



# Response to Letter; Discrimination between Benign and Malignant Post-SARS-CoV-2 Vaccination Lymphadenopathy is Feasible, to Our Article; Axillary Adenopathy in Patients with Recent COVID-19 Vaccination: A New Diagnostic Dilemma

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*Please also read an editorial by Jung Min Chang et al. on the topic on page 691.*

We thank the authors for their interest about our articles and raising such arguments which makes an interesting debate. Here we address the points of interest raised by the authors.

As they mentioned, axillary lymphadenopathy has become

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a frequent finding after vaccination of any of the approved SARS-CoV-2 vaccine brands, therefore clinicians must be aware about how to deal with this properly and this is particularly crucial when dealing with cancer cases [1,2].

We agree that history of infection would help to delineate malignant and benign lymphadenopathy, and that this should be addressed when taking history from patient, such as history of fever, headache, chills, fatigue, arthralgia, or myalgia. On the other hand side, we see that documentation of the injection site and recommendation of the vaccination injection to the other site of cancer would still be feasible in view of the few published cases about bilateral lymphadenopathy [3] and adenopathy on the contralateral site of the injection. In our clinical experience, from tertiary and large referral center, most (> 90%) of axillary lymphadenopathy have presented unilaterally, this is in line with recent published adverse reactions of the most commonly used vaccine brands [4,5]. Therefore, we are strongly recommend that the vaccine should be administered contralaterally and not in close proximity to the time of the clinical examination and imaging.

We agree on the statement that morphology alone will not differentiate between reactive and malignant nodes, and therefore in cases of symptomatic presentation with associated breast concerns, e.g. breast lump, a biopsy of the lymph node is indicated [6]. In addition, a suspicious appearing lymph node in isolation would also be biopsied to rule out other malignancy such as lymphoma. But in cases of reactive appearing nodes with no other concerning feature, a short term follow up with ultrasound as opposed to biopsy in the first instance is preferable [7].

Regarding the suggestion about recommending routine scanning with ultrasound, CT, MRI, or FDG-PET prior to a vaccination to compare these investigations with post vaccination images if axillary lymphadenopathy occurs in cancer patient [8], we see that in our hands this is not feasible due to logistic issues, which means that all cancer patients would have scanning if wish not witch to undergo vaccination which is not be covered under health services and would only be performed under patients' own expenses, hence this would not be possible in large centers.

Finally we thank again the authors for sharing their experience with us, as this opens new horizons about this new topic in our era, the axillary lymphadenopathy after

COVID-19 vaccination.

### Conflicts of Interest

The authors have no potential conflicts of interest to disclose.

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