

Covera Health - Case study



How to establish ground truth for Medical AI models?



The Technology: Quality insights for medical providers and insurers

Covera Health Inc ('Covera') is based in New York, USA and is a leading AI-enabled technology company focused on improving patient outcomes via an integrated clinical intelligence platform. One of their projects relates to improving the quality of Musculoskeletal ('MSK') radiology reporting by reducing interpretive discrepancies through the use of an AI-enabled co-pilot reader. In order to establish the ground truth and curate a high-quality training dataset, Covera partnered with Labelata's network of sub-speciality trained clinical radiologists.

The challenge: Identifying the right experts and ensuring high quality

The challenge with this task lies in the significant variability among radiologists when interpreting MRI musculoskeletal exams. To maintain high-quality and consistent labeling, it is crucial to adhere to set clinical definitions. This alignment ensures the generation of accurate and reliable quality insights.



Labelata's team of highly skilled musculoskeletal radiologists helped Covera Health to produce valuable ground truth data in a large dataset of MSK examinations involving several body parts.



[HTTP://WWW.LABELATA.CH](http://www.labelata.ch)



[INFO@LABELATA.CH](mailto:info@labelata.ch)

Labelata's Solution

Step 1: Assemble network of highly qualified sub-speciality trained radiologists

Labelata assembled a team with over 25 years of musculoskeletal sub-speciality reporting experience. These experts were trained in Switzerland, Germany, the US, South America and Asia. Labelata shared CVs, sample reports and research papers written by the experts for Covera to appropriately vet and develop confidence in the team.

Step 2: Overcoming inter-expert variability

To shortlist appropriate candidates from a large pool of experts, radiologists were initially given a set of pilot cases which had already been labelled internally by Covera in order to compare accuracy and ensure the expert's quality of labelling was up to the required standard. Experts who had labels closer to the ground truth were selected.

Step 3: Training experts on in-house labelling tools

This project was personally led by Labelata's Chief Medical Officer, Dr Nikhil Mirajkar who is a consultant radiologist. Covera was able to provide training to Dr Mirajkar who then fed back to the rest of the team and trained the newly onboarded experts on Covera's bespoke annotation platform. This made the entire process more efficient for Covera who only had to provide the initial training once.

"Labelata's MSK experts very clearly understood our labeling needs and we were able to use their expertise for the benefit of our projects"

Benjamin Odry, Chief AI Officer, Covera Health

The conclusion: A highly scalable and consistent process to develop large training datasets

Labelata's team of experts were able to label a large volume of studies providing a very strong foundation for Covera's models. Covera was impressed by the first project focussed on the spine and extended the collaboration to other body parts including the knee and shoulder.

Labelata's international network of radiologists allows us to select the appropriate experts for any project in a timely and scalable manner. Annotation processes for such projects can be very time consuming and therefore are only scalable if there are a large number of experts available.



Interested in developing high quality training datasets requiring qualified medical experts?
Reach out to us anytime!
saad@labelata.ch