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**CONFLICT OF INTEREST:** A. Scarabosio, F.Tomaselli, N. Bertheuil, P.C.Parodi, Y. Berkane, R.Albanese have nothing to disclose. Dr. Tambasco is consultant from Solta Medical and from Apyx Medical.

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## Ultrasound and Helium Plasma-Assisted Liposuction for Body Contouring: A Single-Retrospective Cohort Study of 639 Patients

Damiano Tambasco<sup>1</sup> · Roberta Albanese<sup>1,2</sup> · Anna Scarabosio<sup>2,3</sup>  ·  
Federica Tomaselli<sup>1</sup> · Massimo Pinelli<sup>4</sup> · Pier Camillo Parodi<sup>5</sup> · Valentina Pinto<sup>4</sup> ·  
Yanis Berkane<sup>6,7,8</sup> · Giorgio De Santis<sup>4</sup>



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### Abstract

#### Background

Over the past two decades, liposuction techniques have significantly evolved, moving from basic fat removal to sophisticated methods aimed at improving safety, efficiency, and cosmetic outcomes. This study evaluates the efficacy and safety of a combined approach using ultrasound-assisted liposuction (UAL) and helium plasma radiofrequency (HPRF) technology to enhance skin tightening without the need for extensive surgical interventions.

#### Methods

We conducted a retrospective analysis of 639 patients who underwent the combined UAL and HPRF liposuction technique. The patient cohort had an average age of 31.5 years and a mean BMI of 27.9 kg/m<sup>2</sup>. The procedure predominantly targeted the abdomen, with an average of 2.4 body areas treated per patient. Surgical duration averaged 118 minutes, with a mean aspirate volume of 1698 mL.

#### Results

Minimal residual skin laxity was observed in 87% of patients, and 91% achieved excellent improvement in body contouring. The complication rates were low, with minor occurrences of seroma (5.6%) and a very low incidence of infection (0.3%). This combined technique demonstrated safety and efficacy, providing significant skin tightening and reducing recovery time compared to more invasive procedures.

#### Conclusions

The combined use of UAL and HPRF technology offers a safe and effective method for enhancing skin tightening and improving body contouring outcomes. Despite the promising results, this study acknowledges the limitations of its retrospective design. Future prospective, multicenter studies are recommended to further validate these findings. This technique represents a significant advancement in the field of cosmetic surgery, emphasizing minimally invasive solutions with substantial esthetic benefits.

#### Level of Evidence IV

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