PURE
PLASTIC SURGERY

Ultrasound-Guided BBL Surgery

Using Ultrasound Technology to increase Procedure Safety and Improve Patient Satisfaction

Advancing the BBL with Ultrasound

BBL Safety Recommendations[2]

1. Harvested fat should only be injected into the subcutaneous space
2. Surgeons should avoid injecting at a downward angle
3. Surgeons should use a stiff cannula (≥4 mm) to avoid bending

Ultrasound technology has been infused into numerous niches within the medical industry, time and again showing its imaging and visualization benefits while also improving procedure outcomes. Whether it's to evaluate blood flow or guide a needle for a biopsy, ultrasound offers numerous advantages when combined with surgery, and this is also true for the cosmetic field.

As one of the fastest-growing aesthetic procedures of the 2010s,[1] the Brazilian Butt Lift (BBL) is a popular cosmetic procedure involving the transfer of fat to the buttocks region to enhance its size and shape. The fat is harvested from the patient's flanks, abdomen, thighs, or back through liposuction, purified, then injected into the soft tissue of the buttocks.

When it comes to grafted fat for BBLs, its receiving site is important. In the past, surgeons had found that injecting deeper to the subcutaneous layers allowed them to transfer larger fat volumes, leading to higher survival rates of the grafted fat.[2] However, the deeper the harvested fat is injected, the closer it is to the blood vessels in the deep gluteal muscles, and the greater the risk of complications such as pulmonary fat embolism.

This adverse event can arise if the harvested fat is injected across the fascia covering the gluteal muscles, which increases the risk of fat entering the bloodstream. Should it enter one of the larger blood vessels leading to the lungs, it can result in a pulmonary embolism, a life-threatening complication that damages the lungs and other organs. To put the seriousness of this complication into perspective, should pulmonary fat embolism occur, it is fatal in 7-10% of cases.[3] These statistics are why reducing this risk, such as through ultrasound guidance, is crucial.

Ultrasound technology utilizes high-frequency sound waves to create images of the body's internal structure based on the placement of the ultrasound probe.[4] For the BBL, the probe is placed directly on the skin of the buttocks, which allows for imaging of the gluteal soft tissue anatomy, including the superficial fat, superficial fascia, deep fat compartments, and deep gluteal muscle and fascia.

Ultrasound technology offers numerous benefits, all of which stem from its ability to provide real-time imaging during the procedure it is paired with. In the case of the BBL, this guidance allows the surgeon to see precisely where the fat is placed, ensuring it is injected into the correct soft tissue compartment.

L7 HD3

Linear Scanner

Frequency: **4–13 MHz**
Max Depth: **11 cm**
Applications: **Breast, Lung, MSK, Ocular, Small Parts, Vascular**

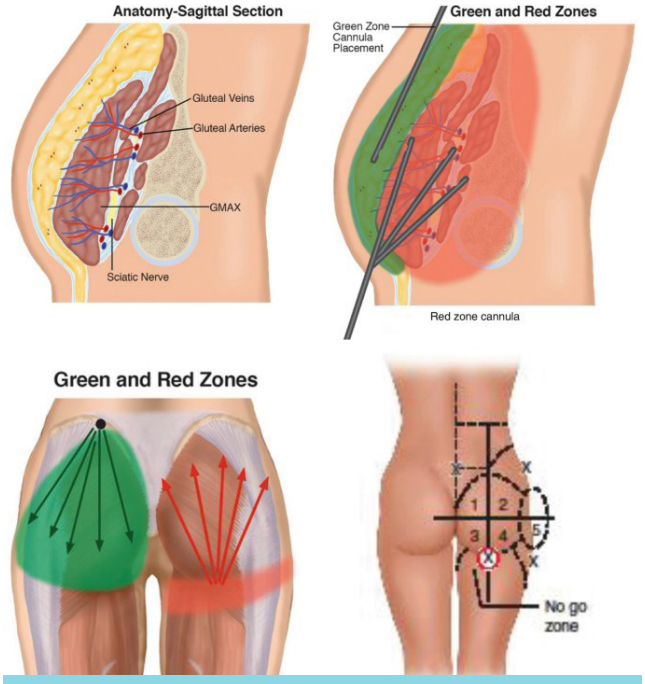
Benefits of Ultrasound-Guidance for BBLs

Before adopting any procedural advancement, it is crucial to evaluate the proposed benefits to determine if the addition is a genuine improvement worth adopting. In the case of ultrasound-guided BBL, the benefits are significant, breaching both patient satisfaction and safety.

Improved Accuracy

Imaging is everything when it comes to surgery, and ultrasound allows for imaging of the internal structures of the body without having to complete more invasive procedures. Through ultrasound guidance, the surgeon can visualize, in real time, where the cannula is and where the fat is transferred.

Currently, for a BBL the best placement for the harvested fat is the deep subcutaneous fat compartment—through ultrasound imaging, surgeons can have greater certainty that they inject the fat into this layer.



Benefits of Ultrasound Guidance With BBL

1. Improves accuracy
2. Reduces complication risk
3. Produces better results

* Image Source: https://link.springer.com/chapter/10.1007/978-3-030-58945-5_5

Reduces Complication Risk

The most significant risk of BBL is pulmonary fat embolism, which can occur if the fat is injected below the fascia overlaying the gluteal muscle.

The increased visibility offered by ultrasound technology allows surgeons to keep fat placement above this fascia and, most importantly, in the deep subcutaneous fat compartment. This compartment is directly above the deep fascia, which is why ultrasound guidance is vital for expertly navigating these layers, ensuring the fat is placed where intended, and reducing the risk of pulmonary fat embolism.

Better Results

The above benefits combine to create better patient outcomes and better results. Since the improved accuracy offered by ultrasound guidance ensures the fat is injected precisely where the surgeon intends, the surgeon can better sculpt the patient's body and create their desired image.

Furthermore, reducing complications leads to better outcomes and fewer adverse events following the procedure. The surgery becomes safer with ultrasound guidance, and patients are happier with their results.

CLICK HERE TO WATCH DR. EARLE PERFORM AN ULTRASOUND GUIDED BBL

Ultrasound-Guided BBL Pioneer:
Dr. S. Alexander Earle, MD, FACS

When it comes to medical procedures, it is always helpful to look to the pioneers in the field—those who have played a part in its evolution over the years. For ultrasound-guided BBL, one such pioneer is Dr. S. Alexander Earle.

Dr. Earle's clinic, PURE Plastic Surgery, is located in Miami, and he is well-known for body and face procedures with a focus on safety, patient education, a luxury experience, and beautiful results.

He has years of experience in reconstructive and aesthetic surgery, specializing in aesthetic procedures of the face and body, including breast surgery, eyelid surgery, abdominoplasty, gluteal augmentation (BBL) with fat transfer, and liposuction. He is also highly skilled in ultrasound-safe BBL technology using the portable ultrasound machine and has emphasized its implementation in his practice because of the additional safety measures offered for his patients.

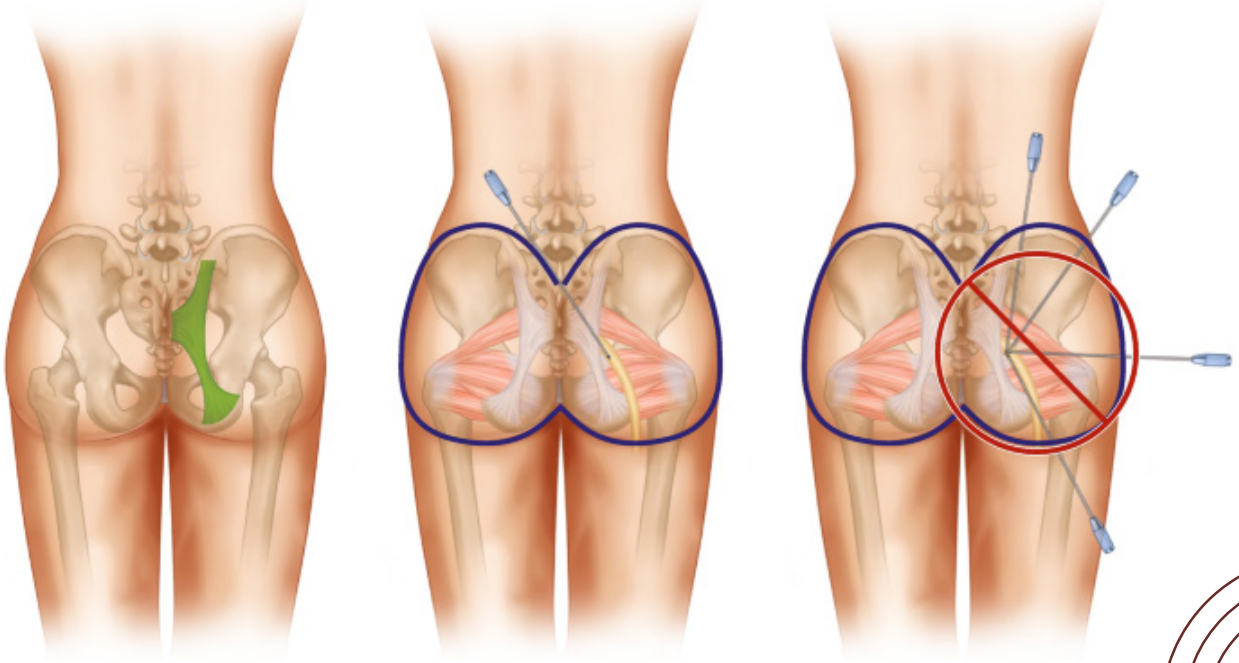
In July 2023, House Bill 1471 was enacted.5 This bill established practice standards for physicians performing gluteal fat grafting procedures and stated that gluteal fat injections be completed under ultrasound guidance to ensure fat is only injected into subcutaneous space, among other safety precautions. Dr. Earle has complied with these points before they were enacted into law, simply because he understood the safety benefits offered to his patients by these points and knew they equated to better outcomes. Furthermore, he has been using ultrasound technology since 2019, years before legislation was passed and other facilities had to learn this skill.

While others are still learning, Dr. Earle has already perfected his craft and has performed approximately 2,000 ultrasound-guided BBLs to date.

If you want an expert in ultrasound-guided BBL procedures, you want Dr. Earle.

References

1. ASfAP, S. (2020). The aesthetic society's cosmetic surgery national data bank: statistics 2019. Aesthet Surg J, 40, 1-26.
2. Pazmiño, P., & Garcia, O. (2023). Brazilian Butt Lift-Associated Mortality: The South Florida Experience. Aesthetic surgery journal, 43(2), 162–178. https://doi.org/10.1093/asj/sjac224
3. Adeyinka A, Pierre L. Fat Embolism. [Updated 2022 Oct 31]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK499885/
4. Wu, T. Y., Guo, N., Teh, C. Y., & Hay, J. X. (2012). SpringerBriefs in Molecular Science, 5–12. doi:10.1007/978-94-007-5533-8_2
5. 2023 Bills - FL HealthSource • Health Care Resources for Consumers & Providers. (2023). https://flhealthsource.gov/2023-bills/



* Image Source: https://link.springer.com/chapter/10.1007/978-3-030-58945-5_5

Dr. S. Alexander Earle Bio

Dr. S. Alexander Earle, MD, FACS, is an Ivy League-educated plastic surgeon, double board-certified by the American Board of Surgery and the American Board of Plastic Surgery. He is the founder and owner of PURE Plastic Surgery and PURE Aesthetic Center in Miami.

Dr. Earle has vast experience in both reconstructive and aesthetic surgery and specializes in aesthetic procedures of the face and body, including eyelid surgery, breast surgery, abdominoplasty, gluteal augmentation (BBL) with fat transfer and liposuction. In addition, he is extremely skilled in ultrasound safe Brazilian butt lift (BBL) technology adding additional safety measures for his patients.

He is also known for breast revision surgery and medical cosmetic procedures, such as FaceTite®, BodyTite®, AccuTite®, Morpheus8® micro-needling and BOTOX® Cosmetic injections.

His artistry and in-depth knowledge of surgical techniques combined with each individua's proportions and desires are the foundation for Smart Aesthetics ™, which provides a beautiful, long-lasting and naturally balanced result. Patient satisfaction is his priority along with patient safety, health and well-being.

The Pure Plastic Surgery operating room (OR) is state-of-the-art and accredited by the Joint Commission, the highest level of accreditation an office-based surgery clinic can obtain. The OR provides the safest conditions for plastic surgery, including a specific pre-operative department to ensure patients undergo anesthesia safely.

Dr. Earle has a B.A. from Princeton University, a Doctor of Medicine from NYU Grossman School of Medicine and completed his general residency at the University of Miami-Jackson Memorial Hospital where he also completed two years of research funded by the National Institute of Health (NIH). He completed his plastic and reconstructive surgery residency at Duke University.

Dr. Earle is a Fellow of the American College of Surgeons, president of The World Association of Gluteal Surgeons (WAGS) and a member of the American Society of Plastic Surgeons.

He is from Puerto Rico and resides in Coral Gables, Florida with his wife, Mikele and three children.

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Legend:

Image 1. Equipment used: 60ml syringes with Toomey type tip, Blunt tip 5mm single hole infiltrating cannulas, Sterile bowl for fat placement, Glass collection bottle 2800ml, Sterile bag and gel for ultrasound.

Video 1. Postoperative complications among patients undergoing US-guided gluteal fat grafting procedures from 2019-2022.

Video 1. Senior surgeon explains the fat transfer portion of the procedure and the technique used for ultrasound visualization.

Image 2a. 25y/o female patient who is 6 weeks post-op liposuction and ultrasound-guided fat transfer to buttocks and hips, anterior view.

Image 2b. 25y/o female patient who is 6 weeks post-op liposuction and ultrasound-guided fat transfer to buttocks and hips, posterior view.

Image 3. 33y/o female patient who is 4 months post-op liposuction and ultrasound-guided fat transfer to buttocks and hips, posterior view.