Whisper® Validation

**Whisper® Lung Score Histopathology Study – Demonstrating Sensitivity and Specificity**

Whisper® was first evaluated in a histopathology study whereby Whisper® lung scores were used to predict the presence of BRD lung lesions. The results of this multi-pathology lab necropsy study demonstrated the statistically significant ($p < 0.05$) predictability of Whisper® lung scores and the following BRD lung lesions: Interstitial Pattern, PMN Infiltration, Monocyte Infiltration, Diffuse Distribution, Chronic Inflammation. The results also depicted the pathophysiological time course of disease progression one would expect to observe.

**Multi-Feedlot/Multi-User Whisper® Lung Score Analysis – Demonstrating Reliability and Objectivity**

An analysis of more than 3,000 Whisper® lung scores from multiple feedlots differing widely in; climate, animal risk purchasing strategies, mortality rates, and user lung scoring experience was performed. The results show that Whisper® lung scores from each feedlot had similar cumulative distributions despite the heterogeneous conditions and feedlot management practices where Whisper® was used.

**Whisper® Lung Score Case Fatality Analysis – Demonstrating Predictability**

Analyzing Whisper® lung scores from 2,738 first pulled BRD animals, a logistic regression model revealed a statistically significant predictability of animal mortality using Whisper® lung scores ($p < 0.0001$). These cases were obtained from multiple heterogeneous feedlots spanning multiple feedlot turns. The analysis results show that the likelihood of mortality increases significantly for each increase in Whisper® lung score.