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Reply: Modern primary breast augmentation: best recommendations for best results

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Sir,

With great interest we have read the CME article of Wan and Rohrich about "Modern primary breast augmentation: best recommendations for best results" [1]

It really is a state of the art article about modern breast augmentation and the use of implants with all its recent developments, including BIA-ALCL.

This CME article, however, lacks the item of planning of the incision location in the neo-IMF with its reconstruction in case of using the inframammary approach. Hidalgo and Spector [2] already called incision placement in inframammary approach "challenging" because the position of the inframammary fold (IMF) changes with surgery.

In the last fifteen years, several methods have been published on incision site positioning for inframammary augmentation mammoplasty. In our clinic, the unpublished Akademikliniken method and the Pythagorean Theorem method [3] are most commonly used for incision site positioning in the neo-IMF and result finally in a scar in or just above the reconstructed neo-IMF. In 2016, Mallucci et al. [4] introduced a new method for determining the incision location; "the ICE Principle".

Very recently we have performed a comparative study between the above mentioned three different methods. After drawing of the location of the original IMF the three possible incision sites (according to Akademikliniken method, Pythagorean theorem and ICE principle) were drawn and photographically documented (Figure 1). The values of the **Akademikliniken** method were obtained from the Allergan brochure: the 55% Lower Ventral Curvature value was drawn from the nipple downwards without skin stretching. The **ICE method** [4] was calculated for anatomical implants by adding half of the implant height to the projection and for round implants by adding 55 percent of the implant height to the projection (I). Then capacity of the breast (C) was measured from nipple to IMF under stretch. By subtracting (C) from (I), the excess (E) was calculated, which represents the distance the IMF

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should be lowered; (I-C=E). For the **Pythagorean Theorem Method**[3] half of the implant height (α) and the projection (β) is used to calculate the hypotenuse (γ) with the formula $\alpha^2 + \beta^2 = \gamma^2$: the calculated hypotenuse (γ) is then drawn from the lower border of the areola with stretching of the skin to determine the incision location in the neo–IMF.

Evaluating the above-mentioned measurements in 22 patients (6 with anatomical and 16 with round implants) we found that the Akademikliniken method and the Pythagorean Theorem method resulted in more or less comparable incision site locations whereas the ICE principle resulted in significant lower incision site locations. Based upon years of experience, we know that both the **Akademikliniken** and **Pythagorean Theorem Method**[3] result in a scar in or just above the reconstructed neo-IMF. For the ICE method we do not know but fear often either a too low scar or too high "star-gazing" nipples (nipple – IMF > 55%).

To our opinion, the key to successful inframammary breast augmentation is accurate planning of the incision location for a final scar in or just above the reconstructed neo-IMF. To date, this item still is an underexposed and therefore we look forward to hear experiences from other surgeons.

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Legends

Figure 1. Preoperative drawing on a patient, illustrating the significant differences in inframammary incision location using the three different measurement methods. The calculated incision sites according to the Akademikliniken method, the ICE principle and the Pythagorean Theorem were marked with "H", "ICE", and "P" respectively.

Figure 1