

**Adeem Moustafa Nachabe**

L4

LSU Health Sciences Center, New Orleans, LA

Mark Stalder, MD

LSUHSC Department of Surgery, Division of Plastic and Reconstructive Surgery

**“Equivalent Incidence of Fat Necrosis in Stacked Versus Single Free Flap Breast Reconstructions: A Multivariate Analysis of 460 Flaps in 212 Patients”**

Clinically significant fat necrosis is a common and significant complication of autologous breast reconstruction. Additional operation is typically required to exclude residual or re-emergence of malignancy, to improve cosmesis, and relieve aggravating symptoms such as pain and impaired mobility. To investigate the incidence of operable fat necrosis and identify potential contributing factors, the authors examined the effects of single vs. stacked perforator free flap use in autologous breast reconstruction and subsequent development of clinically significant fat necrosis. The authors conducted a retrospective review of all patients undergoing perforator free flap breast reconstruction from January 2009 to November 2019. 460 free flaps were analyzed for factors contributing to the formation of fat necrosis including stacked vs single flap reconstruction, flap weight, patient characteristics and patient comorbidities. Retrospective analysis revealed no relationship between the use of single vs stacked perforator flaps on the formation of fat necrosis. However, an association was found between flap weight and the formation of fat necrosis, separate from the use of single or stacked flaps. Further research is needed to discern the occurrence of fat necrosis in the separate flaps that comprise a stacked flap reconstruction to more accurately compare fat necrosis rates to single flap reconstruction.