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Federated EndoViT: Pretraining Vision Transformers via Federated Learning on Endoscopic Image Collections. Translational Surgical Oncology, NCT Dresden; Kirchner et al., 2025
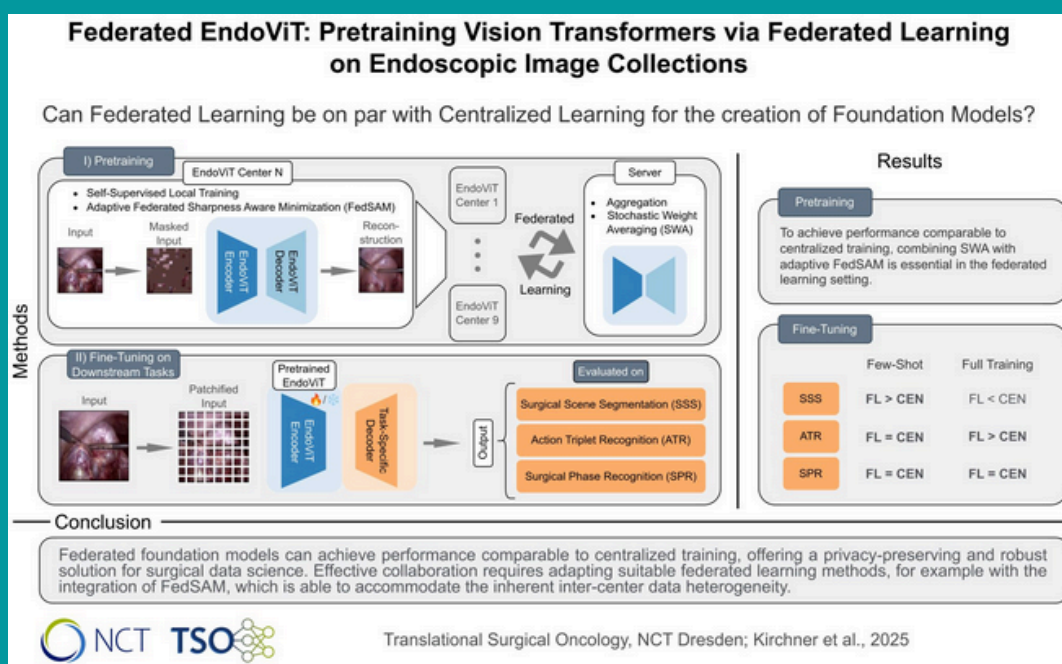
Securing the Future of Surgical AI at National Center for Tumor Diseases Dresden (NCT/UCC)

By Sebastian Bodenstedt (NCT)

How can we train powerful AI models in healthcare without compromising patient privacy?

We're addressing this challenge through NearData Consortium project — combining federated learning and confidential computing to enable secure, privacy-preserving collaboration between hospitals.

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Our latest approach, FL-EndoViT, adapts Vision Transformers for surgical data analysis without centralizing patient information. With techniques like FedSAM and SWA, we've trained strong foundation models across distributed datasets — and the results look very promising!

Read the full article here: https://arxiv.org/pdf/2504.16612

From the authors Max Kirchner, Alexander C. Jenke, Sebastian Bodenstedt Fiona Kolbinger, Jakob Nikolas Kather, Dr. Oliver Lester Saldanha, Univ.-Prof. Dr. med. Martin Wagner, Stefanie Speidel

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