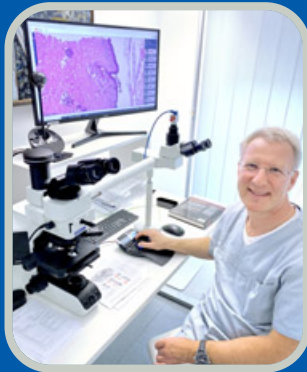




USE CASE

Digital diagnostics at CentroDerm



CentroDerm GmbH is a specialized treatment facility in the field of dermatology with

- a private dermatological practice
- a surgical treatment facility with a high-end equipped dermatological surgery area
- a dermatological laser center with twelve different state-of-the-art skin lasers
- a dermatohistological laboratory
- a molecular biology laboratory
- a clinical study center

INSIGHTS

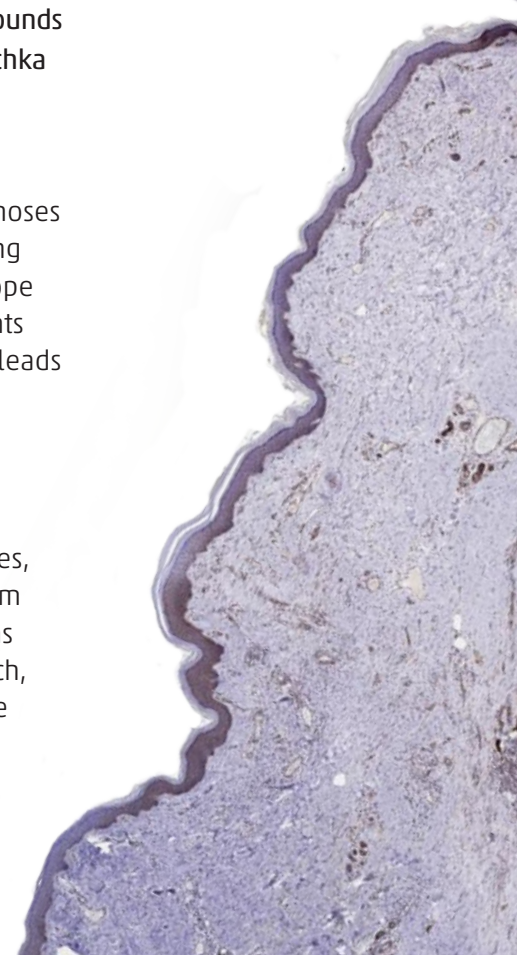
"Classical microscopy is simply no longer up to date"

"Our work processes are significantly shorter: I can instantly exchange information with colleagues at other locations, and I no longer have to pick slides out of paper folders, insert them into the microscope by hand, and then focus them." What sounds like the future to other dermatologists has been routine for Prof. Thomas Dirschka for the past year and a half: diagnostics with digital microscopy.

The head of the CentroDerm Clinic and the private dermatology practice diagnoses around 200 cases himself every day; he also passes on his knowledge to young physicians in training. For this purpose, he has exchanged the classic microscope for a screen and the microscopist for an ergonomic spacemouse. He never wants to go back to his traditional workflow. For the German physician, digitization leads directly to faster diagnoses and thus decisions for the benefit of patients.

From the small solution to fully digitized

For Prof. Dirschka, one thing is certain: "In the face of the numerous advantages, classical microscopy is no longer up to date." This was immediately clear to him when he heard through colleagues about digital microscopy and the solutions of Cologne-based Smart In Media AG. From the founder and CEO Martin Weihrauch, M. D., the dermatologist was given the opportunity to test everything from the small solution to the fully digital "Digital Lab."



Small solution? - "That's a microscope camera that physicians can use to scan slides directly on their microscope or transmit their view live to colleagues," describes Prof. Dirschka the entry-level "PathoZoom Scan & LiveView" solution. "Even in this, I can measure distances and annotate images before sending them to colleagues," says the 54-year-old.

Diagnostics platform instead of just a viewer

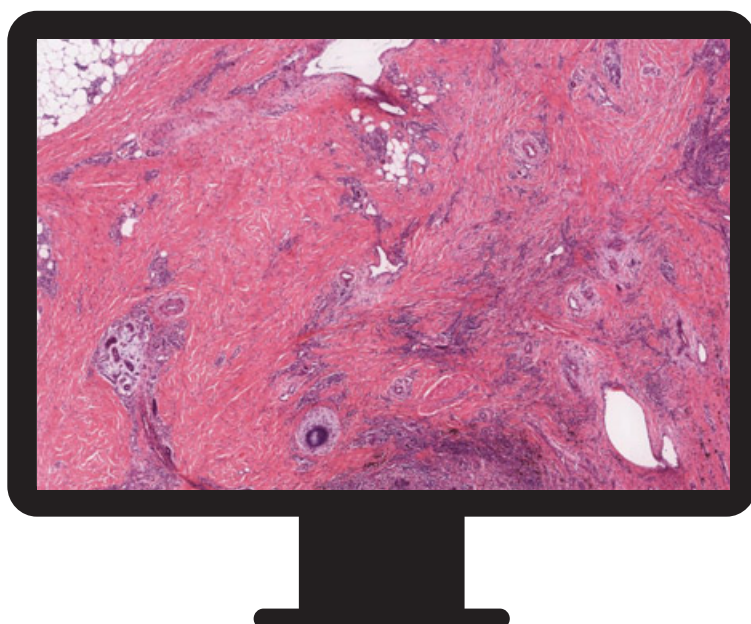
CentroDerm is now fully digitized: In the "PathoZoom Digital Lab", all incoming slides are automatically digitized by a scanner, grouped into cases, and then assigned to the physicians. This eliminates the need for time-consuming manual sorting of slides into folders.

But this viewer function is not the end of the story. The "Digital Lab" contains a complete diagnostics platform that Smart In Media developed with physicians for physicians: In the course of digital diagnostics, Prof. Dirschka can use it to consult colleagues at other locations in real time for a second opinion or view slides live together with them. So he saves time and money for courier trips.

One hour of histology on vacation

But the dermatologist is even more delighted about the personal time and freedom that the Digital Lab gives him. Because via the platform, he can also diagnose from home or on the road via laptop and even smartphone. "On vacation in Italy, I met my former boss," says Prof. Dirschka. After drinking coffee, he said goodbye with the words: "So, I'm going to do an hour of histology now." That caused quite a bit of astonishment.

The Digital Lab also includes image analysis software that reliably quantifies tumor cells. For the CentroDerm owner, this means: "I save the time of counting cells by hand as I used to."



**PROF. DR.
THOMAS DIRSCHKA**

Is digital microscopy suitable for all cases?

Prof. Dirschka: We have not had any slide where we have seen a loss of quality due to scanning. And I'm always impressed by the 40x magnification.

Which scanners do you use?

Prof. Dirschka: We have Hamamatsu scanners in use. I am looking forward to upcoming solutions from Olympus and KFBIO.

Do you take advantage of the opportunity in the athoZoom Digital Lab to use artificial intelligence to support your diagnosis?

Prof. Dirschka: We don't do that yet. Currently, only the image analysis tool for quantifying tumor cells is used daily.

However, with the University of Wuppertal we are in the process of taking the first steps toward using self-trained AI in the Digital Lab. The project with Prof. Dr. Hanno Gottschalk's Institute of Stochastics is about using the type and size of a melanoma to draw conclusions about a patient's life expectancy.

Apropos hands, he particularly likes the ergonomically shaped spacemouse as a Digital Lab accessory because it takes the strain off his hand and fingers. The dermatologist also notices a significant reduction in the stress on his eyes because he no longer has to constantly focus back and forth from looking at the folders with the slides to the microscope, from there to the computer screen and back again.

Teaching via digital teaching platform

Prof. Dirschka also appreciates the flexibility of digital microscopy for in-house training and continuing education. CentroDerm uses "SmartZoom ClassRoom" for this purpose. The digital teaching platform can be set to teach complete preparation courses including supplementary learning materials online available consistent quality. "This means that we are no longer standing closely together with the young physicians in front of the dialog microscope, but instead we are all looking together in a relaxed manner at a screen via which we can zoom into the slides, measure distances and work with annotations."

Use of the microscope only for acute cases

The fact that a microscope is still on Prof. Dirschka's worktable has only one reason – and that is Dirschka's only downer with digital diagnostics: "Even the best scanners still need about a minute for each slide." That's why the dermatologist occasionally still puts acute cases into his microscope.



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