



Outpatient • Office Based • Non-Operating Room

Society for Ambulatory Anesthesia (SAMBA) Statement on Intravenous Catheter Placement, Venipuncture and Blood Pressure Measurements in the Ipsilateral Upper Extremity after Breast Cancer Surgery with and without Axillary Lymph Node Dissection
9/27/2021

Many breast cancer survivors have been told to avoid intravenous (IV) catheters, venipunctures, and blood pressure (BP) measurements in the upper extremity ipsilateral to the previous surgery.¹ Increasingly patients have had bilateral breast surgeries with axillary lymph node dissections.

There is controversy as to whether placement of IV catheters and BP measurements in the ipsilateral surgical arm is associated with breast cancer-related lymphedema (BCRL).²⁻⁴ The first apparent recommendation to avoid venipuncture to prevent BCRL dates to 1955 after a retrospective review of a small number of patients after radical mastectomies.⁵ It is important to note that radical mastectomies are rarely done today. Trauma, venipuncture, IV catheter placement, and BP measurements have not been associated with lymphedema.^{2,3,6-9}

In spite of an accumulation of data challenging this risk, historical practice is difficult to change.⁶ The majority of breast cancer surgery patients are still instructed to avoid venipuncture, IV catheter placement and BP measurements in the ipsilateral arm of breast and axillary surgery for the rest of their lives.^{1,5} Nurses have reported on the impact to patients of this messaging to avoid interventions on these extremities, especially since 83% of breast cancer patients will survive 10 years or more.^{10,11}

The American Society of Breast Surgeons Expert Panel recommends that the use of an arm for IV placement or BP measurements after breast surgery with axillary lymph node removal is not contraindicated.¹²

In conclusion, SAMBA supports the placement of intravenous catheters, venipunctures, and blood pressure measurements in an upper extremity ipsilateral to breast cancer surgery with and without axillary lymph node dissection.

1. LeVasseur N, Stober C, Ibrahim M, et al. Perceptions of vascular access for intravenous systemic therapy and risk factors for lymphedema in early-stage breast cancer-a patient survey. *Curr Oncol*. 2018;25:e305–e310.
2. Ferguson CM, Swaroop MN, Horick N, et al. Impact of ipsilateral blood draws, injections, blood pressure measurements, and air travel on the risk of lymphedema for patients treated for breast cancer. *J Clin Oncol*. 2016;34:691–698.
3. Asdourian MS, Skolny MN, Brunelle C, Seward CE, Salama L, Taghian AG. Precautions for breast cancer-related lymphoedema: risk from air travel, ipsilateral arm blood pressure measurements, skin puncture, extreme temperatures, and cellulitis. *Lancet Oncol*. 2016;17:e392–e405.
4. Greene AK, Borud L, Slavin SA. Blood pressure monitoring and venipuncture in the lymphedematous extremity. *Plast Reconstr Surg*. 2005;116:2058–2059.
5. Villasor RP, Lewison EF. Postmastectomy lymphedema; a clinical investigation into its causes and prevention. *Surg Gynecol Obstet*. 1955;100:743–752.
6. McLaughlin SA. Lymphedema: separating fact from fiction. *Oncology (Williston Park)*. 2012;26:242–249.
7. Kilbreath SL, Refshauge KM, Beith JM, et al. Risk factors for lymphoedema in women with breast cancer: a large prospective cohort. *Breast*. 2016;28:29-36.
8. Naranjo J, Portner ER, Jakub JW, Cheville AL, Nuttall GA. Ipsilateral intravenous catheter placement in breast cancer surgery patients. *Anesth Analg* 2021;133:707-712.
9. Bryant JR, Hajjar RT, Lumley C, Chaiyasate K. Clinical Inquiry-In women who have undergone breast cancer surgery, including lymph node removal, do blood pressure measurements taken in the ipsilateral arm increase the risk of lymphedema? *J Okla State Med Assoc*. 2016;109:589-591.
10. Larocque G, McDiarmid S. The legacy of lymphedema: Impact on nursing practice and vascular access. *Can Oncol Nurs J*. 2019 Jul 1;29(3):194-203.
11. McDiarmid S, Larocque G. Time to rethink vascular access in patients with breast cancer. *Br J Nurs*. 2020;29:S32-S38.
12. McLaughlin SA, DeSnyder SM, Klimberg S, et al. Considerations for clinicians in the diagnosis, prevention, and treatment of breast cancer-related lymphedema, recommendations from an expert panel: part 2: preventive and therapeutic options. *Ann Surg Oncol*. 2017;24:2827–2835.

BobbieJean Sweitzer MD, FACP, SAMBA-F, FASA
SAMBA President

Dawn Schell, MD
SAMBA President-Elect

Steve Butz, MD
SAMBA Vice-President