

bosis rate in a retrospective series of patients who underwent large-volume liposuction and received chemoprophylaxis with low-molecular-weight heparin.<sup>19</sup> In 2011 the ASPS Venous Thromboembolism Task Force recommended risk stratification based on the 2005 Caprini scale for patients undergoing liposuction and the need for low molecular weight prophylaxis.<sup>20</sup> These guidelines should be incorporated by all plastic surgeons in their practice.

Although indirectly related to liposuction, the topic of fat transfer is among the most current and still debated topics in plastic surgery, despite initial investigations going back more than 25 years. Fat transfer may be performed as a primary procedure (e.g., breast or buttock augmentation), as an adjunct (e.g., face-lift surgery or breast reconstruction), or for the potential of “stem cell” therapy.<sup>22</sup> Adipose stem cell pluripotentiality and unlimited capacity for self-renewal, represents a great promise for tissue engineering. Cell-assisted lipotransfer is a novel approach to autologous fat transplantation in which adipose-derived stem cells are attached to the aspirated fat.<sup>24</sup>

The “holy grail” for body-sculpting technology is non-invasive technologies that minimise tissue morbidity, decrease downtime, and increase skin contraction/tightening, which lessens the need for skin excision by way of surgical intervention. This has led to a new industry: non-invasive body contouring.<sup>21</sup> In this regard are non-invasive technologies as cryolipolysis (e.g Zerona™, Coolsculpt™), high-intensity focused ultrasound – HIFU (e.g Liposonix™) and radiofrequency devices (e.g BodyFX™) for fat cell disruption and lysis.

The proven benefit of liposuction as an adjunct in procedures such as abdominoplasty, breast

reduction, face-neck lifting and body lifts cannot be stressed enough. It is an essential tool for the three dimensional composite sculpting/remodelling of body structures.

When liposuction was first introduced and popularised in the early 1980s, it indelibly altered the field of body contouring surgery and redefined plastic surgery for future generations of surgeons. Unless a “cure” for obesity is discovered, or a tectonic shift in human nature, lifestyle, or fashion trends occurs, it is likely than our concerns with lipodystrophy will persist unabated. Moreover, as more practitioners and manufacturers become involved in this area and research continues into the understanding of adipocyte physiology, the fields of liposuction, lipolysis, obesity, and fat cell metabolism will continue to gain more interest and realize more advancement.<sup>22</sup>

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