

Access Surgery in the Breast Cancer Patient

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- Nothing to disclose

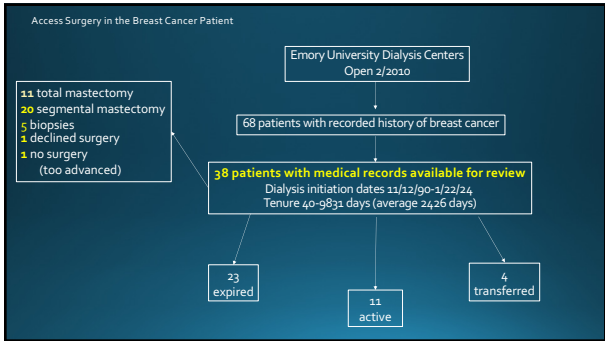
Access Surgery in the Breast Cancer Patient

- Breast cancer patients are often advised to avoid even blood pressure measurements, phlebotomy and IV insertions on the ipsilateral arm to minimize the risk of lymphedema following surgery.
- Dialysis access has the potential of aggravating this risk
- But as breast surgery has evolved away from radical procedures, this advice needs to be questioned as it limits potential access sites.

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- A large, long-term study of patients with invasive breast cancer reported cumulative BCRL rates of
 - **24.9%** in axillary lymph node dissection (ALND) cohort
 - **8%** in the sentinel lymph node (SLND) alone cohort
- Prospective surveillance and early treatment reduces the risk to **4%** in ALND and near zero in SLND

Donahue PMC, MacKenzie A, Filipovic A, Koelmeyer L. Advances in the prevention and treatment of breast cancer-related lymphedema. Breast Cancer Res Treat. 2023 Jul;200(1):1-14. doi: 10.1007/s10549-023-06947-7. Epub 2023 Apr 27. PMID: 37103998; PMCID: PMC10224871. Rafii BS, Christensen J, Larsen A, Bloomquist K. Prospective Surveillance for Breast Cancer-Related Arm Lymphedema: A Systematic Review and Meta-Analysis. J Clin Oncol. 2022 Mar 20;40(9):1009-1026. doi: 10.1200/JCO.21.01081. Epub 2022 Jan 25. PMID: 34977284.



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Lymph Node Dissection

	# Patients	Positive	Negative	Unknown
Sentinel LND	16	2	14	
Sentinel LND + Ax LND	3	1	2	
Ax LND alone	2		1	1
TOTAL	21	3		

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- Little data available about other treatment, including radiation, chemotherapy or breast reconstruction
- In the 38 patients, 22 were diagnosed with breast cancer prior to ESRD
- A total of 18 AVF, 26 AVG and 55 CVC were placed over the study period
- The side of access could only be determined in 20 patients
 - 10 AVF (5 ipsilateral)
 - 12 AVG (8 ipsilateral)

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- 2 of 5 ipsilateral AVF were placed after the BC diagnosis
- Left brachiocephalic fistula 7/3/2023 matured, still functional
- Right AVF patent for 395 days, then replaced by right AVG 6/5/2018 after failure, functional until death 5/15/21

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IPSILATERAL AVG

Patient	HD Tenure (days)	Access	Functional days	Outcome	Graft failure	Replaced by CVC?
1	3853	Right AVG	1075	Death	no	no
2	3745	Left AVG	165	Failed	yes	yes
3	3309	Left AVG	2761	Transfer	no	no
4	2490	Left AVG 1	1905	Replaced	yes	no
		Left AVG 2	585	Death	no	no
5	730	Left AVG 1	231	Replaced	yes	no
		Left AVG 2	198	Patent	no	no
6	281	Right AVG	50	Excised Infection	yes	yes

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- Only one patient in this series had their access ligated for excessive edema.
 - Contralateral left AVG placed in a patient with known left subclavian port present for 20 years
- One patient had contralateral left AVG ligated for steal which did not resolve with initial surgical correction
- No other apparent access complications found, either ipsi- or contralateral

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- Functional patency:
 - Cannulation days ranged from 28– 4805 days for AVF and 3– 3017 days for AVG.

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- Access currently used or in use at the time of death or transfer
 - 9 AVF (23.7%)
 - 14 AVG (36.8%)
 - 15 CVC (39.5%), more than 2x the %CVC across our HD units
- Over the study period, 30 patients used CVC
 - Catheter days ranged from 7-3418 days (average 710)
 - Total catheter days: 21,292
 - 12 (40%) required multiple exchanges
- 7 CVC patients never had AVF/AVG
 - Catheter days ranged from 59-3418 days (avg 1301)
 - 2 (28.5%) required multiple exchanges (CVC days 623 and 2693)

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- Conclusions:
 - We achieved long-term functional access in BC patients, even in the ipsilateral arm
 - Ipsilateral AVG more problematic than AVF
 - Although based on a small number of patients and limited data, breast cancer surgery is not an absolute contra-indication to dialysis access on the ipsilateral arm.

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- Conclusions:
 - This is the first study of access we performed based on dialysis unit data, supplemented by review of surgical records
 - Functional patency rates and catheter days may prove to be important
 - But data collection in the unit will need to be more robust and in collaboration with surgeons and interventionalists to obtain the best outcomes



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