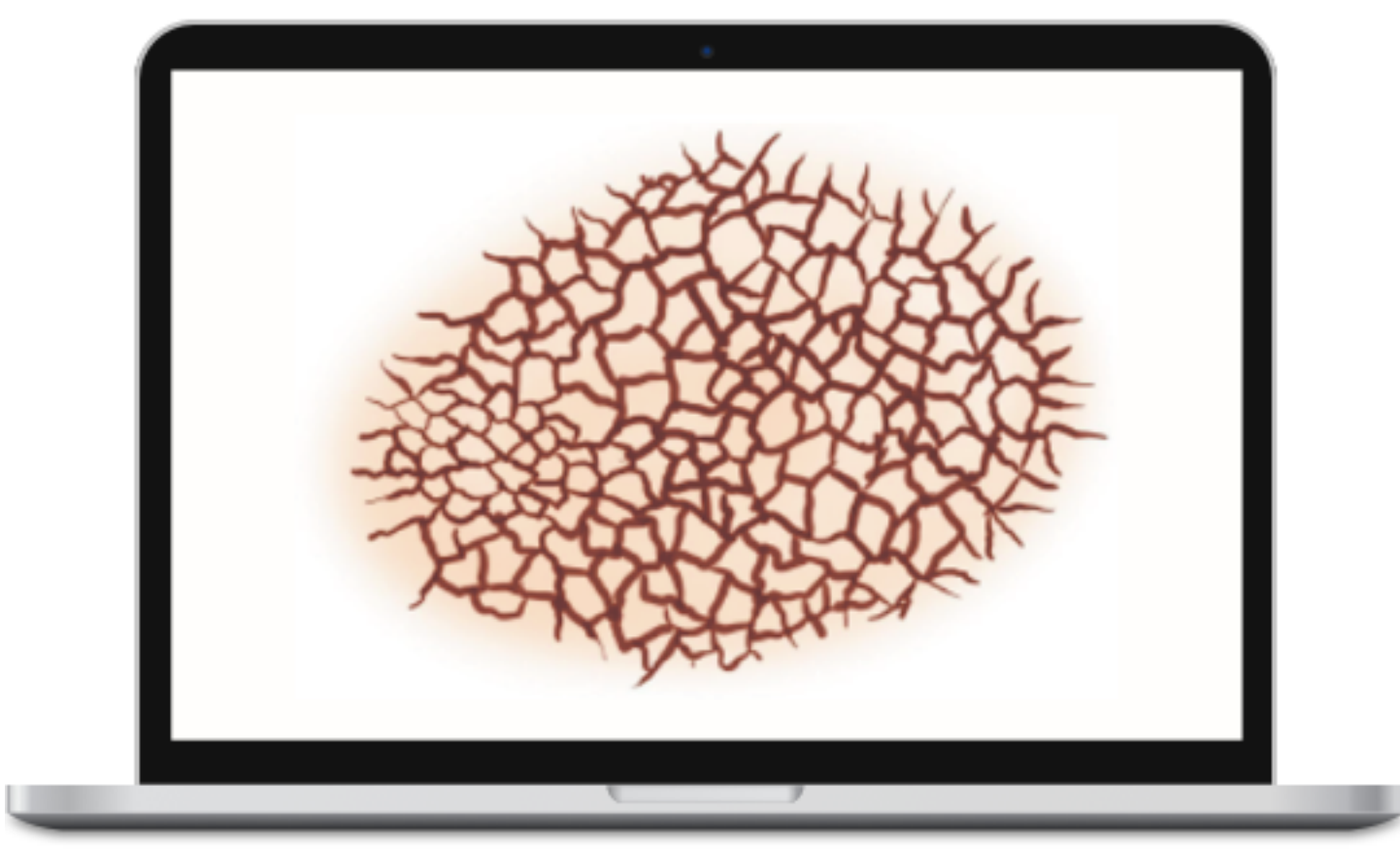




# Case Study: Detection and Labelling of Dermatological Phenomena by Data Annotators without Medical Background



## Client Profile

Industry: Electronics manufacturing  
Location: Belgium  
Size: 1,001 - 5,000 employees

## Company Bio

Our client is a Belgium-based global technology leader that develops networked visualization solutions for the healthcare market. Their products can be found from the radiology department to the operating room.

## Overview

In order to develop a smart dermatoscope that uses Artificial Intelligence to automatically detect skin pathologies, our client needed to label huge datasets. These datasets included images showing five different pathologies: pigment networks, negative networks, streaks, milia-like cysts, and globules. Our goal was to prove that annotators without a medical background could identify and label the right pathologies.

” We had doubts as to whether we should outsource to Ukraine, as high annotation quality is essential for our project. However, Mindy Support surpassed all our expectations!

— Client  
Project Manager

Dedicated Annotation Team

10

Annotation accuracy

98%

Cost savings

83%

## Challenge

Our client produces innovative healthcare devices, the development of which involves lots of manual data labeling. The type of data to be labeled made the situation more complicated, as labeling needed to be done by professional dermatologists. In order to help our client optimize labor costs and get the labeling job done, Mindy Support created a team of eight experienced annotators, one medical supervisor, and a project manager.

# WE GET IT DONE.

## Solution

Before our annotators started the job, our medical supervisor provided training materials and a short tutorial. But it was still challenging for them to mark pathologies fast and with high accuracy. In order to deal with all the issues that arose, Mindy Support decided to expand the training process:

- The dermatologist delivered more detailed training with more examples to the annotators.
- After training, the annotators had the chance to experiment in a test environment, where they got to see 10 examples of each pathology so they were familiar with what to look for.
- Once they had gone through this set, they were asked to label 50 images. After they had labeled them, they got feedback from the supervisor on what images contained a specific pathology and what images did not.

After this process, the annotators were ready to process bigger datasets of 500, 1,000, and 10,000+ images quickly and accurately.

All the annotated data was checked by the medical supervisor before delivery to the client.

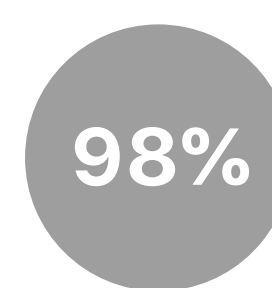
## Results

The annotation team:

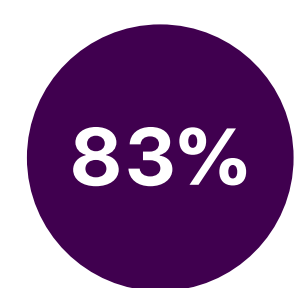
- Completed 80 hours of data training with a dermatologist
- Annotated 10,400 images of pathologies with 98% accuracy
- Proved that our client can accurately label their large datasets using annotation teams from Mindy Support, saving as much as 83% on the cost of annotating this data



DEDICATED ANNOTATION TEAM



ANNOTATION ACCURACY



COST SAVINGS

Mindy Support is ISO 9001 certified. Our information security management system (ISMS) is built on the basis of ISO 27001:2013 international standards, which help organizations keep information assets secure.

### GDPR

We are committed to respecting all rights of data subjects under the General Data Protection Regulation (GDPR) (EU) 2016/679. According to Article 28 of the GDPR, the relationship between data controllers and data processors is regulated by a Data Processing Agreement, which we put in place with every client.



## About Mindy Support

Mindy Support is an international brand with five offices across Ukraine. Since 2013, Mindy Support has been empowering companies all over the world by providing cost-efficient business process outsourcing with no compromise on quality. We build effective teams in customer care, marketing, sales, research, data processing, and annotation as well as provide back-office support for businesses of all sizes.

