

SDC 1. Characteristics and Quality Assessment of Included Studies.

Paper	Study Type	Intervention	Sample Description	Quality	Risk of Bias Rating
Afonso et al., 2017	Retrospective case control	ERP vs. control	DIEP or MS-TRAM flap patients  ERP: n = 42  Control: n = 49	High	Low
Clary et al., 2020	Non-randomized control trial	TAP with liposomal bupivacaine vs. thoracic epidural	DIEP flap breast reconstruction patients (abdominal donor site)  TAP with liposomal bupivacaine: n = 15  Thoracic epidural: n = 15	Low	Serious
Gatherwright et al., 2018	Prospective cohort	Analgesia regimens	Unilateral DIEP reconstruction for breast cancer  Liposomal Bupivacaine: 8 patients  Bupivacaine: 8 patients  OnQ Pump: 5 patients  Controls: 6 patients	Moderate	Low
Hwang et al., 2000	Retrospective cohort	Clinical Pathway vs. Control	TRAM flap Patients  Control: n = 40  Clinical Pathway: n = 29	High	Low
Jablonka et al., 2017	Retrospective case control	Analgesia regimens	Breast reconstruction using abdominally-based free flaps  Control: n = 40  TAP catheter: n = 48	Low	Serious

			TAP liposomal bupivacaine: n = 40		
Kaoutzanis et al., 2018	Retrospective cohort	ERP vs. control	Autologous tissue-based breast reconstruction patients  Control: n = 50  ERP: n = 50	High	Low
Knackstedt et al., 2017	Retrospective cohort	Liposomal Bupivacaine vs OnQ catheter	Unilateral DIEP reconstruction  Liposomal Bupivacaine (TAP block): n = 6  Bupivacaine pain catheter OnQ: n = 6	Low	Serious
O'Neill et al., 2020	Retrospective cohort	ERAS vs. Control	DIEP flap patients  Controls: n = 183  ERAS: n = 198	Moderate	Moderate
Oh et al., 2018	Retrospective cohort	ERAS vs. control	Free-flap breast reconstruction patients (abdominal donor site)  ERAS: n = 82  Control: n = 118	High	Moderate
Salibian et al., 2018	Retrospective chart review/cohort	Liposomal bupivacaine TAP block vs. controls	Abdominally-based microvascular breast reconstruction  Controls: n = 64  Liposomal bupivacaine TAP Block: n = 50	High	Moderate
Stein et al., 2019	Prospective cohort	ERAS vs. control	Latissimus dorsi flap patients  Controls: n = 58  ERAS: n = 20	Moderate	Moderate