

DOCTOR AND HOSPITAL

**stratasys**

3D PRINTING FOR MEDICAL  
SHAPING THE NEXT MEDICAL SCIENCE MOVEMENT



THE 3D PRINTING SOLUTIONS COMPANY

*Doctors at Nicklaus Children's Hospital used Stratasys 3D Printing to plan and execute life-saving heart surgery for Mia Gonzalez.*



# Making Complex Seem Simple

## 3D PRINTING FOR IMPROVED PLANNING AND PATIENT OUTCOMES

For more than 25 years, Stratasys has been the trusted leader in the 3D printing industry. Our solutions help leading hospitals accelerate medical progress and improve surgical success by unlocking physician creativity to solve unique challenges. Our multi-material, multi-color printing creates unrivaled anatomical models and parts allowing hospitals and physicians to deliver personalized medicine to patients.

## EXPERT UNDERSTANDING OF THE MEDICAL MARKET



Stratasys has invested significant resources into developing technology specific to the medical marketplace and has the expertise necessary to stay on top of the industry's needs. When you partner with Stratasys, you benefit from the knowledge, accomplishments, clinical training and global experience of our dedicated medical team. Combined with our history of transformative 3D printing technology, Stratasys helps to ensure our solutions are the right fit for your specific business challenges and applications.

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3D printing helped me take somebody from being inoperable to operable, and we've saved their life.

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Redmond P. Burke, M.D. / Nicklaus Children's Hospital  
CARDIOVASCULAR SURGERY





## PERSONALIZING PATIENT CARE

Our 3D printing solutions provide hospitals and doctors with powerful technology that delivers personalized patient care — reducing risk, improving success rates, increasing efficiency and minimizing waste. Stratasys solutions help doctors recreate patient anatomy and develop custom guides and molds to shape patient-specific procedures.

## ACCELERATING HOSPITAL INNOVATION

Stratasys enables hospitals to differentiate themselves as innovators by helping physicians realize their ideas and insights. Our 3D printing solutions allow physicians to complete more design revisions in less time, speeding time to verification and validation and accelerating product development.

## IMPROVING RESEARCH AND OPERATING ROOM EFFICIENCY

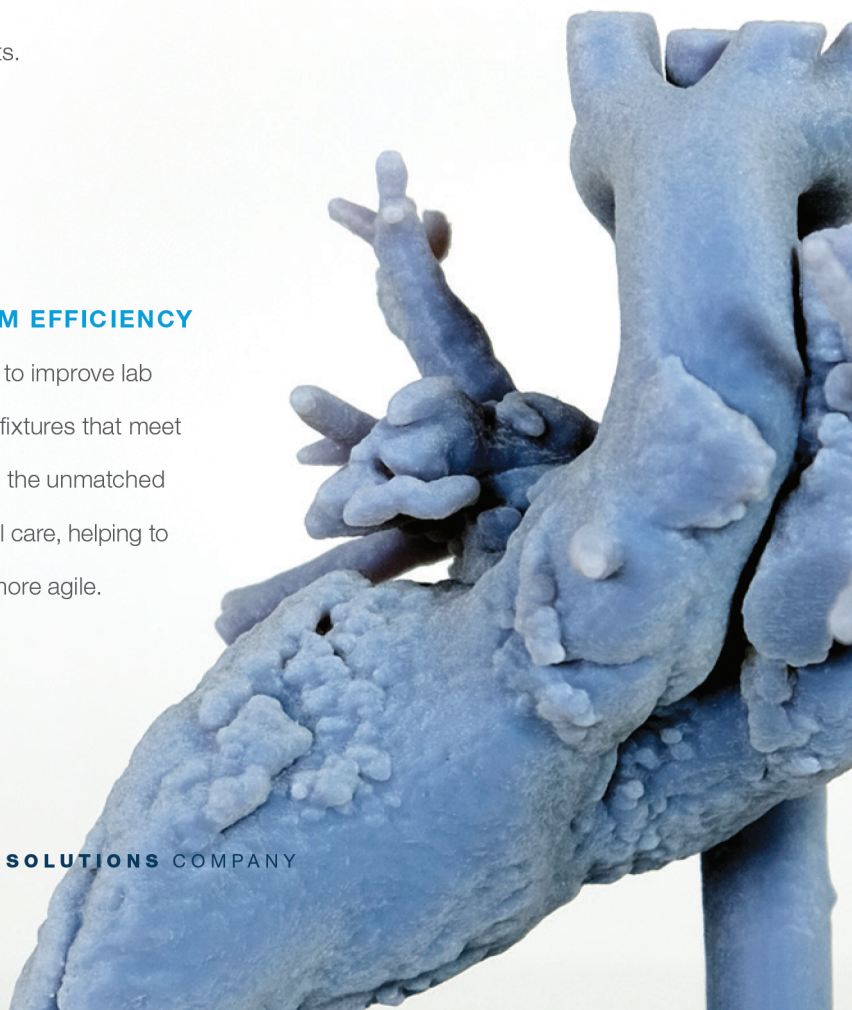
Stratasys provides hospitals with the 3D printing technology to improve lab and operating room efficiency by creating custom tools and fixtures that meet specific manufacturing needs. Our systems allow physicians the unmatched freedom to produce customized tools for research and clinical care, helping to eliminate manufacturing constraints and makes processes more agile.

## TRAINING AND PREPARING PHYSICIANS

Stratasys gives physicians the practice and confidence to effectively care for patients. We offer 3D printing solutions for physicians to develop clinically relevant, high-impact training models from real human anatomy. These models reduce limitations by allowing hospitals to train physicians in any environment, and closely simulate real human tissue properties without using highly processed cadavers and animals.

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## THE POWER OF 3D PRINTING

APPLICATION	KEY BENEFIT	STRATASYS SOLUTION	DELIVERING VALUE
Patient-Specific Pre-Planning Models, Molds and Cutting Guides	Improve clinical outcomes, increase efficiency and reduce waste using models based on real patient anatomy	PolyJet <ul style="list-style-type: none"> <li>Multi-material, multi-color</li> <li>Rubber-like materials to match flexible tissue</li> <li>Harder materials to match bone/calcification</li> </ul>	<ul style="list-style-type: none"> <li>Create realistic, accurate and versatile anatomical models</li> <li>Replicate a range of anatomical structures from bone to skin to heart tissue</li> <li>Clear materials enhance visualization and allow physicians to see all structures</li> <li>Use color to embed distinct visible markers</li> </ul>
Clinical Training and Education	Improve health care practitioner clinical preparedness through high-impact, clinically relevant training models	PolyJet <ul style="list-style-type: none"> <li>Multi-material, multi-color</li> <li>Rubber-like materials to match flexible tissue</li> <li>Harder materials to match bone/calcification</li> </ul>	<ul style="list-style-type: none"> <li>Create realistic, accurate and versatile anatomical models</li> <li>Gain a cost-effective digital design path from patient scans to tooling-free models</li> <li>Customize each model with different clinical scenarios and pathology to ensure physician experience</li> </ul>
Rapid Prototyping	Support innovation in the hospital and tap into the ingenuity of clinical staff	A range of in-house and on-demand solutions <ul style="list-style-type: none"> <li>Biocompatible materials</li> <li>Multi-material and multi-color</li> <li>High performance TPE</li> <li>Injection molding that can support high temperatures</li> </ul>	<ul style="list-style-type: none"> <li>Move quickly from concept to design to prototype</li> <li>Create functional parts for testing</li> <li>Refine designs quickly through rapid iteration</li> <li>Communicate ideas and gain partner feedback</li> </ul>
Fit-for-Purpose Tools, Jigs and Fixtures	Create customized tools to optimize workflows in research labs and the operating theater	A range of in-house and on-demand solutions <ul style="list-style-type: none"> <li>Biocompatible materials</li> <li>SDM 450 printer bureau with full range of systems</li> </ul>	<ul style="list-style-type: none"> <li>Build on-site quickly and cost-effectively, 90% faster and at 30-50% of the cost</li> <li>Manage digital inventory and revise, replace and replicate as needed</li> <li>Get unmatched design freedom to produce complex shapes and consolidate multi-piece assemblies</li> <li>Use biocompatible materials sterilizable with EtO or gamma radiation</li> </ul>

For more information on how Stratasys 3D Printing solutions can empower physicians and support hospital innovation, contact:

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