

# Nano-Surface Implants: Indications and Limitations

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The authors are to be congratulated for their efforts to introduce into their practice a breast implant with a new surface and to adapt their clinical routine to make it safe (<https://doi.org/10.1093/asj/sjaa169>). The dataset was rendered anonymous by an institutional trusted third party and organized into 2 main implant groups (conventional textured and nanotextured). The groups were further organized chronologically into 3 period subgroups for analysis of period effect.

For a surgeon highly experienced with textured anatomical implants such as Dr Montemurro and his team, it should be quite easy to utilize round/smooth implants. However, the authors experienced an increase in their complications rate after they started utilizing the new device (nanotextured implants). To reduce the learning curve with nanotextured implants, the authors described their modifications to patients' selection/surgical technique and postoperative management.

Reading this study, there seems to be no real learning curve. Rather, the authors managed to decrease the complication rate of nano-surface implants simply by avoiding utilizing them in many cases. In fact, nanotextured implants were employed only in "easy patients" with small and firm breasts with implants less than 350 mL. However, in such patients, basically any implant can potentially work fine. So where is the actual need for such a "new" implant, assuming that we really are speaking about a new implant?

Are "nanotextured" implants safer than traditional implants? The previous literature, with short follow-ups and no control groups, did not resolve my doubt.<sup>1-5</sup> According to the present results, nanotextured implants do not perform better than textured implants, which makes my early skepticism more prominent than ever.

In this study, nanotextured implants cause a worrying rate of "bottoming-out," while the incidence of capsular contracture and of breast implant associated-anaplastic large cell lymphoma development does not differ between the 2 groups. It is possible that nanotextured implants will prove their protective actions compared with textured implants with long-term and case-controlled studies; in the meantime, all the claimed advantages remain as speculations.

A very interesting point of this paper was a "steady decrease" in utilization of "nanotextured" implants beyond "period 3" of the study (19% of all implants; unpublished data of the authors). In other words, "nanotextured" implants are currently indicated in only 1 of 5 patients.

Lastly, the ISO classification put the so-called "nanotextured" implants within the smooth implant category, so why do the authors keep calling them "nanotextured" implants? "Nano-surface" should be the correct name of these implants. Breast implant manufacturers such as Motiva or others all have 1 important mission: to improve the quality of life of our patients. We as surgeons appreciate such efforts. The nano-surface is one of the current innovations in breast implants. However, only prospective and well conducted studies can prove the advantages of a new device over other surface implants. In

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conclusion, I really appreciate the honesty of the authors to make their experience available for testing “nano-surface” implants and clarify the indications and limitations of these new devices.

### Disclosures

Dr Hamdi served as a consultant for Polytech (Dieburg, Germany), Orbishape (Orbix Medical, Tel Aviv, Israel), and Zeiss (Oberkochen, Germany). Polytech was one of many sponsors of the CATBBAS meeting, for which Dr Hamdi serves as Program Director and Congress Organizer. Dr Hamdi received travel expenses from Polytech for educational presentations at some meetings but not for the 2nd World Conference on BIA-ALCL in November 2020 in Houston, Texas. Polytech provides a grant for the Brussels Breast Fellowship including the inscription to the European Master's degree in surgical oncology, reconstructive and aesthetic surgery, issued by Barcelona University, Barcelona, Spain, for which Dr Hamdi serves as the Chairman of the Scientific Committee.

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