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Design thinking of orthopaedics implants

While additive manufacturing (AM) offers transformative design possibilities for medical implants—especially those with intricate geometries—its successful implementation hinges on more than just technological capability and rationales. Drawing from our experience with DMLS-fabricated titanium spine implants, this session shares practical insights on aligning AM process constraints with biotechnical requirements through concurrent engineering.

We'll discuss how a structured, cross-disciplinary approach—spanning design verification, AM process constraints integration—helps mitigate risks and ensure reliable implant design. By examining real-world challenges in 3D implant design, we aim to foster a dialogue on how teams can systematically balance innovation with safety, compliance, and performance—turning AM's promise into evidence.