# Long-Term Outcomes (>36 Months) for Complex Abdominal Wall Reconstruction with Acellular Dermal Matrix

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**Disclosure/Financial Support**: Supported in part by the National Institutes of Health through MD Anderson's Cancer Center Support Grant CA016672. Dr. Garvey is a consultant for Acelity Corporation. None of the authors has a financial interest in any of the products, devices, or drugs mentioned in this manuscript.

**INTRODUCTION**: Acellular Dermal Matrix (ADM) for abdominal wall reconstruction (AWR) results in less infectious wound complications compared to synthetic mesh in contaminated fields. However, long-term outcomes data for hernia recurrence rates following AWR with ADM are lacking. The aim of this study was to assess the long-term durability of AWR using ADM.

**MATERIALS AND METHODS**: This study included 191 consecutive patients, who underwent AWR with ADM for repair of complex hernia and/or oncologic resection at a single center. We only included patients with a minimum follow-up of 36 months. Mean follow-up was 55.6 months (range 36-104 months). Primary outcome measures were surgical site occurrence (SSO) and hernia recurrence.

**RESULTS**: The rate of SSO was 25.1%. There were 31 (16.2%) hernia recurrences overall, 13% developing by 3 years and 16.7% developing by 5 years. The most frequently used ADM was porcine (Strattice, 56.5%), followed by bovine (Surgimend, 31.1%) and human cadaveric (Alloderm, 10.9%). Significant predictors of hernia recurrence included bridged repair (HR=10.1, $p<0.001$), the use of human cadaveric ADM (HR=2.52, $p=0.044$), and elevated body mass index (HR=1.9, $p=0.09$). Subset analysis excluding bridged repairs and human cadaveric ADM cases demonstrated hernia recurrence rates of 8.2% by 3 years and 10.7% by 5 years follow-up.

**CONCLUSION**: The use of ADM for AWR is associated with low hernia recurrence rates with long-term follow-up. Optimal durability can be achieved by avoiding bridged repairs and human cadaveric ADM.