

**The Lindner Center for Research and Education
"FIRSTS" for Cincinnati, Ohio, The U.S or In Man**

	Year	First In Man	In U.S.	In Ohio	In Cincinnati
Balloon Angioplasty	1980				X
Tissue Plasminogen Activator (tPA)	1986			X	X
Administration of t-PA (alteplase) in stroke	1987	X	X	X	X
Directional Atherectomy	1989			X	X
Extraction Atherectomy	1989			X	X
First Coronary Stents (Gianturco-Roubin 1)	1990				X
ReoPro	1990				X
Excimer Laser	1991				X
Rotational Atherectomy	1991				X
Integrelin	1992				X
Tirofiban (MK 383)	1993				X
Oral Platelet Glycoprotein II/IIIa inhibitors	1995				X
Retevase (rPA)	1995				X
IntraCoronary Radiation - Gamma	1997			X	X
Laser Pacemaker Lead Extraction	1997				X
Angiogenesis with VEGF	1997				X
IntraCoronary Radiation - Beta	1998				X
Covered Stents	1998				X
Angiogenesis with FGF	1999				X
Photodynamic Laser Angioplasty	2000	X	X	X	X
Alcohol Septal Ablation for HOCM / IHSS	2000				X
Percutaneous Distal Embolic Protection during Angioplasty	2000				X
Abdominal Aortic Aneurysm Stent Graft	2000				X
Enhanced External Counterpulsation (EECP)	2000				X
Drug Eluting Stents (CYPHER)	2001				X
COBALT – Chromium Alloy Stents (Multi Link VISION stent)	2001	X	X	X	X
T-Wave Alternans (TWA)	2001				X
Cholesterol / Diabetes Treatment: HDL cholesterol vaccine	2001				X
EPI Filterwire Distal Embolic Protection Device	2001				X
Angiogenesis Gene Therapy with Adenoviral FGF	2002				X
Myoblast Cell Therapy Transplant	2003				X
Branch Vessel Stents (Petal Stent)	2003		X	X	X
Medtronic bipolar left ventricular pacing lead (Model 4194)	2003	X	X	X	X
Interceptor Distal Embolic Protection during Angioplasty	2003			X	X
Microvena Filter Distal Embolic Protection during Angioplasty	2003				X
Cholesterol / Diabetes Treatment: CETP HDL-raising medicine	2004				X
COSTAR II trial: First bioresorbable polymer DES	2005		X	X	X
Chronicle ICD – Pressure Sensor Defibrillator	2006	X	X	X	X
SureScan (MRI compatible pacemaker)	2008		X	X	X
Crosser device for chronic total arterial occlusion	2010		X	X	X
Tryton side branch stent	2011		X	X	X
Levant 2 drug-eluting balloon	2011			X	X
Advise MRI compatible pacemaker	2011		X	X	X
PARTNER (TAVR) transcatheter aortic valve replacement	2011				X
PreServe bone marrow derived stem cells	2012			X	X
ABSORB (dissolvable stent)	12/31/12	2012		X	X
EVOLVE (Synergy – bioabsorbable polymer DES)	11/26/12	2012	X	X	X
MitraClip / COAPT Trial (mitral valve repair)	7/30/13	2013			X
PARTNER Sapien 3 valve (2 nd in U.S.)	10/17/13	2013		X	X

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Remede sleep apnea trial (Respicardia) 4/17/14	2014				X
Lotus Transcatheter Aortic Valve (2 nd in U.S.)	2014			X	X
Wrap It – Antimicrobial Pacemaker Pocket	2015		X	X	X
Oxinium Total Hip	2015		X	X	X
HeartMate PHP	2015			X	X
Endurant EVO Abdominal Aortic Aneurysm Stent Graft	2015		X	X	X
Calm FLM Trial	2015			X	X
21mm Lotus Valve Implantation (TAVR)	2016	X	X	X	X
PARTNER 3 Valve-in-Valve Procedure	2017		X	X	X
Valiant Thoracic Abdominal	2017	X	X	X	X
Pioneer/ BuMA Stent (DES)	2017		X	X	X
OPTIMIZE/Svelte SLENDER IDS and DIRECT RX Stents (DES)	2017		X	X	X
Lotus EDGE TAVR	2018		X	X	X
J-Valve Implantation (TAVR)	2018		X	X	X
J-Valve – subclavian access (TAVR)	2018	X	X	X	X
REPRISE IV – first patient enrolled 1/14/19	2019		X	X	X
RUC 4 Subcutaneous 6PZB3A Medication For MI	2019	X	X	X	X
AccuCinch device (8/22/19) for heart failure	2019			X	X
Commercial deployment of Tacks	2019			X	X
INXN injection for LVAD	2019			X	X
Foldax Tria Heart Valve	2020				X
NanoCor – NAN-CS101 – Cardiac Gene Therapy	2020	X	X	X	X
Acurate Valve Trial	2020				X
Xylocor in Refractory Angina	2020	X	X	X	X
Impella ECP Expandable Percutaneous Heart Pump	2020			X	X
JenaValve	2020			X	X
Sievers Mitral Repair Ring (Robotic)	2020	X	X	X	X
Thoracoscope MAZE utilizing EPI Sense Ablation Catheter	2020		X	X	X
Frozen elephant trunk arch aneurysm	2020				X
CD34+ stem cell pt for microvascular disease FREEDOM Trial	2021			X	X
Implantation of Nexus Aortic Arch graft system for a chronic dissection	2021	X	X	X	X
Cryo AF Global Registration (1 st and 2 nd enrollment in the US – 8/19/21)	2021		X		
Doraya	2022		X	X	X
J Valve implant via carotid access	2022	X	X	X	X
Shockwave L6	2022	X	X	X	X
Totals:		15	34	51	83

t-PA = Tissue Plasminogen Activator; TAVR = Transcatheter Aortic Valve Replacement
DES = Drug-Eluting Stent
MRI = Magnetic Resonance Imaging