Ontario Health
Cancer Care Ontario

Guidance for Ontario Breast Screening Program (OBSP) Sites – Adenopathy Related to Vaccination (Updated – 2022-01-28)

To:	OBSP sites
From:	Cancer Screening, Ontario Health (Cancer Care Ontario)
Re:	Guidance for adenopathy related to vaccination

Background

COVID-19 vaccines have been reported to cause swelling in the lymph nodes. In the Moderna vaccine trial, axillary swelling or tenderness in the vaccination arm was reported in approximately 12% of participants following dose 1 and 16% of participants following dose 2 of the vaccine[1]. For the Pfizer-BionNTech vaccine, adenopathy was reported as an unsolicited adverse event in 64 participants in the vaccine group compared to 6 in the placebo group[2]. The rates of adenopathy reported in the trials were based on physical examination; it is expected that the rates detected by mammography will likely be higher.

The implementation of mass vaccination is likely to lead to an increase in the detection of axillary adenopathy in breast imaging. This document provides recommendations for OBSP sites on scheduling breast screening and managing axillary adenopathy following COVID-19 and other vaccinations . The recommendations were developed in consultation with Ontario Health (Cancer Care Ontario) clinical, imaging and primary care leads, and consider recently available information[3,4,5]. The evidence on management of axillary adenopathy continues to evolve and this guidance may be updated as new information emerges.

The following recommendations apply to both OBSP (average risk) and High Risk OBSP participants.

Recommendations

1. **Where possible and when it does not unduly delay care, screening appointments for participants should be scheduled before they receive any COVID-19 vaccine dose (or any other vaccine) or 6 weeks after vaccination to allow for reactive adenopathy to resolve. This scheduling guidance should be incorporated based on the site's available resources.**
    - Participants that have already been booked for their screening appointments do not need to be rescheduled; ensure that vaccination information (see recommendation 2, below) is collected at the time of their screening appointment.

- Participants that report vaccination history of less than 6 weeks at the time of their screening appointment may be advised of the possibility of adenopathy but do not need to be rescheduled. Where possible, provide participants the choice to rebook if they prefer.
- **Breast assessment appointments (diagnostic imaging) should not be delayed.**

2. **Collect COVID-19 or other recent vaccination* information (within the last 3 months) and provide it to the interpreting radiologist.**
   OBSP sites should collect the following vaccination information for all OBSP participants:
   - Vaccination status (yes/no)
   - Dates of vaccinations administered in the last 3 months
   - Side of vaccination (left or right arm)

   This information should be made readily available to the interpreting radiologist. The OBSP site is responsible for determining how best to make this information available. **Vaccination information does not need to be entered into the integrated client management system (ICMS).**

   *Other vaccines may also cause adenopathy. OBSP sites are advised to collect information on all recent vaccination for OBSP participants.

3. **Provide participants with information regarding vaccine-related adenopathy.**
   For participants that have been vaccinated and are attending their screening appointment, the following information can be provided to help reduce anxiety:

   - *If you recently got the COVID-19 or other vaccine, you may have swelling in the lymph nodes on the side you got the injection (around or in your armpit or neck). This swelling is your body's normal reaction to the vaccine and is a sign that your body is making antibodies in response to the vaccine.*
   - *If lymph node swelling is seen on your mammogram, the radiologist may ask you to come back for additional imaging to check that the swelling has gone away.*
   - *If you notice swelling in your lymph nodes after vaccination, and it lasts for more than 6 weeks after your vaccination, you should let your family doctor or nurse practitioner know.*

4. **Management of axillary adenopathy in screening mammography.**
   Vaccines are known to cause adenopathy. This is a normal reaction to the vaccine and is related to antibody production. If axillary adenopathy is detected within 4 weeks of vaccination and is ipsilateral to the vaccination site, management should be based on available clinical history (Table 1).

Table 1: Management recommendations for axillary adenopathy in screening mammography

Type	Scenario	Management recommendation
Non-palpable adenopathy	Clinical and vaccination history is available, axillary adenopathy is likely due to vaccination	• This finding could be considered benign, participant can return to screening (BI-RADS 2). • Radiologists should recommend that the primary care provider follow up with the participant to ensure that no axillary lymph nodes are palpable 6 weeks after most recent vaccination.

Non-palpable adenopathy	Clinical and/or vaccination history insufficient, or participant at risk from other etiology	• Participant can be recalled for further assessment (BI-RADS 0).
		• Following appropriate diagnostic assessment:
		  ○ Participant may undergo short interval follow up, a minimum of 6 weeks after their last imaging test. Consider timing of second vaccine dose, if applicable, with respect to follow up imaging as appropriate.
		  ○ Options for follow up of mammography-detected adenopathy include ultrasound or single view mammography.
		  ○ MRI-detected adenopathy can be followed with ultrasound.
		  ○ Unresolved adenopathy should undergo further assessment.

Palpable adenopathy	Reported at time of screening appointment	• The medical radiation technologist should note palpable adenopathy and provide this information to the interpreting radiologist.
		• Follow management recommendations for non-palpable adenopathy.
		• Primary care providers have been given the following guidance for palpable adenopathy:
		  ○ For patients reporting palpable adenopathy that is ipsilateral to the vaccination site and is within 6 weeks of vaccination, monitor clinically for up to 6 weeks from date of vaccination.
		  ○ If adenopathy persists after 6 weeks, in-person physical examination by the primary care provider and imaging with ultrasound and mammography (where relevant) is advised; earlier follow up may be required depending on clinical history.

5. **Radiologists should note all suspected vaccine-related adenopathy in OBSP screening reports (paper report and dictated) for the awareness of the primary care provider.**

References

1. Local Reactions, Systemic Reactions, Adverse Events, and Serious Adverse Events: Moderna COVID-19 Vaccine [Internet]. Centers for Disease Control and Prevention; [updated 2020 Dec 20; cited 2021 Mar 21]. Available from: https://www.cdc.gov/vaccines/covid-19/info-by-product/moderna/reactogenicity.html
2. Local Reactions, Systemic Reactions, Adverse Events, and Serious Adverse Events: Pfizer-BioNTech COVID-19 Vaccine [Internet]. Centers for Disease Control and Prevention; [updated 2020 Dec 13; cited 2021 Mar 21]. Available from: https://www.cdc.gov/vaccines/covid-19/info-by-product/pfizer/reactogenicity.html
3. Becker AS, Perez-Johnston R, Chikarmane SA, Chen MM, El Homsi M, Feigin KN, Gallagher KM, Hanna EY, Hicks M, Ilica AT, Mayer EL. Multidisciplinary Recommendations Regarding Post-Vaccine Adenopathy and Radiologic Imaging: Radiology Scientific Expert Panel. Radiology. 2021 Feb 24:210436.
4. Seely JM, Barry MH. The Canadian Society of Breast Imaging/Canadian Association of Radiologists' Recommendations for the Management of Axillary Adenopathy in Patients with Recent COVID-19 Vaccination. Amended 2021 March 23.
5. Lehman CD, Lamb LR, D'Alessandro HA. Mitigating the impact of coronavirus disease (COVID-19) vaccinations on patients undergoing breast imaging examinations: A pragmatic approach. American Journal of Roentgenology. 2021 Feb 22.