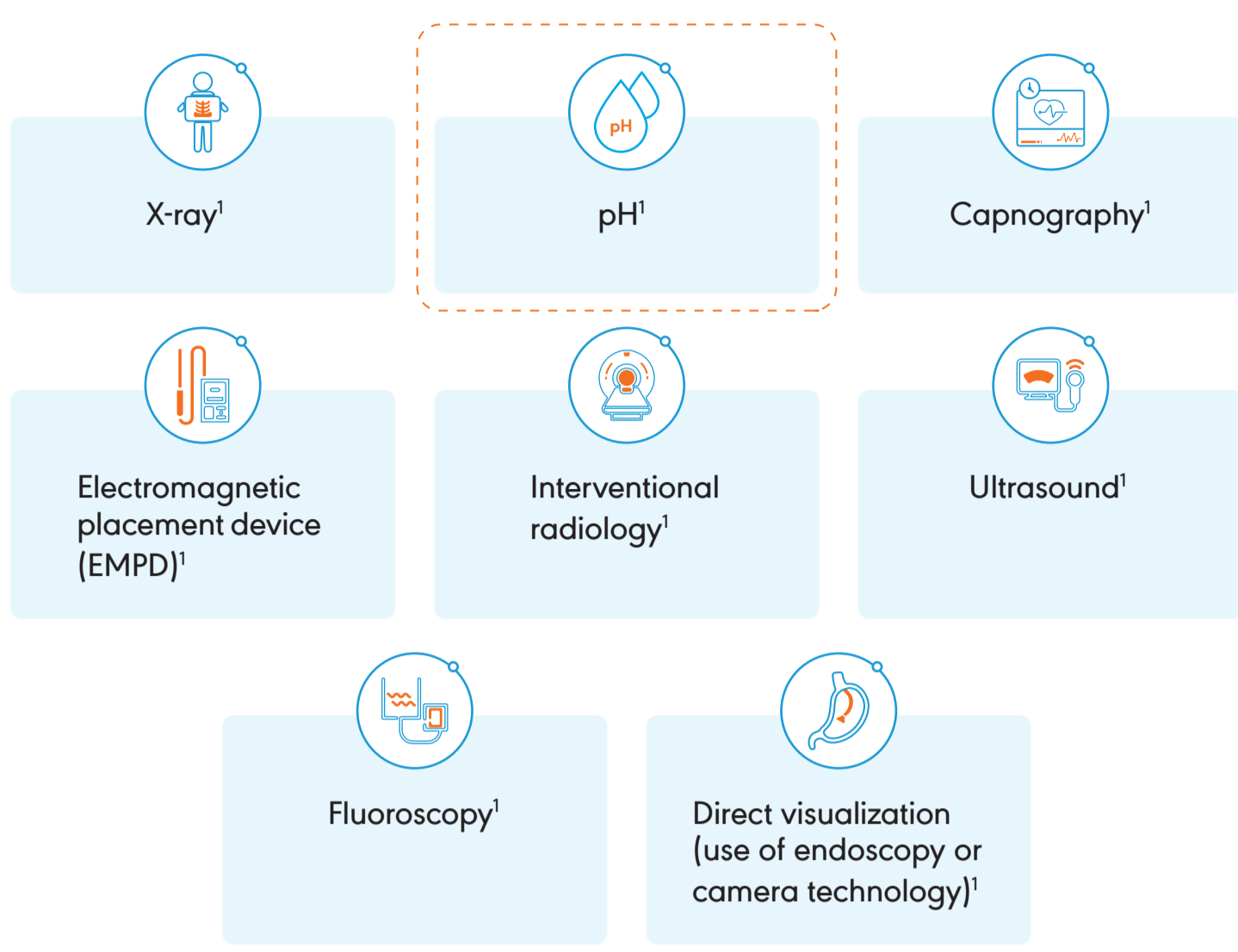
Nasoenteric feeding tube placements may be associated with adverse events.<sup>1</sup>

- Need for proper training to prevent devastating complications and significant patient harm related to misplacement.<sup>1</sup>

Safe tube placement and placement verification techniques are of primary importance.<sup>1</sup>

- Feeding tube placement must be followed by tube tip verification prior to the commencement of enteral nutrition.<sup>1</sup>

Techniques include—



However, each of these techniques has its own drawbacks.<sup>1</sup>

## Challenges of using pH testing technique for feeding tube placement confirmation

- Individual performing the test cannot be color-blind.<sup>1</sup>
- Need for periodic quality control testing and annual competency to fulfill point-of-care testing requirements.<sup>1</sup>
- Can be false negative if the tube is in the lungs and patient has aspirated gastric fluid.<sup>1</sup>
- Drop in total caloric delivery if feeding needs to be held to check pH.<sup>1</sup>
- Cannot be used to confirm post pyloric tube placement.<sup>1</sup>

## Did you know ?

- One study reported being unable to obtain an aspirate in 69% of their patients. In another study, ~33.5% of aspirates were obtained only after additional measures such as air insufflation into the nasogastric tube, lateral positioning of the patient, and reattempting after an hour which resulted in delayed feeding.<sup>2</sup>
- Certain factors like continuous feeding and pH lowering medications would likely interfere with the pH of the gastric aspirates.<sup>2</sup>
- There is a possibility of false negative results in certain patient populations. Nasogastric aspirate of a patient with right tonsillar squamous cell carcinoma showed a pH of 4.5 despite the tube being in the chest.<sup>2</sup>

## Benefits of using electromagnetic (EM)-guided placement technique for feeding tube placement

- Visual tracking of the tube pathway.<sup>1</sup>
  - Helps avoid lung placement and complications.<sup>1</sup>
  - Placement at bedside enabling expedited placement.<sup>1</sup>
  - Nurses or dietitians can be trained to use the technique.<sup>1</sup>
  - Better accuracy compared to X-ray.<sup>1</sup>
  - Decreased radiation exposure.<sup>1</sup>
  - Cost savings associated with reduced X-ray usage.<sup>1,3,4</sup>
  - Allows for gastric and post pyloric tube placement.<sup>1,5</sup>
  - Provides increased efficiency for small bowel tube placement.<sup>1</sup>
- Reduced time to feed<sup>1</sup>

Feeding tube insertion using EM-guided placement technique requires focused training until confirmation of necessary skills.<sup>4</sup>

## Our Solution

Feed patients faster, so they recover faster.<sup>6</sup>

An electromagnetic stylet provides real-time location information on the tube tip placement within a patient's anatomy.<sup>6</sup>

On-screen visualization provides immediate feedback on tube placement.<sup>6</sup>



- ### Efficient placement<sup>6</sup>
- Visual tracking of the tube pathway.
  - Direct tubes to desired feeding placement with real-time feedback.
  - Immediately identify misplaced tubes.
  - Minimize complications, such as lung placements.

- ### Timely feeding<sup>6</sup>
- Can significantly reduce time-to-feed.
  - More efficient than blind placements with X-ray confirmation.

- ### Reduced burden<sup>6</sup>
- Address feeding needs more quickly.
  - Can improve patient outcomes.
  - Save time and resources.

Allows clinicians to confidently place tubes in an optimal feeding position, quickly confirm location, and reduce the time to nutrition delivery.<sup>6</sup>

Institution protocols must always supersede the use of the CORTRAK<sup>®</sup>2. Clinical judgment must always take precedence.<sup>7</sup>

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 4. McCutcheon KP, Whittet WL, Kirsten JL, et al. Feeding Tube Insertion and Placement Confirmation Using Electromagnetic Guidance: A Team Review. JPEN J Parenter Enteral Nutr. 2018; 42(1):247-254. 5. Taylor S, Allan K, McWilliam H, et al. Confirming nasogastric tube position with electromagnetic tracking versus pH or X-ray and tube radio-opacity. BJN. 2014;23(7):352-8.  
 6. Avanos CORTRAK<sup>®</sup> 2 ANZ brochure. 7. CORTRAK 2 Quick Start Guide\_15M1360.