

the risks of overall complications were significantly higher in the DTI group (OR 1.51 [1.06-2.14]).

**Conclusions:** This meta-analysis demonstrates significantly greater risk of complications and implant loss in the DTI breast reconstruction group. These findings serve to aid both patients and clinicians in the decision-making process regarding implant reconstruction following mastectomy

#### 1443 Comparison of Outcomes Between Immediate Direct-to-Implant Breast Reconstruction versus Two-Stage Implant Breast Reconstruction; a Systematic Review and Meta-analysis

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**Background:** Direct-to-implant (DTI) breast reconstruction is increasingly performed as the preferred method of immediate breast reconstruction following mastectomy. The proposed advantages of DTI over two-stage tissue expander (TE)/implant reconstruction relate to fewer surgical procedures. This systematic review and meta-analysis aims to evaluate the safety and efficacy of DTI versus conventional TE/implant breast reconstruction.

**Method:** A systematic review was performed (PubMed, Embase, Scopus) to identify relevant studies that compared outcomes between DTI and TE/Implant reconstructions. Publications up to October 2020 were included. The primary outcome was overall complication rate. Secondary outcomes included infection rate and implant loss.

**Results:** Nineteen studies, including 32,971 implant-based breast reconstructions, were analysed. Median age was 48 years. Mean BMI was 25.9. There was no statistically significant difference between the two groups. Duration of follow up ranged from 1-60 months. Overall complications were significantly more likely to occur in the DTI group (OR 1.81 [1.17-2.79]). Overall complications refers to all reported complications including seroma, haematoma, wound dehiscence, infection, skin necrosis and capsular contracture. Implant loss was also significantly higher in the DTI cohort (OR 1.31 [1.12-1.78]). There was no significant difference in infection rates between the two groups. Subgroup analyses, focusing on high-powered multicentre studies showed that