There is an overall trend of the relative median amplitude of HHb variable to be higher in men with BOO. This seems to be of physiologic origin due to increased amount of oxygen consumed during voiding. NIRS data can be of diagnostic value for BOO in men with LUTS.

Aim
To determine the difference in response of NIRS of the bladder during voiding between men with and without BOO.

Methods
• 36 men with LUTS.
• IPSS questionnaires, prostate volumes by US.
• Pressure flow study (PFS) with simultaneous NIRS of the bladder.
  • Amplitudes of HHb, O$_2$Hb, and Hb$_{diss}$ were calculated at Q$_{max}$, relative to baseline.
  • Patients were urodynamically classified as obstructed and unobstructed.
  • Recursive partition analysis (RPA) to determine the best predictor(s) of BOO using:
    1- NIRS amplitudes.
    2- Combined data of prostate volume, IPSS, PVR, and Q$_{max}$.
    3- Combined data of NIRS amplitudes, prostate volume, IPSS, and Q$_{max}$.

Results
• 28 patients had BOO, 8 unobstructed.
  • The median HHb amplitude was significantly higher in obstructed group.
  • RPA of:
    1- NIRS amplitudes correctly reclassified 89% of patients [AUC: 0.91].
    2- Combined IPSS, prostate volume, PVR, and Q$_{max}$ correctly reclassified 72% of patients [AUC: 0.84].
    3- Combined data of NIRS amplitudes, prostate volume, IPSS, and Q$_{max}$ revealed a significantly (P < 0.01) higher rate of correct reclassification in 89% of patients [AUC: 0.96].

Conclusion
There is an overall trend of the relative median amplitude of HHb variable to be higher in men with BOO. This seems to be of physiologic origin due to increased amount of oxygen consumed during voiding. NIRS data can be of diagnostic value for BOO in men with LUTS.