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**Title:** Emphysematous lung sealant (ELS) therapy reduces CRP, an index of inflammation, in patients with severe emphysema (clinicaltrials.gov #NCT NCT00884962)

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**Body:** Introduction: C-Reactive Protein (CRP) is a biomarker of inflammation and predictor of mortality in emphysema. Lung volume reduction surgery has been shown to decrease inflammation and CRP 1 year post treatment.<sup>1</sup> Objective: Assess effects of bronchoscopic ELS therapy on CRP 1 year post therapy. Methods: Study NCT00884962 assessed responses to ELS therapy in patients with advanced emphysema.<sup>2</sup> Physiological outcomes and CRP values in 29 patients were evaluated out to 48 weeks. Results: Baseline CRP was elevated ( $5.3 \pm 8.7$  mg/L) vs. normal; 16 patients had values indicating "high-risk" ( $> 3$  mg/L). By 48 weeks CRP was significantly below baseline ( $2.2 \pm 3.2$  mg/L,  $n=29$ ,  $p=0.041$ ); (Figure 1) only 9 patients had persistent "high-risk" CRP values.

BODE Index (BI) also decreased, but changes did not correlate with CRP, suggesting ELS therapy influences outcomes by 2 independent mechanisms: reducing inflammation and improving physiology. Conclusions: ELS is associated with a reduction in CRP in advanced emphysema and may reduce chronic inflammation and mortality risk through a compensatory anti-inflammatory response and/or elimination of inflamed tissue.<sup>1</sup> This observation is now being validated prospectively in a large multi-national randomized controlled trial. 1. Mineo, D. et al., AJRCCM, Vol 181; 806: 2010. 2. Herth F.J. et al., Expert Rev. Med. Devices 8(3); 307: 2011.