Supplementary Material

Slide-to-Slide Tissue Transfer and Array Assembly from Limited Samples for Comprehensive Molecular Profiling

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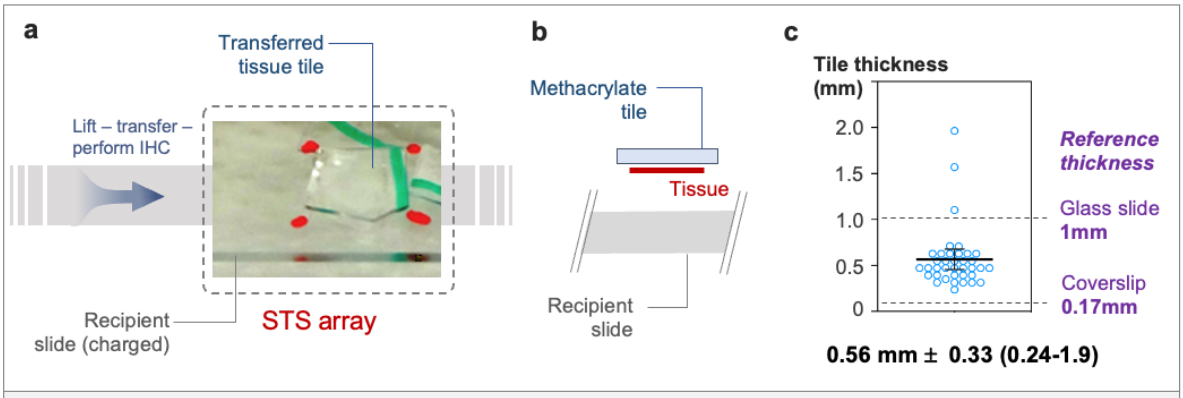
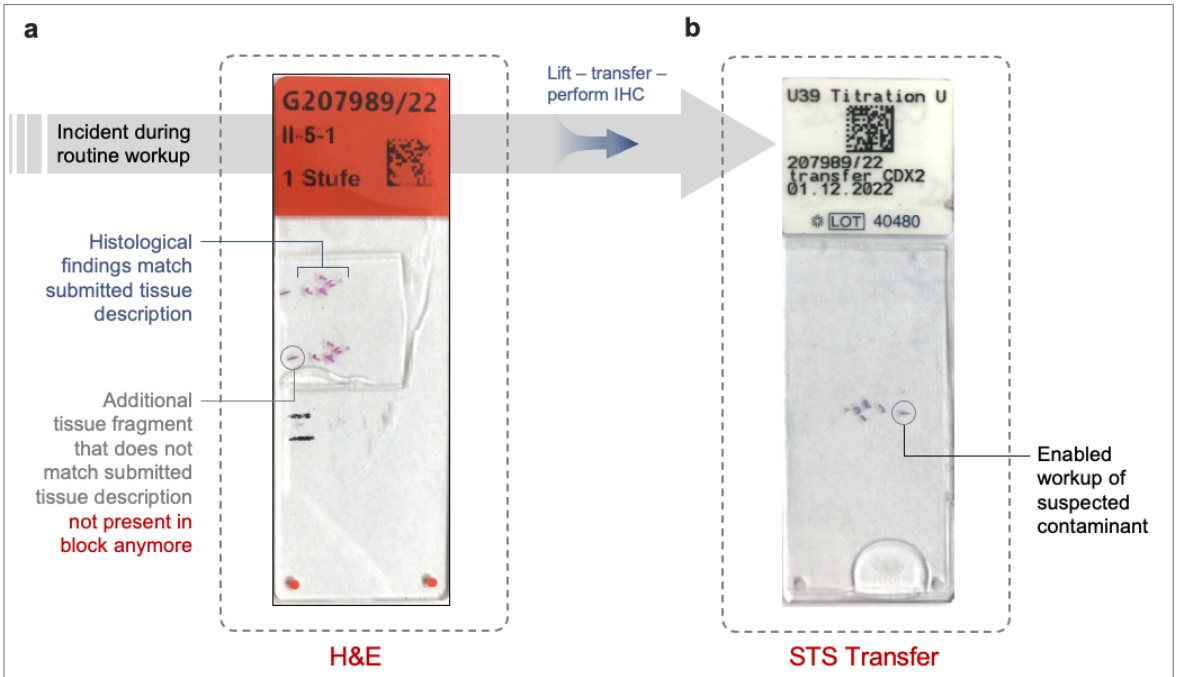
Supplementary Figure 1



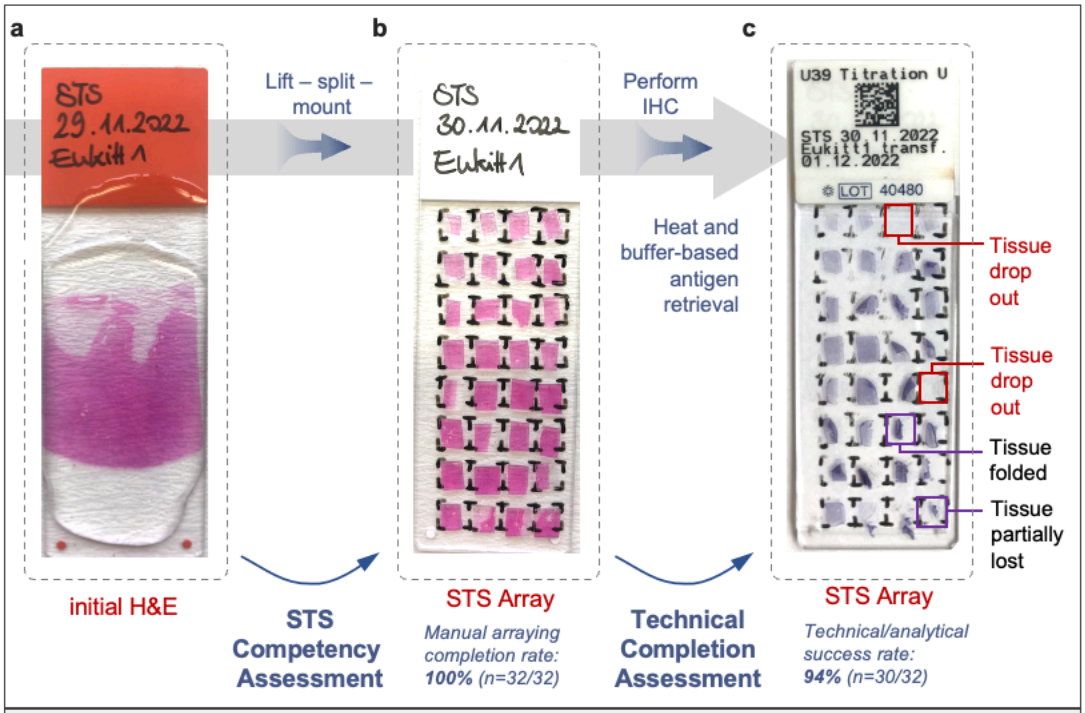
Supplementary Figure 1. Configuration of the STS array components. (**a**) High-power view of a single methacrylate tile on the recipient slide. (**b**) Vertical orientation of methacrylate tile, tissue and recipient slide. (**c**) Methacrylate thickness measurements in n=37 subsequently mounted tiles; average ± standard deviation (range min-max). *Abbreviations:* STS, slide-to-slide.

Supplementary Figure 2



Supplementary Figure 2. Example of STS Transfer in the context of incident management. (**a**) The suspected contaminant on the H&E slide is present in multiple levels; contaminant was not present in deeper levels (not shown). (**b**) After lifting and transfer to a charged slide, additional immunohistochemical workup clarified distinct origin. *Abbreviations:* H&E, haematoxylin & eosin; IHC, immunohistochemistry; STS, slide-to-slide.

Supplementary Figure 3



Supplementary Figure 3. Competency Assessment and Technical Success Rate of the STS Array Assembly Technique. To practice the STS technique or to assess manual competency in performing the lift–split–mount steps (steps 4/5/6), we use a replaceable H&E section. (**a**) After coverslip lifting and xylene immersion the slide is covered with methacrylate. After drying, the slide is immersed in water overnight (not shown). Subsequent steps include lifting, splitting and mounting (see Supplementary Video). (**b**) The assembled STS array allows assessment of the manual competency in mounting the individual pieces ('tiles'; manual completion rate). (**c**) The same array can be used to assess technical success rate; shown here as an immunohistochemical stain for cytokeratin 7. The technical success rate is affected by the principal antigen retrieval technique (and sub-conditions) as well as the counterstaining and final coverslipping methods. The overall performance of the STS array technique is a combination of manual competency during assembly and technical/analytical success. For educational purposes we depict an STS array with 2 complete tissue dropouts, partial losses, and folds. *Abbreviations:* H&E, haematoxylin & eosin; IHC, immunohistochemistry; STS, slide-to-slide transfer

Supplementary Video Description

Clip that outlines all steps of the slide-to-slide (STS) transfer technique including a practice exercise for competency assessment before working with precious tissues.
Length: 2:56 min
Format: .mp4