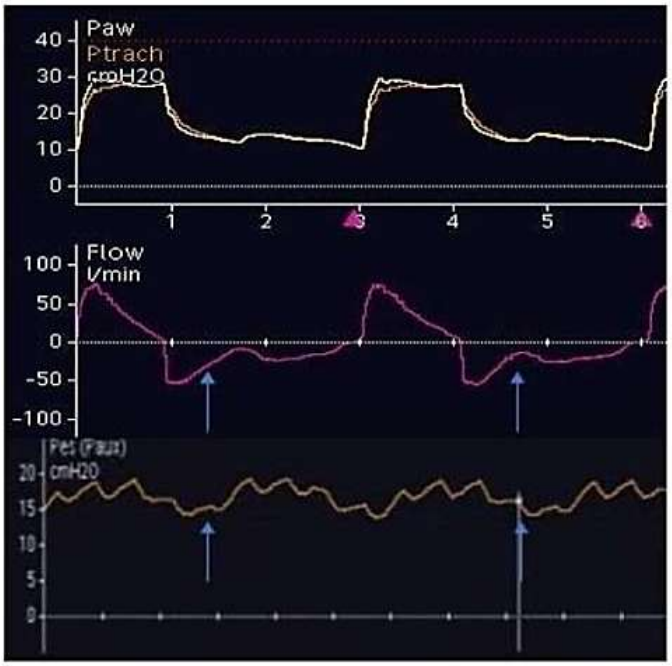

Figure 1: airway-time (top), flow-time (middle), and esophageal pressure-time (bottom) curves showing missed trigger (blue arrows). Breath would start at the negative deflection of the esophageal balloon and would trigger the breath.

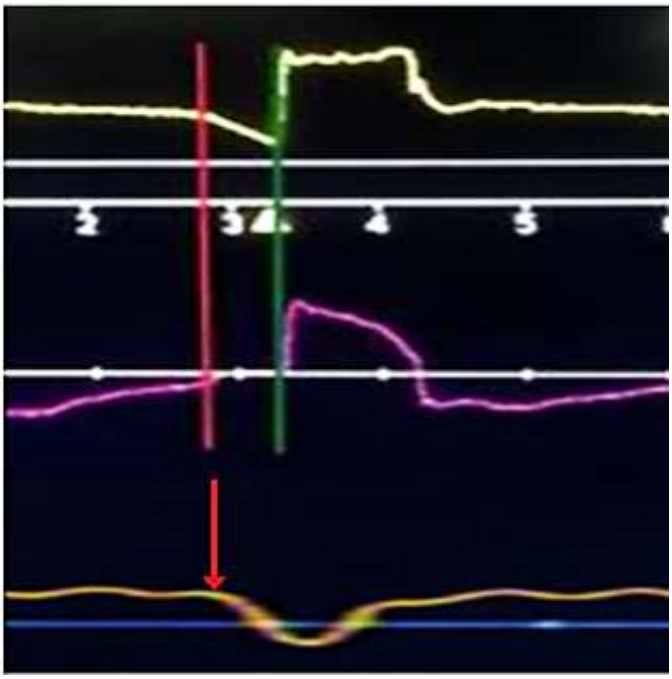

Figure 2: airway-time (top), flow-time (middle), and esophageal pressure-time (bottom) curves showing delayed trigger (distance between red and green line). Breath would start at the negative deflection of the esophageal balloon (red arrow) and would trigger the breath.

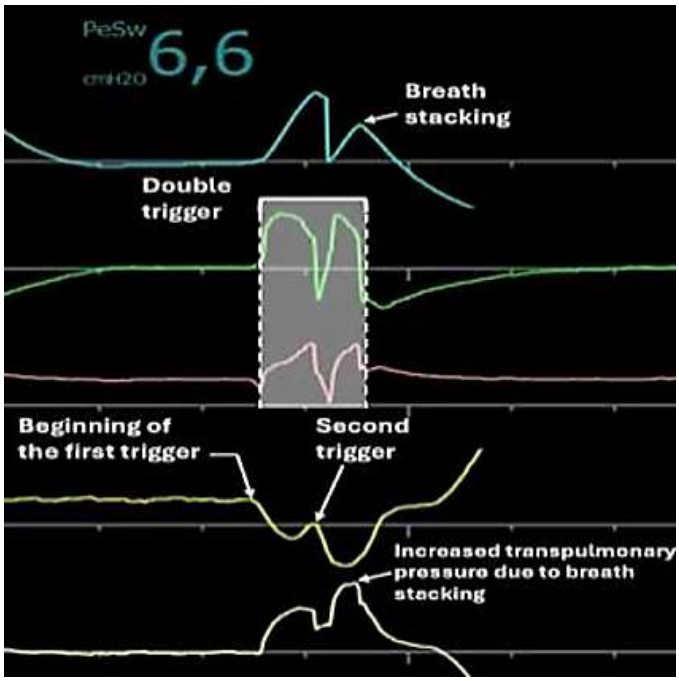

Figure 3: Double trigger, two consecutive triggers can be observed (box between dotted lines). An increase in transpulmonary pressure secondary to the presence of breath stacking is also observed. From reference 36

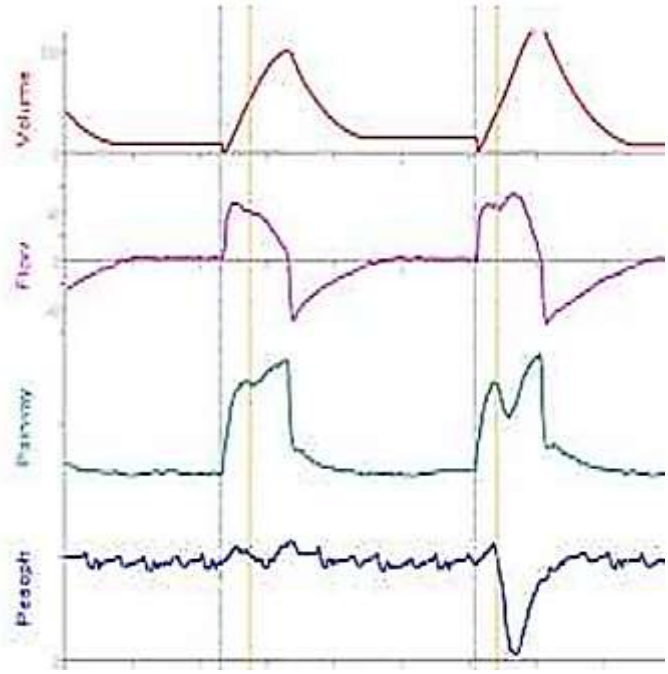

Figure 4: Reverse trigger. The blue lines show the beginning of the stimulus (ventilator insufflation), while the yellow lines show the beginning of inspiratory effort. From reference 35

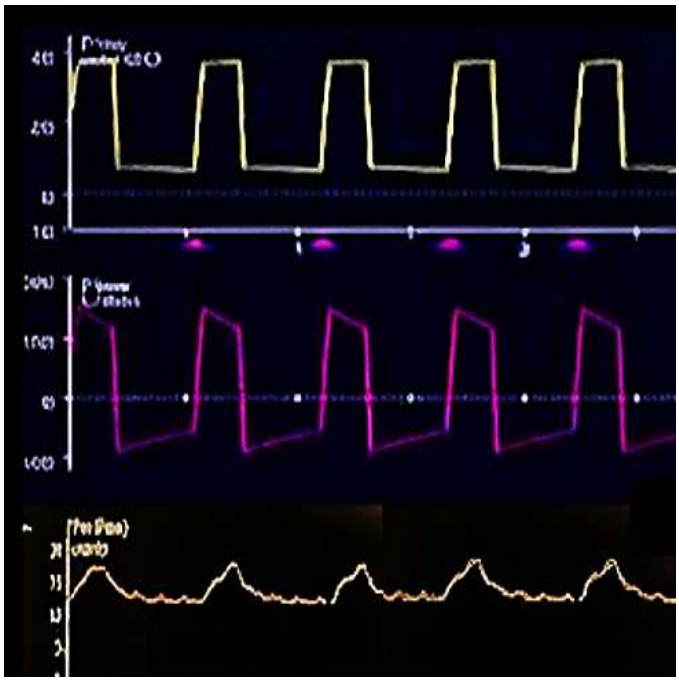

Figure 5: Auto-trigger: Multiple triggered breaths above the mandatory set number (pink arrowsin the top pressure-time tracing) but with no negative deflection of the esophageal balloon tracing (bottom orange waveforms).

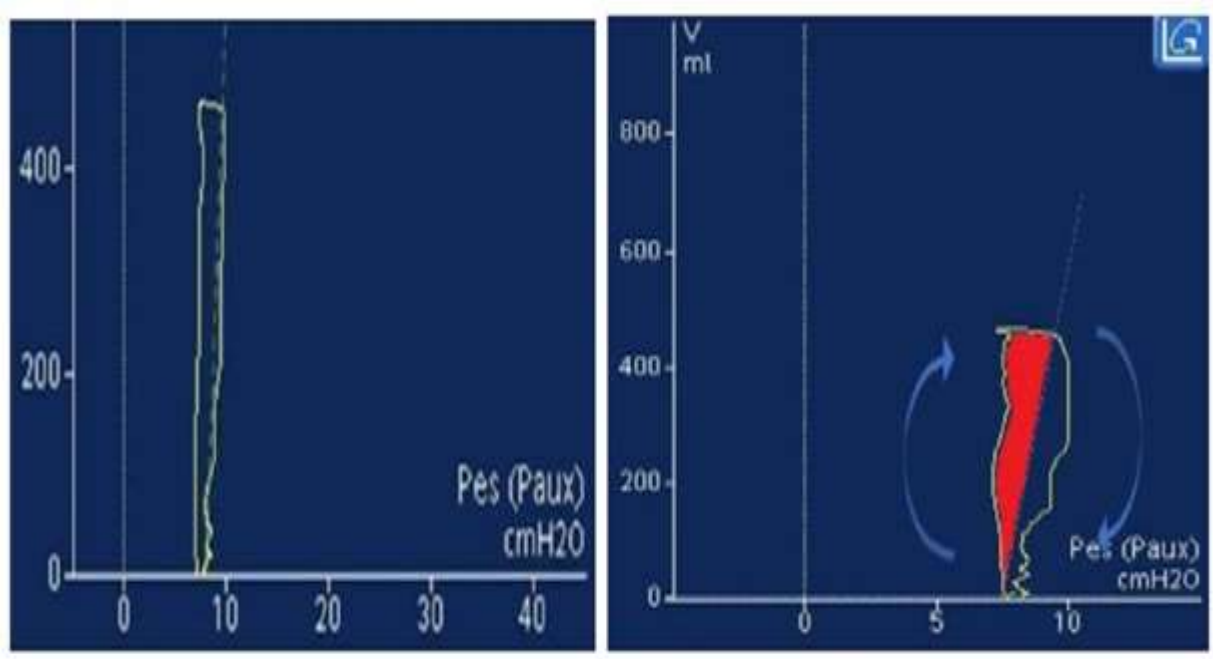

Figure 8: Esophageal pressure – Volume loop in passive condition (left), and active breathing condition (right). The blue dashed line between the inspiratory and expiratory phase can represent the chest wall elastance (from reference 2).

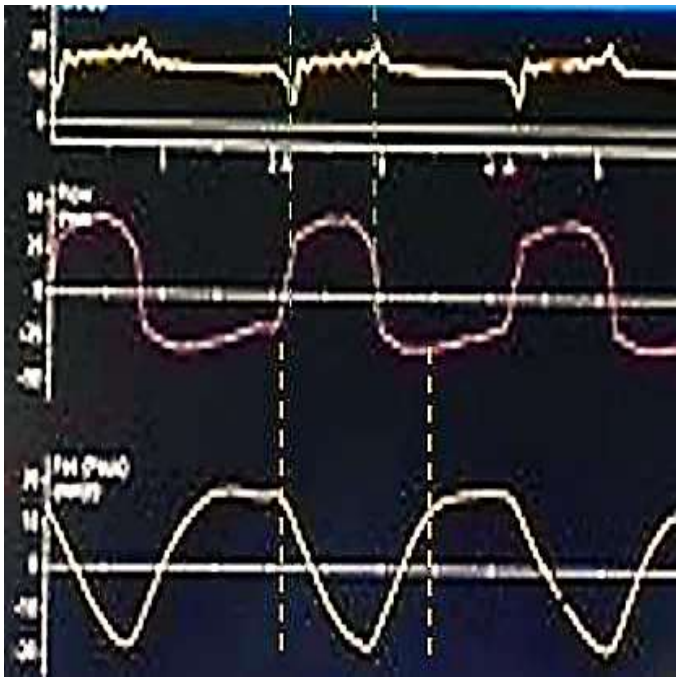

Figure 7: Early cycling. From top to bottom, the curves represent pressure-time, flow-time, esophageal pressure-time. The green top dashed lines show the beginning of the mechanical breath while the bottom dashed yellow lines show the beginning and the end of the patient effort.

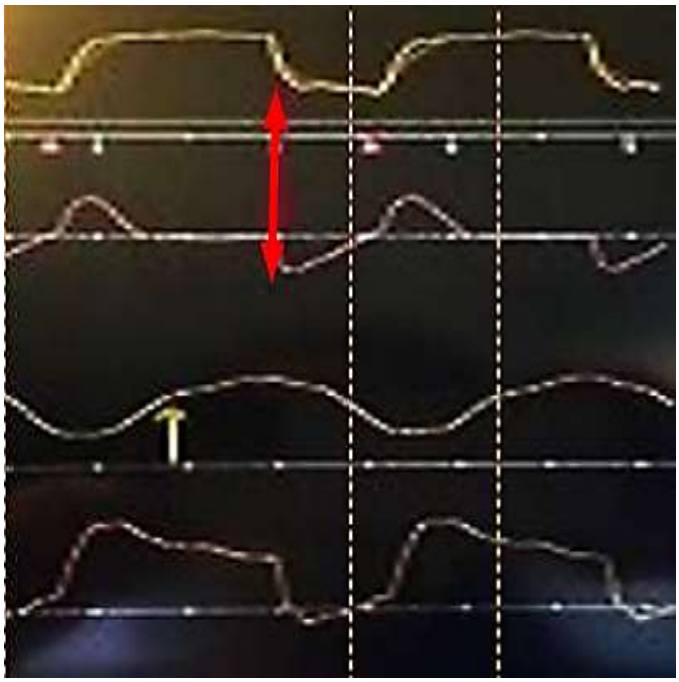

Figure 8: Late cycling. The yellow arrow points to the end of the patients' effort, and the red double arrow points to the time cycled mandatory breath, the dashed orange lines indicate the beginning and the end of the patients' next breath.