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# 28599 – BREAST RECONSTRUCTION WITH LATISSIMUS DORSI MUSCLE FLAP LIPOINJECTED ASSISTED BY INDOCYANINE GREEN AND SPY-PHI: A CASE REPORT AND LITERATURE REVIEW

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**Introduction:** Indocyanine green (ICG) is a non-toxic fluorophore with widespread use in clinical and surgical practice. It has multiple applications in breast surgery, including lymphatic mapping for sentinel lymph node biopsy, assessment of perfusion and flap viability in reconstructive surgeries, and intraoperative lesion localization when the tumor cannot be palpated. The use of fluorescence in breast surgery to evaluate flap perfusion in reconstructive procedures appears to be an effective tool for daily surgical practice, enabling real-time assessment of dermal and myocutaneous flap viability. Although there is substantial evidence supporting the benefits of fluorescence-guided surgery techniques, current clinical application in breast surgery remains limited. There is limited data in the literature on this scope, and the method's use is still restricted. The significance of this article lies in reporting a autologous breast reconstruction performed with the assistance of the SPY-PHI device and documenting real-time assessment of myocutaneous flap perfusion. **Methodology:** The study design was observational and retrospective, reporting a case involving a patient who underwent delayed breast reconstruction with autologous flaps assisted by fluorescence, using indocyanine green and intraoperative images obtained with the SPY-PHI device. Data were collected from medical records at Santa Izabel Hospital. The information included clinical data, the surgical technique employed, and intraoperative and postoperative outcomes. The study was approved by the institution's Research Ethics Committee via the Brazilian Platform Brasil, with the Certificate of Presentation for Ethical Review (CAAE) number 77670823.7.0000.5520. **Conclusion:** Breast reconstruction with a lipoinjected latissimus dorsi muscle flap is an effective and versatile option using autologous tissues. Although the risk of ischemic complications is low, excessive fat transfer can impair local microcirculation. Real-time blood perfusion monitoring with indocyanine green fluorescence assisted by SPY-PHI may serve as an alternative to incorporate this technology into breast reconstructive procedures.