VOLPARA BREAST HEALTH PLATFORM

Top 5 positioning challenges in mammography

The US Food and Drug Administration (FDA) has said that improper positioning is one of the most prevalent causes of clinical image deficiencies. Poor positioning can lead to image artifacts and missing breast tissue, which may cause cancers to be missed.

Naturally, breast imaging managers seek high-quality images that aid in the early detection of breast cancer.

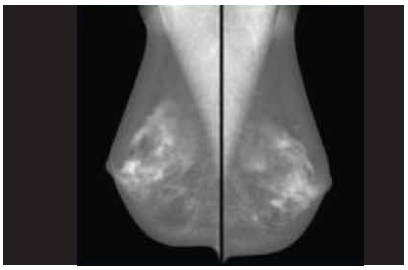
By understanding the positioning issues that affect image quality, they can guide their team to improved performance.

We sought to identify the key positioning issues affecting mammographic quality and performed a quantitative analysis on over one million mammography studies stored in the Volpara® Analytics™ cloud-based database.

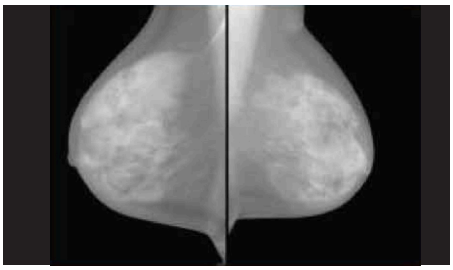
Most common positioning issues for the MLO view

① Adequate pectoral muscle

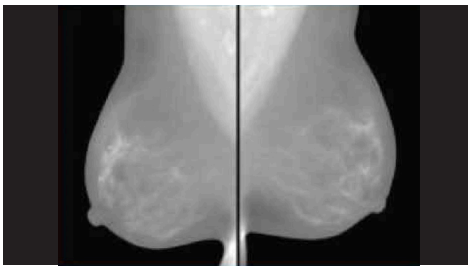
The adequate pectoral metric is achieved when the pectoral muscle angle, length, and width are captured adequately. If the pectoral muscle is not captured adequately, the result is either a narrow pectoral muscle, which indicates the potential for missed posterior breast tissue; or, conversely, a pectoral muscle with a thick axillary region, which indicates the potential for uneven compression. The thick axillary region can result in under-compression of the central and anterior breast tissue, which causes sag or droop.



Adequate pectoral muscle



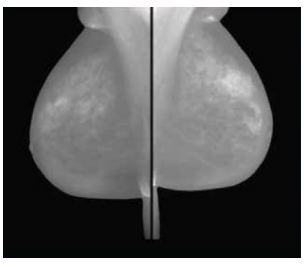
Metric not met: narrow angle



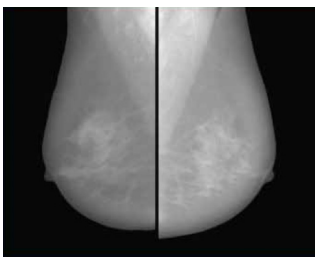
Inadequate: wide angle

② Inframammary fold (IMF)

Visible IMF is achieved when the inframammary fold is visualized and open. If the IMF is not well demonstrated, there is a greater likelihood that posterior-inferior breast tissue will be omitted from view.



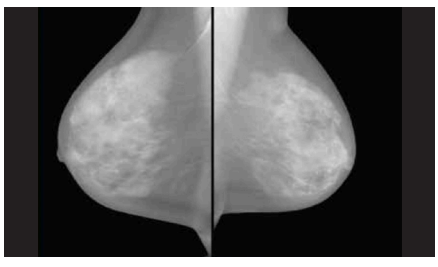
Adequate pectoral muscle



Metric not met: narrow angle

③ Pectoralis muscle to posterior nipple line (PNL)

An adequate pec to PNL metric is achieved when the pectoral muscle extends inferiorly to at least 1 cm above the PNL.

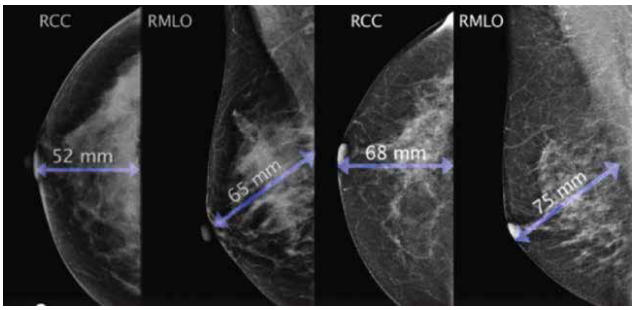


MLO: inadequate pectoral muscle

Most common positioning issues for the CC view

④ PNL length

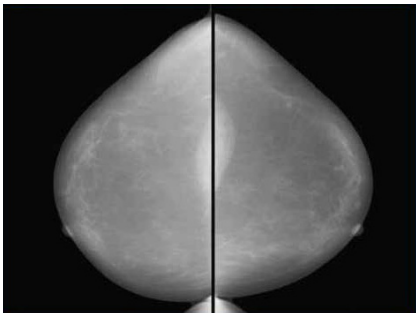
Adequate PNL length is achieved when the MLO PNL length minus the CC PNL length is no more than 1 cm. A shorter CC PNL length indicates that the posterior tissue may not be optimally visualized.



Adequate pectoral muscle

⑤ Excessive exaggeration

The CC should be acquired with the nipple centrally located to the breast, without medial or lateral exaggeration. This maximizes visualization of both medial and lateral tissue. Obtaining the CC with exaggeration in one direction or the other potentially omits medial tissue which is critical, as the MLO may not capture medial tissue well.



MLO: inadequate pectoral muscle

Volpara® Live™ software

Volpara Live automatically analyzes patient positioning and compressions while providing on-the-job feedback.

The feedback helps technologists to:

- improve mammographic quality
- improve technologist experience
- enhance patient experience.

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