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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.