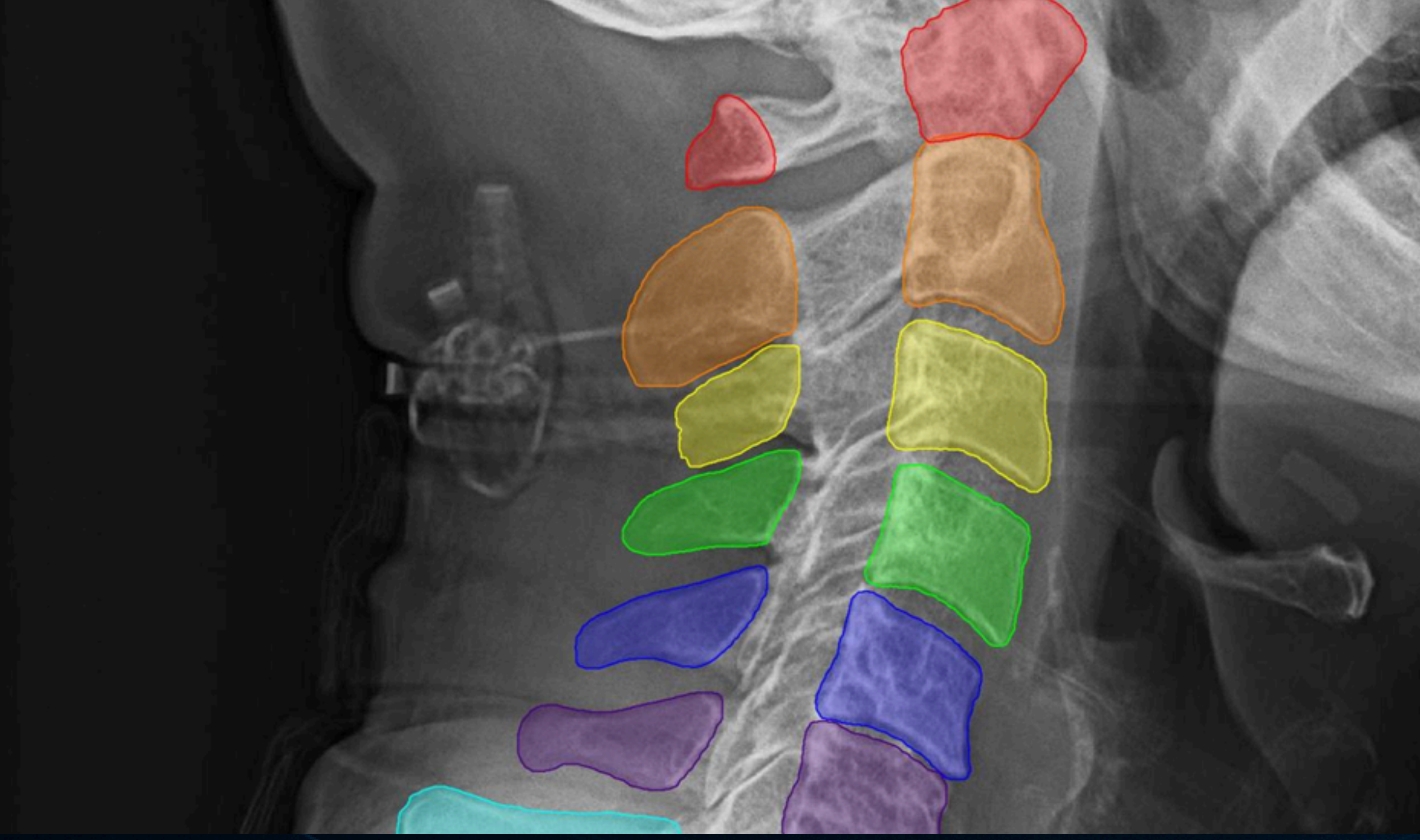

How we helped B. Braun capture consistent, reproducible spinal fusion data for their Aesculap products — across two key PMCF studies

with AI-based image analysis.

B|BRAUN | RAYLYTIC

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About B. Braun

B. Braun is a leading medical technology company. For its Aesculap products, the company conducts advanced post-market clinical follow-up (PMCF) studies to ensure the long-term safety and performance of its spinal implants.

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But inconsistent data were putting their PMCF studies at risk.

❌**No consistent fusion criteria** = limited comparibility between clinical sites
❌**Expensive** manual image reads & long turnaround times
❌Image **delays and quality issues**

How they turned it around →

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We partnered with B. Braun to help them achieve:

Objective & precise radiographic outcome data

2-3X

faster time to report

significantly lower image read costs

How we did it →

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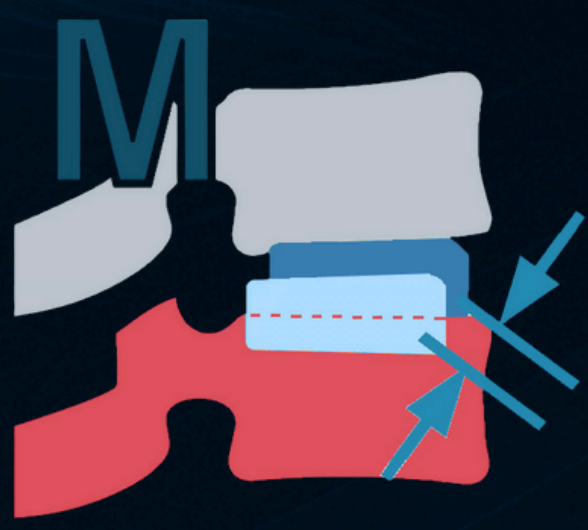
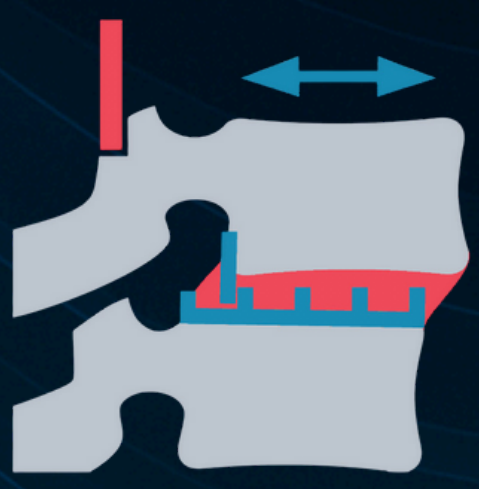
The Solution

With AI, we automated the analysis of key **radiographic indicators of implant performance,** for example:

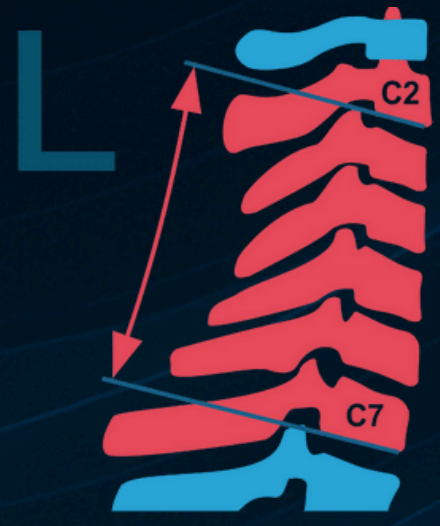
Range of motion (°)



Device migration (mm)



Translational AP motion (mm)



C2-C7 Lordosis (°)

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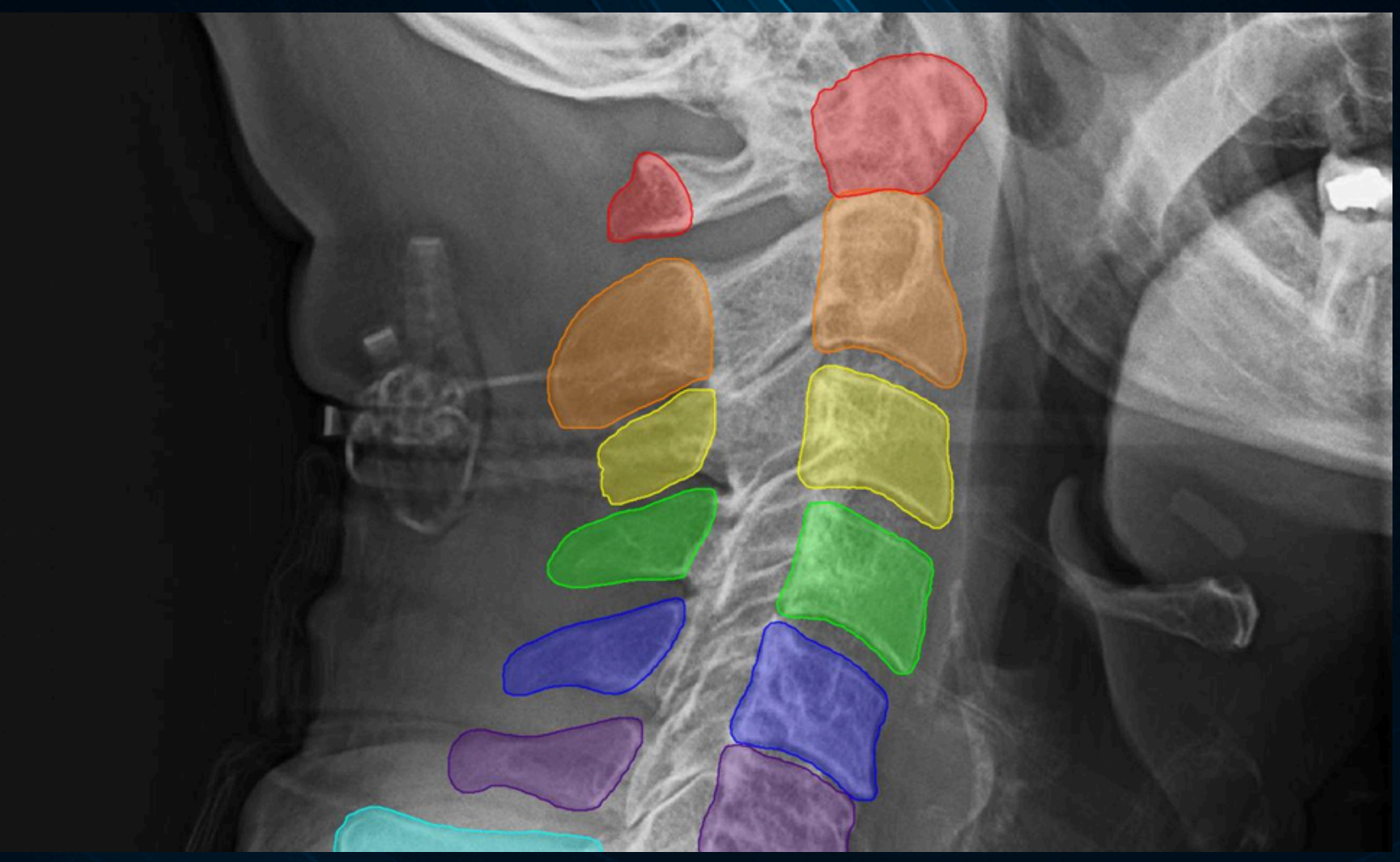
Measurement example: Range of Motion (RoM)



Segmentation is used to extract anatomical structures from X-ray images.

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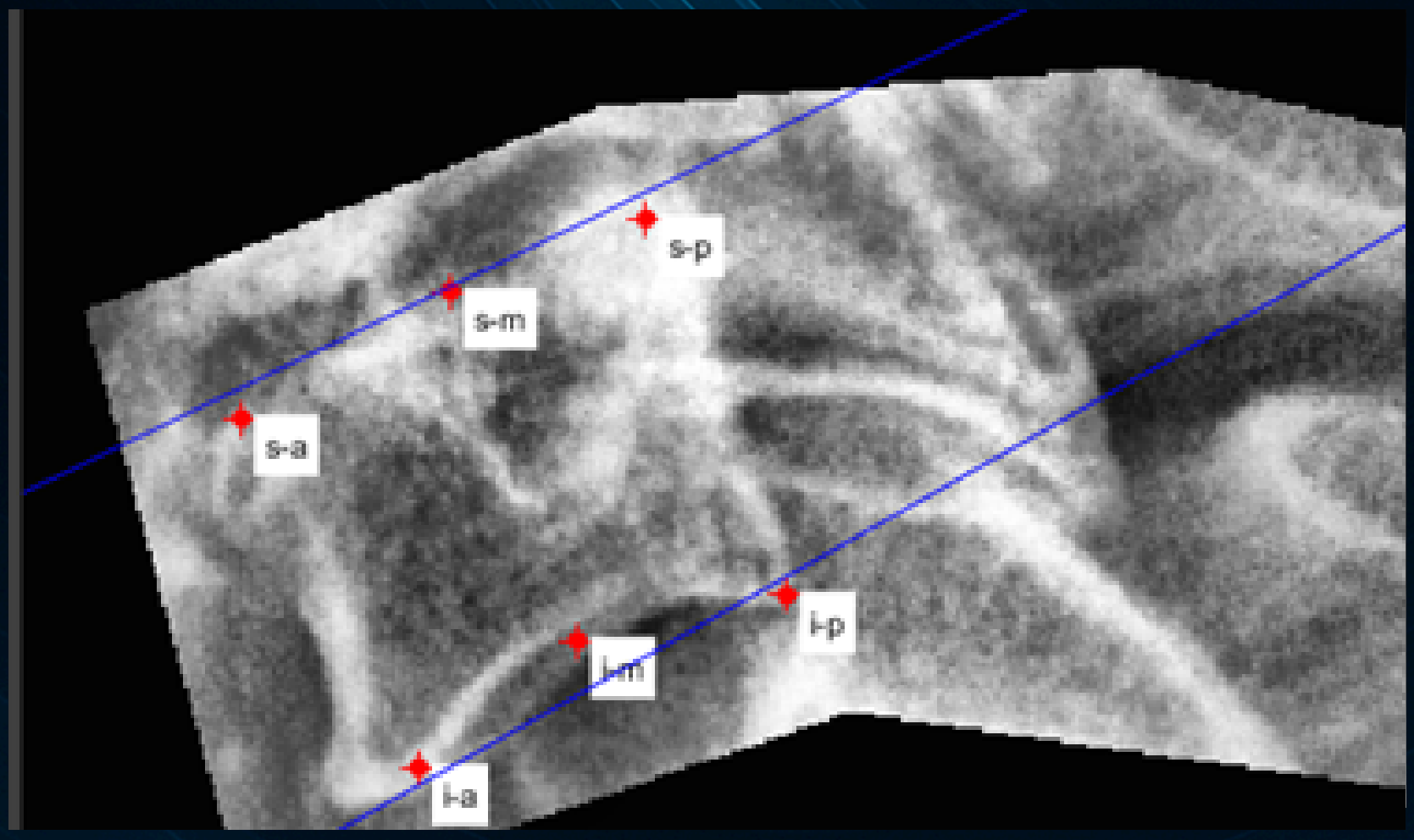
Measurement example: Range of Motion (RoM)



The segmented regions form the basis for tasks like AI-based detection of anatomical landmarks.

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Measurement example: Range of Motion (RoM)

The algorithm automatically registers baseline and follow-up images to enable **highly precise rotation (mean angular error < 0.2°) and translation (mean error <1mm) measurements.**

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All that was part of a **scalable, AI-powered image analysis workflow** that delivered results — fast.

1. **Standardize fusion criteria**
2. **Enable sites with targeted training**
3. **Centralize image collection & management**
4. **Automate the image analysis**
5. **Report on demand**

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B. Braun’s success, in their own words

“The ability to centrally and objectively determine fusion rates in dynamic radiographs was a key factor in the success of our PMCF studies.”

– Dr. Stefan Maenz, Head of Clinical Evaluation and Clinical Studies for Aesculap products at B. Braun in Tuttlingen, Germany

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See how AI-powered image analysis can transform your next spine study.

Request a demo → Link in post!