

**College of Surgeons Breast and Endocrine Chapter & College of Radiology
Malaysia Recommendations for Breast Imaging, Vaccination and Management
of Lymph Node Enlargement in Patients with Recent COVID-19 Vaccination: A
Guide for Patients and Healthcare Providers.**

These recommendations aim to:

- (1) reduce patient anxiety, healthcare provider burden, and costs of unnecessary evaluation of enlarged nodes in the setting of recent COVID 19 vaccination and
- (2) avoid delay in vaccination and recommended breast imaging for the best standard of care during the pandemic.

The COVID-19 vaccination rolled out for older individuals and cancer patients on 19 April 2021 in Malaysia. Like any other vaccination, COVID -19 vaccination will invoke an immune response that may manifest as fever and enlarged lymph nodes (1). These are natural responses and are expected to resolve within 6 to 12 weeks after the vaccine's second or final dose.

The rate of individuals getting lymph node swelling after completing the COVID-19 vaccination has been reported in 1 in 10 people (2). Thus, information about when (exact date) and the exact injection site (arm, thigh, buttock) are essential to share with your doctors.

The vaccine injection can be given intramuscularly into any muscle in the body. The most common site is the deltoid muscle on the upper arm. Other muscles like the vastus lateralis muscle on the front of the thigh and the gluteus maximus muscle on the upper outer side of the buttock are common intramuscular injection sites.

We suggest the following recommendations:

- We do not recommend delay in vaccination or breast imaging in breast cancer patients and well women screening.
- Women are advised to have their screening mammograms before being vaccinated or six weeks after the second or final dose.
- The following information must be documented on patient radiology order forms or during registration for breast imaging: COVID-19 vaccination status, date, side (left or right) and site (arm/ thigh/buttock) of vaccination.
- If an individual is being investigated for a breast problem or breast cancer diagnosis has been made, or the patient is on active cancer treatments or follow-up, vaccination should be done preferably on the thigh, or buttock, or opposite side arm to the known side of breast cancer to reduce cancer status confusion.
- We would encourage individuals to use appropriate clothing during the vaccination to ease the vaccination process, especially those having the front of thigh injections.

Patients with swollen armpit lymph nodes (axillary lymphadenopathy) after the vaccination should be managed case-by-case. Patients with axillary lymphadenopathy 6 weeks following the second vaccination dose with no other suspicious clinical finding will need no imaging. Patients with persistent axillary lymphadenopathy > 6 weeks or those with other suspicious clinical findings or recent diagnosis or suspicion of breast cancer may need further investigation (Refer to Figure. 1).

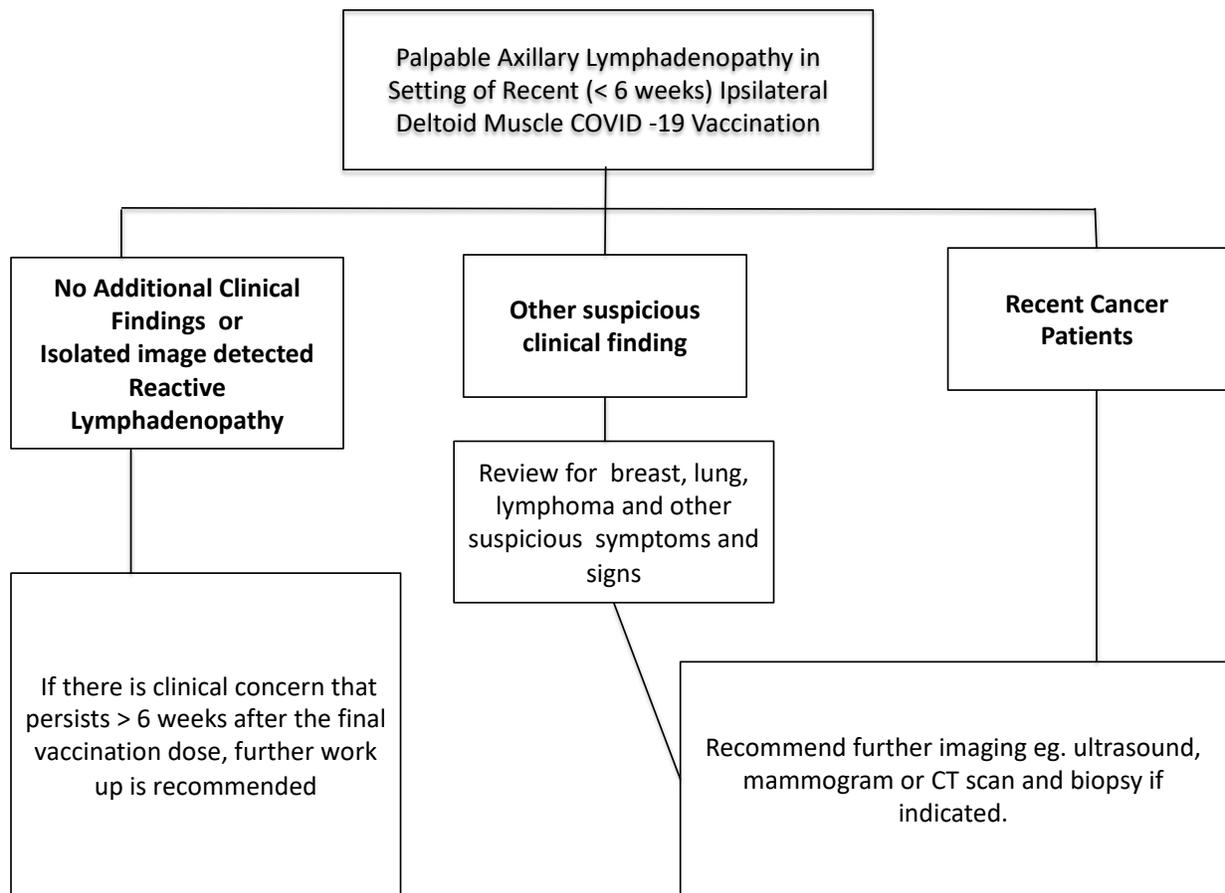


Fig. 1 Flowchart on the clinical management of same side axillary lymphadenopathy after COVID-19 vaccination.

Refer to Figure 2 for recommendations to work up incidental image-detected axillary lymphadenopathy after vaccination.

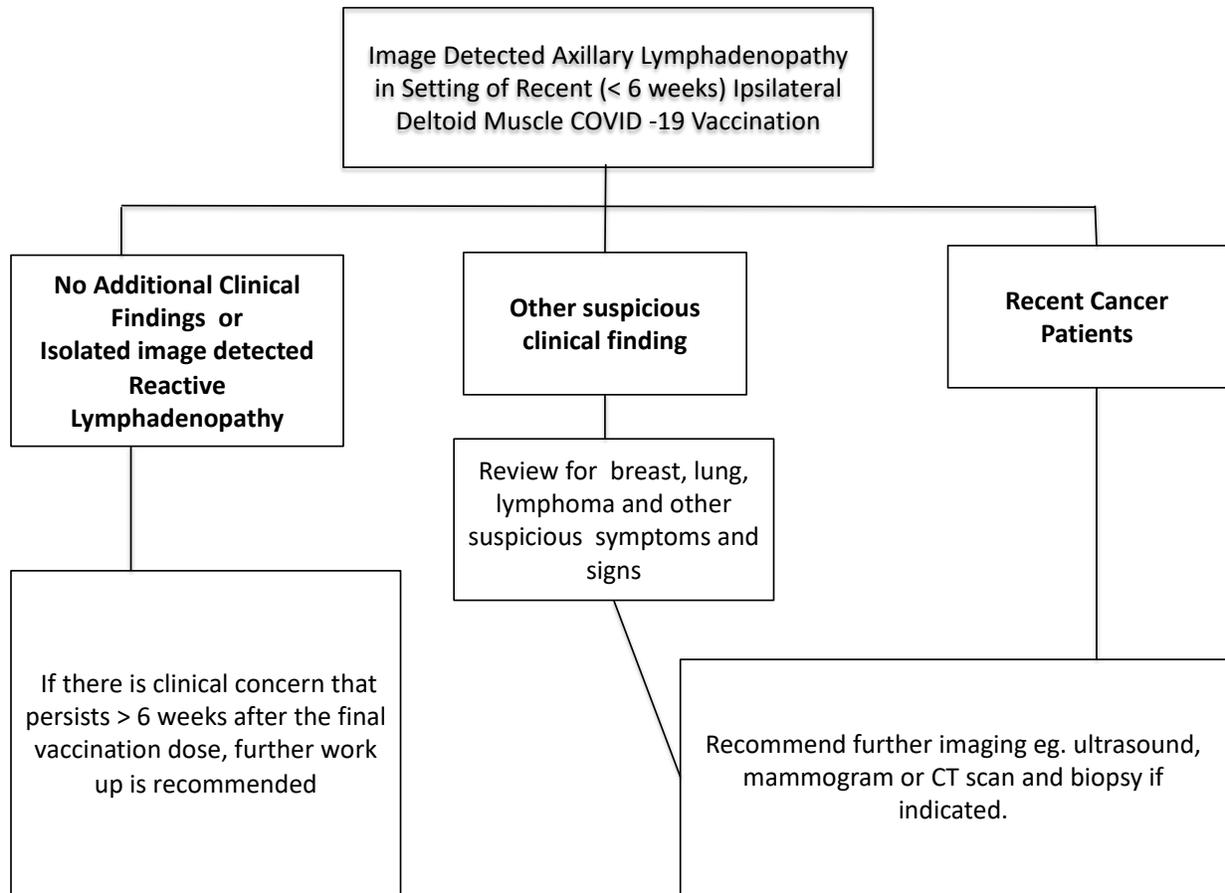


Fig. 2 Flowchart on the clinical management of same side image detected lymphadenopathy after COVID-19 vaccination.

References:

1. Unilateral Lymphadenopathy After COVID-19 Vaccination: A Practical Management Plan for Radiologists Across Specialties. Lehman CD, D'Alessandro HA, Mendoza DP, Succi MD, Kambadakone A, Lamb LR. J Am Coll Radiol. 2021 Mar 4:S1546-1440(21)00212-X. doi: 10.1016/j.jacr.2021.03.001. Online ahead of print. PMID: 33713605 Free PMC article.
2. Local Reactions, Systemic Reactions, Adverse Events, and Serious Adverse Events: PfizerBioNTech COVID-19 Vaccine. Centers for Disease Control and Prevention; [16 January, 2021]; Available from: <https://www.cdc.gov/vaccines/covid-19/infobyproduct/pfizer/reactogenicity.html>.

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