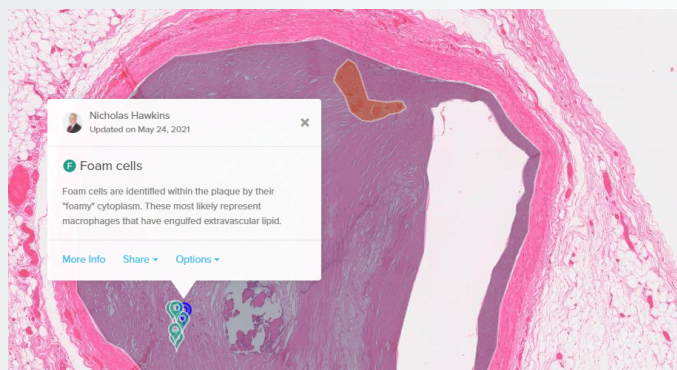


Challenge

The teaching of microscopy-based disciplines was revolutionized in the early 2000s with the digitization of glass slide sets. **Disseminating these large, specialized images (1-20GB) to students is challenging.** It requires purpose-built servers and software leading to costly duplication of resources and technology across the higher education sector. At the same time, it often limits the range and quality of resources available at different institutions.

Solution

Slice is an online image-based teaching platform that **facilitates inter-institutional sharing of large, high-quality images**, as well as expert knowledge about those images.



Slice allows academics to contribute their own images or utilize any of the 22,000+ existing high quality resources with **interactive and engaging education tools** that:

- Support face-to-face and remote teaching, enabling members to pivot to online learning without disruption;
- Encourage active learning with students controlling how they navigate images;
- Promote the creation and sharing of in-context annotations on images;
- Facilitate effective communication about feature identification between teachers and students;
- Enable group activities where students pinpoint responses that are collated for efficient review.

Learning Impact Outcomes

Medical students reported that using annotated images in Slice improved their clinical reasoning skills, understanding of gross pathology, and better supported their exam preparation (personal communication Pillai, 2022). Online teaching with Slice **significantly improved student examination results** (Waugh, 2022). Group activities provide **insights into student understanding and support timely identification of misconceptions**. They allow simple provision of personalized feedback and improve the understanding of key microscopic features by senior medical students (Sahota, 2016).

Return on Investment

Slice is supported by the BEST Network, a not-for-profit education collaborative established in Australia in 2012.



10 member institutions



270,000 students and teachers



6,340,000 image views

It provides the legal, ethical and financial framework needed for **cost-effective and equitable access to biomedical images and tools worldwide**. As a cloud-based tool, it provides the accessibility and scalability needed to respond quickly to current and future demand.

In this way, the Network supports a sustainable model of academic crowd-sourcing that frees teachers from the constraints of their institutional silos, to the benefit of student, teacher and institution alike.

