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LETTER TO EDITOR/LED REPLY

# Body Contouring Following Massive Weight Loss: the Evolving Role of Plastic Surgeons and Risk Stratification Tools

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We thank Bertheuil et al. for their interest and greatly appreciate their comments on our study "Advanced Age Is a Risk Factor for Complications Following Abdominal Panniculectomy" [1]. The primary goal of our study was to evaluate the safety of abdominal panniculectomy in patients with advanced age (age > 65) and to evaluate risk factors for postoperative complications using a large, validated, national dataset. Our results demonstrated that advanced age is an independent risk factor for both wound and overall complications.

Our findings are congruent with the prior study by Winocour et al. that demonstrated age greater than 55 years as a risk factor for major postoperative complications following abdominoplasty [2]. As mentioned, this study was significant as one of the first to identify advanced age as being associated with increased operative risk in this patient population. We agree that this association was likely not identified in earlier studies due to limited statistical power and difficulties obtaining large sample sizes given that the elderly represent a relatively small proportion of patients undergoing these types of procedures.

The authors also raise an interesting point regarding our study's identification of diabetes as an independent risk factor for postoperative complications. Although several prior studies failed to identify such an association, as pointed out, many of these did not evaluate minor complications such as wound healing issues like dehiscence and surgical site infections. One point we hope to highlight is that not only are these types of wound healing complications among the most common following panniculectomy and abdominoplasty, but they are precisely the type of complications that are increased in patients with diabetes [3].

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With our current improved knowledge of risk factors for complications, we agree that one major challenge moving forward will be selecting the best candidates for body contouring in patients over 65 years of age. Given the increasing demand for plastic surgery among individuals over the age of 65, it is imperative that the field develops clinical tools that will aid in this patient selection process. We agree that the next logical step must involve the creation of a clinically relevant and easily applicable score to define individual risk of complications following common body-contouring procedures based on preoperative risk factors. In fact, as the authors point out, similar scoring systems and risk calculators have achieved widespread use within the surgical community, including the EuroSCORE in cardiac surgery, the Caprini score for deep vein thrombosis, and the CeDAR score [4] for ventral hernia repair. A clinical tool for risk stratification in body-contouring procedures is absolutely critical for both assisting the surgeon in making surgical decisions for these patients but also for providing individualized patient education for informed consent during the consultation phase. It is our belief that large national procedural databases—such as the American College of Surgeons National Quality Improvement Program (ACS-NSQIP) used in our study and the CosmetAssure database utilized by Winocour et al.—are uniquely well suited for this particular task of developing risk stratification tools, and there have already been encouraging results from efforts on this front [5].

Another interesting point of discussion raised by the authors involves the specialty of the surgical team carrying out the reconstruction. While the vast majority of panniculectomy procedures in both age groups were performed by plastic surgeons (80.4% for age < 65, 70.8% for age > 65), elderly patients were significantly more likely to be operated on by general surgeons as compared to younger patients ($p < 0.001$). While our study did not identify surgical team specialty as an independent risk factor for postoperative complications, prior groups have demonstrated lower rates of overall postoperative complications following

panniculectomies performed by plastic surgeons as compared to non-plastic surgeons [6]. The etiology of this disparity is certainly multifactorial and likely involves a combination of differences in patient demographics and surgical technique. Nonetheless, we believe that it highlights the importance of judicious patient selection, meticulous operative technique, and ensuring the highest quality of care in this patient subpopulation regardless of surgeon specialty.

We thank these highly respected surgeons for their comments and for providing their unique insight on these important issues. Additionally, we are grateful to them for initiating this dialog among surgeons highlighting the necessity of developing a future preoperative score and risk management algorithms. We agree that plastic surgeons must continue to lead and contribute to the surgical care of patients with massive weight loss, with the ultimate goal of ensuring the delivery of safe surgical care and improving postoperative outcomes.



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