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GE Healthcare uses AI to assess ETT placement for COVID-19 patients

24 November 2020 | News

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GE Healthcare has announced a new artificial intelligence (AI) algorithm to help clinicians assess Endotracheal Tube (ETT) placements, a necessary and important step when ventilating critically ill COVID-19 patients. The AI solution is one of five included in GE Healthcare's Critical Care Suite 2.0, an industry-first collection of AI algorithms embedded on a mobile x-ray device for automated measurements, case prioritization and quality control.

Research shows that up to 25 percent of patients intubated outside of the operating room have misplaced ETTs on chest x-rays, which can lead to severe complications for patients, including hyperinflation, pneumothorax, cardiac arrest and death.

Up to 45% of ICU patients, including severe COVID-19 cases, receive ETT intubation for ventilation. While proper ETT placement can be difficult, Critical Care Suite 2.0 uses AI to automatically detect ETTs in chest x-ray images and provides an accurate and automated measurement of ETT positioning to clinicians within seconds of image acquisition, right on the monitor of the x-ray system. In 94% of cases, the ET Tube tip-to-Carina distance calculation is accurate to within 1.0 cm.

- GE Healthcare's algorithms are a fast and reliable way to ensure AI results are generated within seconds of image acquisition, without any dependency on connectivity or transfer speeds to produce the AI results.
- Results are then sent to the radiologist while the device sends the original diagnostic image, ensuring no additional processing delay.
- The AI suite also includes several quality-focused AI algorithms to analyze and flag protocol and field of view errors, as well as auto, rotate the images on-device.