

Table S1. Category-distinguishing wavenumbers for Normal *vs.* Inflammatory *vs.* Barrett's *vs.* LGD *vs.* HGD *vs.* OAC using spectra tissues samples obtained for SPA-QDA model

Wavenumbers (cm ⁻¹)	Tentative Assignments
~1393	Symmetric CH ₃ bending of the methyl groups of proteins [29, 41] or aliphatic side groups of the amino acid residues [30]
~1540	Protein amide II absorption – predominately b-sheet of amide II [28]
~1589	Ring C-C stretching of phenyl [42]
~1640	Amide I band [23]
~1690	Peak of nucleic acids due to the base carbonyl stretching and ring breathing mode [30]
~1745	Ester group (C=O) vibration of lipids [28, 31]

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