

## Discussions and Discourses

Conversation with **Dr. Varun Dixit**, plastic surgeon, Lilavati Hospital, Mumbai

Topic: discussed the paper “**Three-dimensional Morphing and Its Added Value in the Rhinoplasty Consult**” (<https://pmc.ncbi.nlm.nih.gov/articles/PMC6382239/>)

After reading the paper, I had the some questions and received the following answers:

1. Would patients be more receptive towards using this technology? And has the number of surgeries increased?

Ans: Yes, patients love these sought of technological advancements in which they can visually see as to how things will shape up. Especially while talking about a nose surgery, since it is in the center of the face, patients are worried about how things will shape up since there have been a lot of horror stories about botched up procedures. Hence, people get clarity through this new procedure. After gaining the comfort of seeing what they have liked, there are more patients willing to do this procedure and hence the number of surgeries are increasing.

2. Is this new method easier for surgeons? And what are some of the flip sides of using this?

Ans: From the surgeon’s perspective, the app is easy to use as it involves moving pixels on the computer. However, the nose tissues are very complexly interlinked and moving or reducing one particular part can have implications on other parts. The patient is often shown how the morphed noses appear and how things can change, but replicating it surgically is important. Hence the morphing process should be carried out by the surgeon himself or herself as they are aware about the modifications possible without jeopardizing the stability of the nose. These apps contain algorithms for example reduction of the tip, width or hump of the nose, attainment of an upturned tip nose, etc . It will modify it to that extent and send it to the patient. All of those things might not be achievable on the operating table.

Sometimes these simulations raise the patient’s expectations highly causing a double edged sword. To prevent this, they need to be informed or counseled.

Another issue with certain apps is that the patient images are mandatorily uploaded on their server and then are modified. They do not get modified at the doctor’s end. This also gives rise to privacy issues.

A plus side of using this app is that they inform the surgeon about alternate procedures that may be more beneficial. For example, in some cases, a patient complains about a large nose while in reality, they have a weak chin, or a small, recluded chin. After entering the procedure required into the app for nose reduction, the algorithms in the app send recommendations about focusing more on the chin instead of the nose so this face does not appear disfigured after the procedure.