

# Phasix™ Mesh: 40+ clinical publications and growing

## 200K patients impacted

### Changing the standard of care since 2013

#### LEGEND

- 2 for 2 year+ follow up
- 5 for 5 year+ follow up
- ✓ Data reported
- QOL- Quality of Life
- HEOR- Health, Economics, Outcomes, Research
- NR – Not Reported
- N/A – Not Applicable

Authors, Article Title, Journal, Year	Product	Patients	Mean Follow-up (Months)	Recurrence	Seroma	Surgical Site Infections	QOL	HEOR
<b>Inguinal</b>								
Abdullah Aldohayan, et. al. A Novel Use of Fully Absorbable Phasix Mesh for Laparoscopic Inguinal Hernia Repair. <i>JSLIS</i> 2020	Phasix™ Mesh	15	30 <span style="background-color: #008080; color: white; padding: 2px 5px; font-weight: bold;">2</span>	0.0%	NR	NR		
<b>Hiatal</b>								
Benjamin Clapp, et. al. Does bioabsorbable mesh reduce hiatal hernia recurrence rates? A meta-analysis. <i>Surg Obes Relat Dis</i> 2022	Mesh vs. No Mesh	1351	Mesh: 28.8 No Mesh: 32.8 <span style="background-color: #008080; color: white; padding: 2px 5px; font-weight: bold;">2</span>	8.0%	NR	NR		
Aiolfi A, et. al. Medium-term safety and efficacy profile of paraesophageal hernia repair with Phasix-ST mesh: a single-institution experience. <i>Hernia</i> 2022	Phasix™ ST Mesh	68	27 <span style="background-color: #008080; color: white; padding: 2px 5px; font-weight: bold;">2</span>	8.8%	NR	NR	<span style="background-color: #191970; color: white; padding: 2px 5px; font-weight: bold;">✓</span>	
A Aiolfi, et. al. Laparoscopic posterior cruroplasty: a patient tailored approach. <i>Hernia</i> 2022	Phasix™ ST Mesh	Phasix™ ST Mesh: 39 No Mesh: 102	21	2.1%	NR	NR	<span style="background-color: #191970; color: white; padding: 2px 5px; font-weight: bold;">✓</span>	
Konstantinidis H, Charisis C. Surgical treatment of large and complicated hiatal hernias with the new resorbable mesh with hydrogel barrier (Phasix ST): a preliminary study. <i>J Robotic Surgery</i> 2022	Phasix ST™ Mesh	60	21	0.0%	NR	NR		
Konstantinidis H, Charisis C. Surgical treatment of large and complicated hiatal hernias with the new resorbable mesh with hydrogel barrier (Phasix ST): a preliminary study. <i>J Robotic Surgery</i> 2022	Phasix™ ST Mesh	60	21	0.0%	NR	NR		
Tommaso Panici Tonucci, et. al. Safety and Efficacy of Crura Augmentation with Phasix ST Mesh for Large Hiatal Hernia: 3-Year Single-Center Experience. <i>Laparosc Adv Surg Tech A</i> 2020	Phasix™ ST Mesh	73	17	3.2%	NR	0.0%	<span style="background-color: #191970; color: white; padding: 2px 5px; font-weight: bold;">✓</span>	
Walaa F Abdelmoaty, et. al. Combination of Surgical Technique and Bioresorbable Mesh Reinforcement of the Crural Repair Leads to Low Early Hernia Recurrence Rates with Laparoscopic Paraesophageal Hernia Repair. <i>J Gastrointest Surg</i> 2020	Phasix™ ST Mesh	50	12	8.0%	NR	0.0%		
<b>Ventral</b>								
Joseph F. Buell, et al. Long-Term Outcomes in Complex Abdominal Wall Reconstruction Repaired With Absorbable Biologic Polymer Scaffold (Poly-4-Hydroxybutyrate). <i>Ann Surg (open)</i> 2021	Phasix™ Mesh Strattice™	Phasix™ Mesh: 31 Strattice™: 42	60 <span style="background-color: #FFD700; color: white; padding: 2px 5px; font-weight: bold;">5</span>	Phasix™ Mesh: 12.9% Strattice™: 38.1% (p = 0.017)	NR	Phasix™ Mesh: 12.9% Strattice™: 31.0% (p = 0.071)		<span style="background-color: #191970; color: white; padding: 2px 5px; font-weight: bold;">✓</span>
Ankoor A. Talwar, et al. Shifting the Goalpost in Ventral Hernia Care: 5-year Outcomes after Ventral Hernia Repair with Poly-4-hydroxybutyrate Mesh. <i>Hernia</i> 2022	Phasix™ Mesh	43	60 <span style="background-color: #FFD700; color: white; padding: 2px 5px; font-weight: bold;">5</span>	20.0%	5.9%	3.9%	<span style="background-color: #191970; color: white; padding: 2px 5px; font-weight: bold;">✓</span>	
John Scott Roth, et al. Long-Term, Prospective, Multicenter Study of Poly-4-hydroxybutyrate Mesh (Phasix Mesh) for Hernia Repair in Cohort at Risk for Complication: 60-Month Follow-Up. <i>Journal of the Am College of Surgeons</i> 2022	Phasix™ Mesh	121	60 <span style="background-color: #FFD700; color: white; padding: 2px 5px; font-weight: bold;">5</span>	22.0%	NR	2.8%		
Morrison BG, et al. Comparative long-term effectiveness between ventral hernia repairs with biosynthetic and synthetic mesh. <i>Surg Endosc.</i> 2023	Phasix™ Mesh	101	Up to 60 <span style="background-color: #FFD700; color: white; padding: 2px 5px; font-weight: bold;">5</span>	7.9%	16.8%	6.9% (Superficial) 10.9% (Deep)		
A N Christopher, et al. An evaluation of clinical and quality of life outcomes after ventral hernia repair with poly-4-hydroxybutyrate mesh. <i>Hernia</i> 2021	Phasix™ Mesh	71	43.1 <span style="background-color: #008080; color: white; padding: 2px 5px; font-weight: bold;">2</span>	12.7%	NR	7.1%	<span style="background-color: #191970; color: white; padding: 2px 5px; font-weight: bold;">✓</span>	
Layer T., et al. Incisional hernia repair with a slowly absorbable P4HB mesh: what happens after the mesh disappears? A retrospective longitudinal clinical study. <i>Hernia</i> 2022	Phasix™ Mesh	VHWG grade 3: 77 (71.3%) VHWG grade 4: 31 (28.7%).	41 <span style="background-color: #008080; color: white; padding: 2px 5px; font-weight: bold;">2</span>	22.2%	NR	24.1%		

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<b>Ventral</b>								
Samuel C. Schecter, et al. Single-stage abdominal wall reconstruction in contaminated and dirty wound is safe: a single center experience. <i>Surgical Endoscopy</i> 2022	Phasix™ Mesh	34	37 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	6.0% <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	17.6%	12.0%		
J Bueno-Lledó, et al. Abdominal wall reconstruction with biosynthetic absorbable mesh after infected prosthesis explanation: single stage is better than two-stage approach of chronic mesh infection. <i>Hernia</i> 2021	Phasix™ Mesh	Phasix™ Mesh: 30 Synthetic: 41	36.5 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	Phasix™ Mesh: 6.6% Synthetic: 10.7%	Phasix™ Mesh: 6.6% Synthetic: 10.7%	Phasix™ Mesh: 3.3% Synthetic: 9.8%		
Adam S Levy, et al. Poly-4-hydroxybutyrate (Phasix™) mesh onlay in complex abdominal wall repair. <i>Surg Endoscopy</i> 2021	Phasix™ Mesh	105	36 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	17.0%	6.0%	5.0%		
John Scott Roth, et al. Prospective, multicenter study of P4HB (Phasix™) mesh for hernia repair in cohort at risk for complications: 3-Year follow-up. <i>Ann Med Surg (Lond)</i> 2020	Phasix™ Mesh	121	36 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	17.9%	6.6%	9.3%		
José Bueno-Lledó, et al. Biosynthetic Resorbable Prosthesis is Useful in Single-Stage Management of Chronic Mesh Infection After Abdominal Wall Hernia Repair. <i>World J Surgery</i> 2021	Phasix™ Mesh	32	34.5 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	3.3%	20.0%	3.3%		
Abdullah Aldohayan, et al. Laparoscopic Ventral Hernia Repair with Poly-4-Hydroxybutyrate Absorbable Barrier Composite Mesh. <i>JLS</i> 2021	Phasix™ ST Mesh	26	28 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	0.0%	15.4%	0.0%		
Joseph A Mellia, et al. Outcomes of Poly-4-hydroxybutyrate Mesh in Ventral Hernia Repair: A Systematic Review and Pooled Analysis. <i>Plat Reconstr Surg Global (Open)</i> 2020	Phasix™ Mesh	453	26.8 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	9.1%	NR	6.8%		
Justin D Faulkner, et al. Evaluation of Absorbable Mesh for Prophylactic Mesh Augmentation in High-Risk Patients. <i>Surg Technol Int</i> 2021	Phasix™ Mesh	50	26.4 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	8.0% (When Phasix™ Mesh was placed)	4.0%	4.0%		
Deborah Yu, et al. Comparison of Phasix, polypropylene, and primary closure of the abdominal donor site after bilateral free flap breast reconstruction: Long-term evaluation of abdominal hernia and bulge formation. <i>Microsurgery</i> 2020	Phasix™ Mesh	66	25.2 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	0.0%	Phasix™ Mesh: 0% Polypropylene mesh: 10% Primary closure: 16.7% (p<0.05)	NR		
Othman S, et al. Comparative Effectiveness Analysis of Resorbable Synthetic Onlay and Biologic Intraperitoneal Mesh for Abdominal Wall Reconstruction: A 2-Year Match-Paired Analysis. <i>Plast Reconstr Surg</i> 2022	Phasix™ Mesh	Phasix™ Mesh: 44 Biologics: 44	24.5 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	Phasix™ Mesh: 4.5% Biologics: 22.7%	NR	Phasix™ Mesh: 18.2% Biologics: 25.6%		
Christopher AN, Morris et al. Resorbable Synthetic Ventral Hernia Repair in Contaminated Fields: Outcomes with Poly-4-Hydroxybutyrate Mesh. <i>Plast Reconstr Surg</i> 2021	Phasix™ Mesh	60	24.2 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	8.3%	NR	16.7%		
Hope WW, et al. A prospective, multicenter trial of a long-term bioabsorbable mesh with Sepra technology in cohort of challenging laparoscopic ventral or incisional hernia repairs (ATLAS trial). <i>Ann Med Surg (Lond)</i> 2021	Phasix™ ST Mesh	120	24 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	31.7%	NR	0.0%		
M M J Van Rooijen, et al. Slowly resorbable biosynthetic mesh: 2-year results in VHWG grade 3 hernia repair. <i>Hernia</i> 2022	Phasix™ Mesh	84	24 <span style="background-color: #008080; color: white; padding: 2px 5px;">2</span>	11.0%	8.3%	13.1%	<span style="background-color: #191970; color: white; padding: 2px 5px;">✓</span>	

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<b>Ventral</b>								
Charles A Messa 4th, et al. When the Mesh Goes Away: An Analysis of Poly-4-Hydroxybutyrate Mesh for Complex Hernia Repair. <i>Plast Reconstr Surg Global (Open)</i> 2019	Phasix™ Mesh	70	24	<span style="background-color: #28a745; color: white; padding: 2px 5px;">2</span> 5.7%	<span style="background-color: #28a745; color: white; padding: 2px 5px;">2</span> 8.0%	8.0%	<span style="background-color: #343a40; color: white; padding: 2px 5px;">✓</span>	
Margaret A Plymale, et al. Ventral hernia repair with poly-4-hydroxybutyrate mesh. <i>Surg Endosc</i> 2018	Phasix™ Mesh	31	24	<span style="background-color: #28a745; color: white; padding: 2px 5px;">2</span> 0.0%	12.9%	19.0%	<span style="background-color: #343a40; color: white; padding: 2px 5px;">✓</span>	
Pakula A, Skinner R. Outcomes of Open Complex Ventral Hernia Repairs With Retromuscular Placement of Poly-4-Hydroxybutyrate Bioabsorbable Mesh. <i>Surg Innov</i> 2020	Phasix™ Mesh	20	21.1	0.0%	10.0%	10.0%		
Claessen JJM, et al. Outcomes of mid-term and long-term degradable biosynthetic meshes in single-stage open complex abdominal wall reconstruction. <i>Hernia</i> 2021	Phasix™ Mesh Bio-A@	Phasix™: 40 Bio-A@: 30	Median: 20 Phasix™: 35 Bio-A@: 11	Phasix™: 10% Bio-A@: 10%	NR	Phasix™: 25% Bio-A@: 23.3%		
Adrienne N Christopher, et al. Onlay Poly-4-Hydroxybutyrate (P4HB) Mesh for Complex Hernia: Early Clinical and Patient Reported Outcomes. <i>J Surg Res</i> 2021	Phasix™ Mesh	51	20	5.9%	NR	15.7%		
John Scott Roth, et al. Prospective evaluation of poly-4-hydroxybutyrate mesh in CDC class I/high-risk ventral and incisional hernia repair: 18-month follow-up. <i>Surg Endosc</i> 2018	Phasix™ Mesh	121	18	9.0%	6.0%	9.0%		
Carla Rognoni, et al. Clinical outcomes and quality of life associated with the use of a biosynthetic mesh for complex ventral hernia repair: analysis of the "Italian Hernia Club" registry. <i>Sci Rep</i> 2020	Phasix™ ST Mesh Phasix™ Mesh	75	18	8.0%	17.0%	4.0%	<span style="background-color: #343a40; color: white; padding: 2px 5px;">✓</span>	<span style="background-color: #343a40; color: white; padding: 2px 5px;">✓</span>
Blair A Wormer, et al. Reducing Postoperative Abdominal Bulge Following Deep Inferior Epigastric Perforator Flap Breast Reconstruction with Onlay Monofilament Poly-4-Hydroxybutyrate Biosynthetic Mesh. <i>J Reconstr Microsurg</i> 2017	Phasix™ Mesh	319	16.4 ± 11.1	NR	Phasix™ Mesh: 2.5% No mesh: 3.1% (p = 0.75)	Phasix™ Mesh: 1.3% No mesh: 2.5% (p = 0.45)		
Daniela Kniepeiss, et al. Prevention of Incisional hernia after liver transplantation (PRINC trial): study protocol for a randomized controlled trial. <i>Trials</i> 2019	Phasix™ Mesh	178	12	NR	NR	NR		
E Vauclair, et al. What results can be expected one year after complex incisional hernia repair with biosynthetic mesh? <i>J Visc Surg</i> 2021	Phasix™ Mesh	29	12	10.3%	NR	0.0%		
D Charleux-Muller, et al. Slowly absorbable mesh in contaminated incisional hernia repair: results of a French multicenter study. <i>Hernia</i> 2021	Phasix™ ST Mesh Phasix™ Mesh	VHWG grade 3: 170 VHWG grade 2: 45	12	12.4%	NR	22.3%		
D Charleux-Muller, et al. Cost-effectiveness analysis of resorbable biosynthetic mesh in contaminated ventral hernia repair. <i>J Visc Surg</i> 2022	Phasix™ ST Mesh Phasix™ Mesh	94	6	Phasix™: 21% Biologics: 33%	NR	NR	<span style="background-color: #343a40; color: white; padding: 2px 5px;">✓</span>	<span style="background-color: #343a40; color: white; padding: 2px 5px;">✓</span>
Diego L Lima, et al. Versatility of Poly-4-Hydroxybutyrate (Phasix) Mesh in Abdominal Wall Surgery. <i>Arq Gastroenterol</i> 2022	Phasix™ Mesh	51	3.5	4.0%	16.0%	NR		

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<b>Ventral</b>								
Mathilde Mj van Rooijen, et al. Outcomes of a new slowly resorbable biosynthetic mesh (Phasix™) in potentially contaminated incisional hernias: A prospective, multi-center, single-arm trial. <i>Int J Surg</i> 2020	Phasix™ Mesh	84	3	0.0%	<span style="background-color: #28a745; color: white; padding: 2px 5px; border-radius: 3px;">2</span>	8.3%	13.0%	
Laurens Jan van Driel, et al. Observational Cohort Study on the Use of a Slowly Fully Resorbable Synthetic Mesh (Phasix™) in the Treatment of Complex Abdominal Wall Pathology with Different Grades of Contamination. <i>Surg Technol Int</i> 2021	Phasix™ ST Mesh Phasix™ Mesh	47	2	Clean: 5.9% Clean-Contaminated: 11.8% Dirty Cases: 42.9%	NR	NR		
Salvador Morales-Conde, et al. Establishing Peer Consensus About the Use of Long-Term Biosynthetic Absorbable Mesh for Hernia (Grades 2–3) as the Standard of Care. <i>World Journal of Surgery</i> 2022	Phasix™ ST Mesh Phasix™ Mesh	255	N/A	N/A	NR	NR		
Joseph F Buell, et al. Initial Experience With Biologic Polymer Scaffold (Poly-4-hydroxybuturate) in Complex Abdominal Wall Reconstruction. <i>Ann Surg</i> 2017	Phasix™ Mesh	73	NR	Phasix™ Mesh: 6.5% Strattice™: 23.8% (p = 0.049)	Time to drain removal: Phasix™ Mesh: 10 days Strattice™: 14 days (p = 0.002)	Phasix™ Mesh 12.9% Strattice™ 31.0% (p = 0.073)		<span style="background-color: #34495e; color: white; padding: 2px 5px; border-radius: 3px;">✓</span>

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