Electronic Supplementary Material (ESI) for Analyst.

Quantitative Mass Spectrometry Imaging of Glutathione in Healthy and Cancerous Hen Ovarian Tissue Sections by Infrared Matrix-Assisted Laser Desorption Electrospray Ionization (IR-MALDESI)

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Electronic Supplementary Information

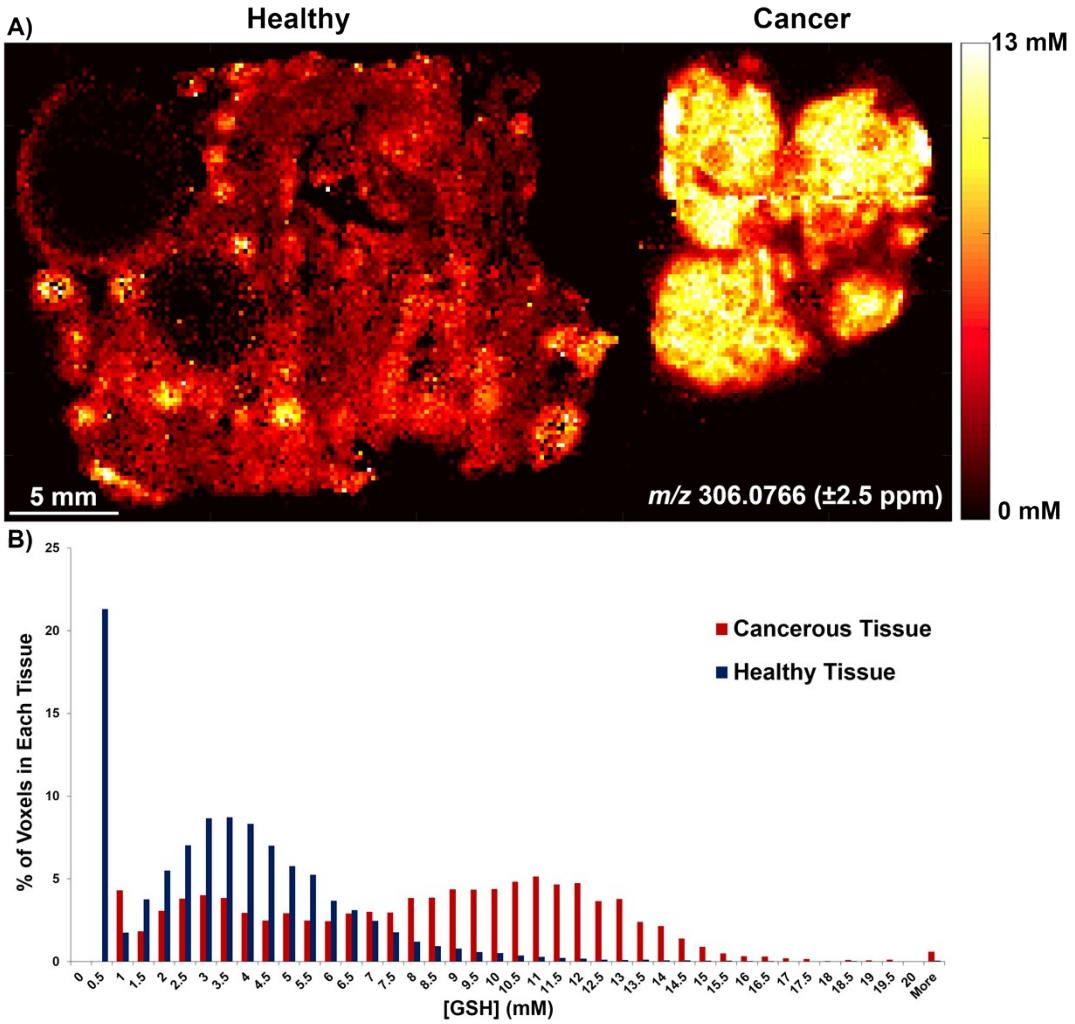


Figure S1. Concentration heatmaps of GSH in healthy and cancerous tissue sections **(A)** and the histograms of concentration frequency in % of total voxels in each tissue **(B)**, demonstrating the heterogeneity of GSH concentration across each tissue section. The % voxels in each tissue are shown in the y-axis of histograms since the absolute number of voxels in tissues varied significantly due to the difference in sizes of the tissues.

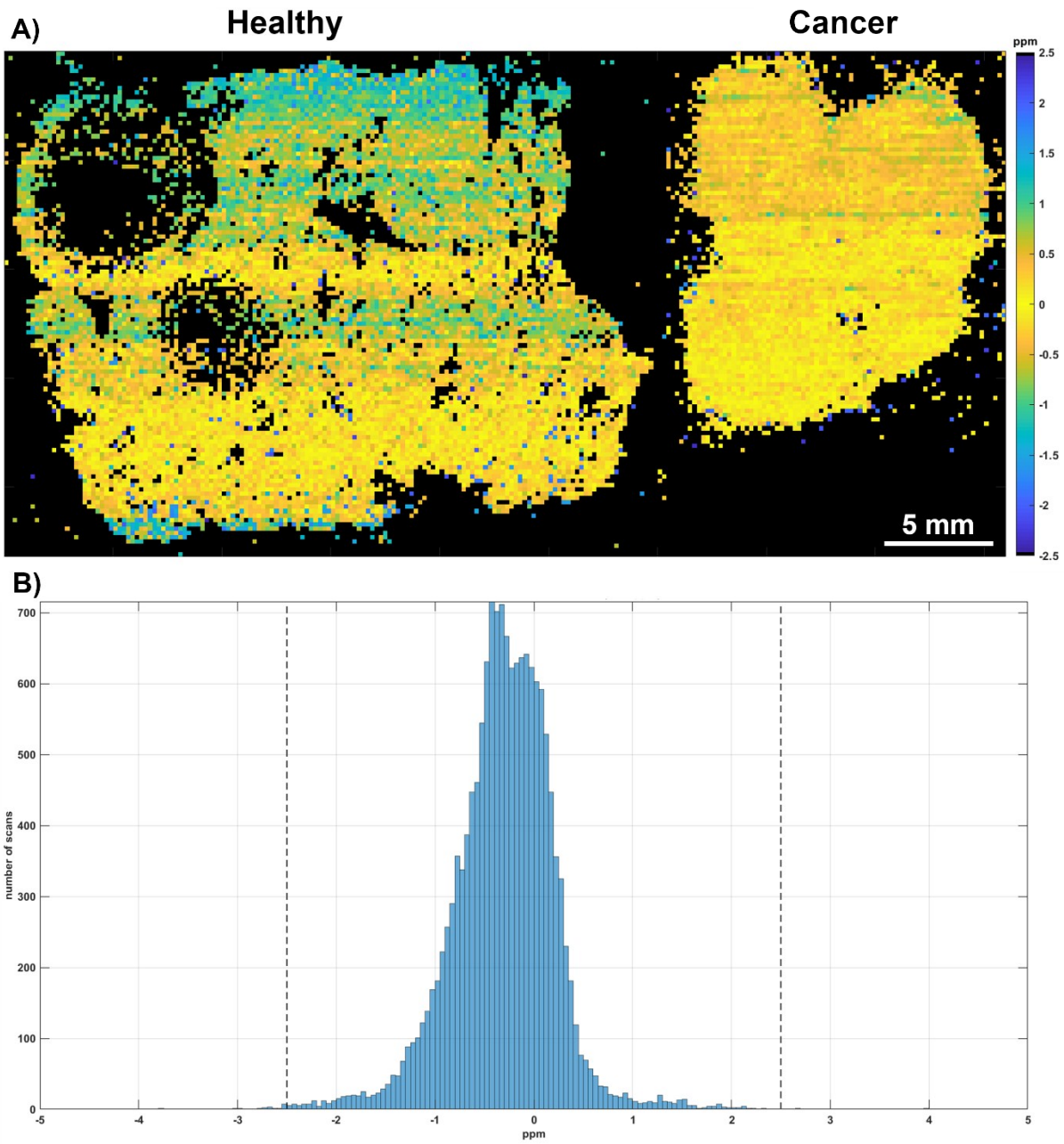
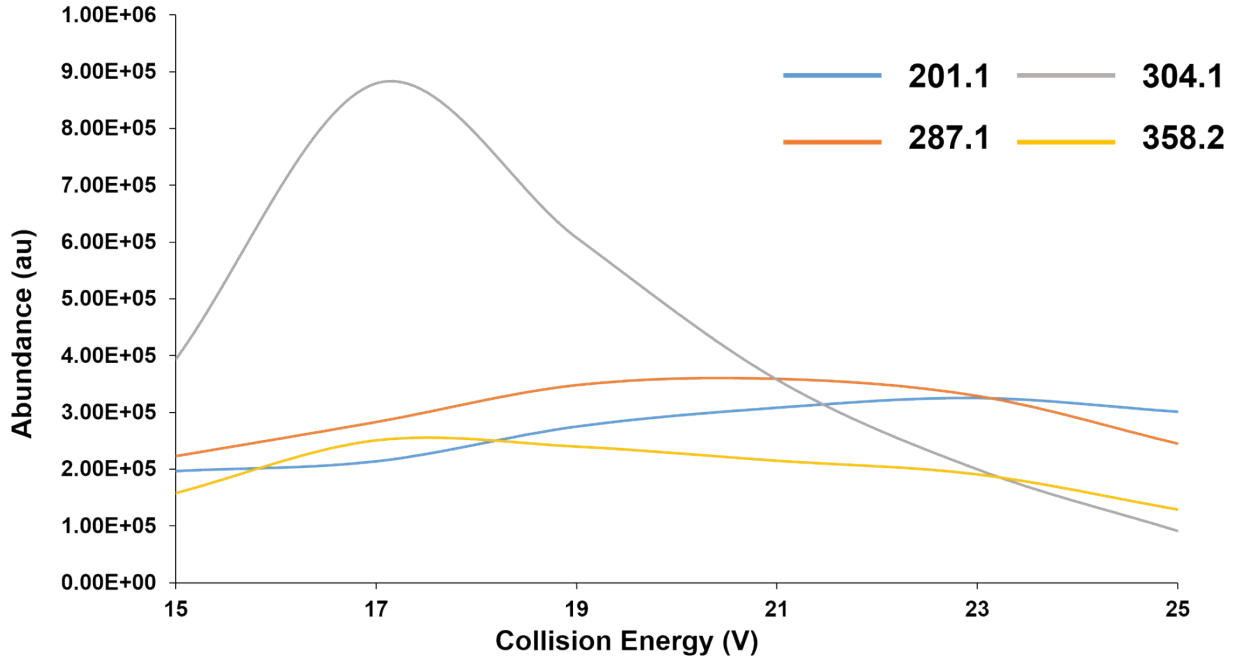


Figure S2. **A)** MMA heatmaps of endogenous GSH (*m/z* 306.0766) in healthy and cancerous hen ovarian tissue sections, **B)** histogram of the MMA for all scans across the region of interest. The dashed lines indicate the ±2.5 ppm tolerance used for generating ion images. It can be seen that the MMA of GSH falls in this 5 ppm window.



NAT GSH-NEM Transition	Collision Energy (V)
433.1 → 201.1	23
433.1 → 287.1	20
433.1 → 304.1	17
433.1 → 358.2	17

Figure S3. Top: breakdown curves showing the abundance of 4 different transitions of NAT GSH-NEM as collision energy (CE) increases. Bottom: the optimized CE for each transition chosen based on these data.