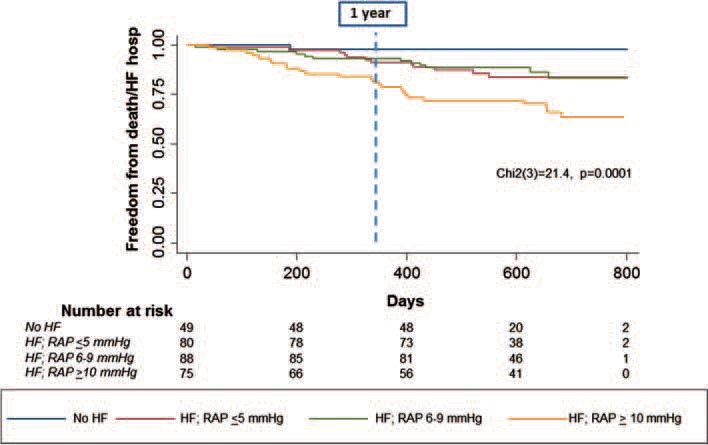


**Figure 1:** Measurement of right atrial pressure using near-infrared spectroscopy. With the patient reclining and head and neck elevated at 45o, the external jugular vein was identified and right atrial pressure measured using near-infrared spectroscopy (Venus 1000, Mespere LifeSciences, Canada), a portable device that includes adhesive patches connected to a reading electrode placed over the external jugular vein on the right side of the neck and a reference point aligned with the right atrium (the fourth intercostal space at the mid- anteroposterior diameter of the chest wall). Once stable waveforms and readings are obtained, the device records right atrial pressure (in mmHg).



**Figure 2:** Kaplan-Meier curves for the primary outcome of death from all causes and heart failure (HF) hospitalizations. Compared with those with normal right atrial pressure (RAP) by near-infrared spectroscopy (<=5 mmHg, in red), HF patients with high RAP (>=10 mmHg, in yellow) had more than a two-fold higher risk of dying or being hospitalized for HF (hazard ratio 2.38, 95% confidence interval: 1.19 - 4.75, P = 0.014).