

# Rhinoplasty in the Asian Patient



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## KEYWORDS

• Rhinoplasty • Nose • Asian • Nasal tip

## KEY POINTS

- For successful Asian rhinoplasty, not only specific anatomic distinctions but also cultural nuances and social framework surrounding the patient need to be considered.
- Nasal tip skin is typically thick and sebaceous, and the lower lateral cartilages and septum are paradoxically small, weak, and deficient.
- The mainstream of dorsal augmentation is using alloplast, such as silicone or expanded polytetrafluoroethylene (e-PTFE); however, tip-plasty is safely performed with autogenous cartilage.
- Septal extension graft with added onlay tip graft is the workhorse for the tip.
- Alloplast-related complications are common causes of revision rhinoplasty. Proper selection of patients, judicious use of alloplast, and the ability to manage relevant complications are important attributes in Asian rhinoplasty.

 **Video of an end-to-end style septal extension graft (SEG) used to modify the Asian nasal tip accompanies this article at <http://www.plasticsurgery.theclinics.com/>**

## INTRODUCTION

Rhinoplasty is one of the most common facial plastic surgeries performed in Asia. The primary objective in an Asian rhinoplasty is fundamentally the same as with all rhinoplasty patients. The goal is to sculpture a natural-looking and appealing Asian nose that goes well with the ethnic face. An attractive white nose, although maybe beautiful as a nose itself, does not harmonize with the Asian face. Anatomic characteristics of the Asian nose coupled with differences in aesthetic standards demand that they be approached in a unique way. Numerous articles have been published highlighting these different approaches and techniques.<sup>1-4</sup> These collectively stress that rhinoplasty among Asians includes peculiarities

that distinguish the procedure from its white counterpart.

This article highlights the characteristics and techniques of different aspects of Asian rhinoplasty. Procedures performed on the nasal dorsum including dorsal augmentation and management of the nasal hump and procedures performed on the nasal tip with emphasis on tip augmentation are discussed. Finally, revision rhinoplasty in Asians is briefly addressed.

## CHARACTERISTICS OF THE ASIAN NOSE AND CLINICAL IMPLICATIONS

Although there are individual variations, most Asian noses are characterized by thick skin with abundant subcutaneous fibrofatty tissue, a weak

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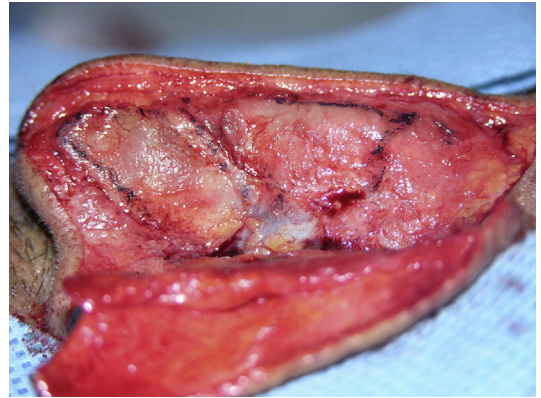
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cartilaginous framework, short nasal bones, underdeveloped anterior nasal spine, and small quadrilateral septal cartilage. The associated cutaneous findings include a wide and underprojected dorsum; a low radix and nasion; a nasal tip that is bulbous, lacking definition, underprojected, and either ptotic or overrotated (short nose); with a short columella and an alar base that is wide and flaring. These features are summarized in **Table 1** and depicted in **Fig. 1**.

Clinical implications of these characteristics are as follows:

- Thick skin can better tolerate alloplastic or autogenous material than thin skin. It camouflages grafts in a more natural fashion. However, it also obscures minor changes performed on the cartilaginous framework.
- Tip definition is harder to achieve in Asian noses. Delicate and weak lower lateral cartilages together with thin, weak septal cartilaginous support generally require reinforcement to obtain a desirable tip shape. Cephalic resection or pure cartilage reshaping sutures often do not work; instead, struts, grafts, and battens are needed to effectively modify the shape of the tip.
- The lack of septal cartilage frequently places the surgeon in a challenging situation because in most cases there is a need for significant amount of cartilage. Consequently, one of the primary sources of augmentation material in Asia remains alloplastic implants.
- The shorter nasal bone width with flatter nasal pyramid makes osteotomy more difficult because the path tends to follow the thicker part of the ascending process of maxilla.<sup>5</sup> In patients requiring large dorsal hump reductions, there is a higher chance for middle vault collapse because of short nasal bone width



**Fig. 1.** The anatomy of a typical Asian nose. Note the weak cartilages, short nasal bones, and thick skin.

and length resulting in an inverted “V” deformity.<sup>2</sup> Because of the wide nasal valve angle and thick skin envelope, nasal obstruction caused by the internal nasal valve problems is rare in Asians.<sup>6</sup>

## MANAGEMENT OF THE NASAL DORSUM

### *Dorsal Augmentation*

Most Asian patients request greater dorsal height together with increase in tip projection. Prerequisites for a successful augmentation rhinoplasty include a thorough evaluation of the patient’s anatomy, knowledge of the ideal shape and size of the nose within the context of cultural harmony, execution of proper surgical technique, and most importantly appropriate choice of augmentation material.

### *Determining the level and height of the nasion*

The key in preoperative planning is determining the level and height of the nasion, which is the starting point of the nose. The difference in the starting point among different races has been extensively debated in the literature.<sup>7</sup> Traditionally, the supratarsal crease has been considered as the ideal starting point for whites, and the midpupillary line for Asians. However, there is a trend for contemporary Asian patients to seek a higher starting point. The authors consider the starting point in Asians to be somewhere in between the supratarsal crease and midpupillary line depending on individual preferences. The height of the nasion is usually determined by the nasofrontal angle. The ideal nasofrontal angle in Asians is around 135 for males and 140 for females.

### *Choice of augmentation material*

The most important practical issue in dorsal augmentation is the choice of augmentation material. The amount of augmentation needed, skin thickness, and patient’s age, wishes, and available

**Table 1**  
**Characteristic features of the Asian nose**

Location	Characteristics
Radix	Low and inferior
Dorsum	Underprojected, short nasal bones
Tip	Underprojected, poor definition
Lower lateral	Weak, small, and pliable cartilage
Ala	Thick, flared, short columella
Skin	Thick with abundant subcutaneous fibrofatty tissue
Septum	Thinner, smaller

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