Fig 1: Methodology overview.

Fig 2: The spectral power distributions of the 41 bands used to obtain the multispectral images shown in corresponding hue.

Fig 3: Correlation analysis of the registered images between the truth and the modern device. The correlation was calculated based on CIE *L\**, while the reconstructed truth image (sRGB) is shown to visualize the image content. The cursor was used to choose vertical (pink curves, x=951) and horizontal (cyan curves, y=656) cross-sections. The CIE *L\** values of the cross-sections are shown beside the x- and y-axes. The solid curves represent the truth and the dotted curves the modern device, which generated lower *L\** values overall. The correlation coefficients are 0.9755 and 0.9697 for vertical and horizontal cross-sections, respectively.

Fig 4. Spectral transmittance samples (right column) of the colon (top row), kidney (center row), and skin tissue samples (left column). Each curve represents the spectrum of a single pixel in the image.

Fig 5. Images obtained in this study. From left to right, the columns contain images from the multispectral imaging system, modern, legacy, and monochrome WSI scanners. From top to bottom, the rows are for the colon, kidney, and skin tissue samples.

Fig 6. ΔE00 for each pixel shown in three-dimensional heat maps.

Fig 7. Histograms of the ΔE00 for three tissue samples.

Fig 8. Which pixels have higher ΔE00 than the monochrome device? Augmented images showing colored pixels that have higher ΔE00 than their counterparts from the monochrome device of the same tissue type. The remaining pixels, which have lower ΔE00, were filled with black.

Table 1. The mean and standard deviation of color differences ΔE00.

Table 2: Normalized mean ΔE00 with respect to the monochrome images.