

28 Shifting to Virtual MDT in the COVID-19 Era and Beyond

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Aim: The COVID19 pandemic has accelerated the need for staff to work remotely. Our aim was to demonstrate how a next-generation digital platform could be used to create a virtual MDT ecosystem in order to manipulate holographic 2D and 3D images in real-time.

Method: This study involved setting up a mock virtual MDT using de-identified DICOM files from a patient who had been treated for colorectal cancer and then subsequently found to have a liver metastasis. The image file was segmented and converted into a 2D and 3D format for visualisation within Microsoft HoloLens 2[®] (smart glasses) using Holocare Solutions[®] (Mixed Reality software).

Results: A seamless cross-border pipeline was developed that involved "clinician" training, DICOM segmentation and virtual connection. We successfully performed a virtual MDT with participants able to visualise and manipulate a virtual 3D organ in real-time. The digital network remotely connected sites in England and Norway. The streaming quality was stable and HIPAA compliant. Each participant could observe others as "avatars" interacting with images within the virtual ecosystem allowing image characteristics to be highlighted.

Conclusions: We successfully conducted a virtual MDT using novel hardware and software. Our intention is to conduct a large-scale study to assess the platform's effectiveness in "Real World" MDTs.