



# Detectability and Patient Satisfaction between Dorsal Preservation and Non-preservation Rhinoplasty

Short-term Scientists and Training Program  
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## BACKGROUND

The primary objective of this study is to determine if plastic surgeons (all levels of training) can identify which primary rhinoplasty patients have undergone Dorsal Preservation or separation of components. The secondary goal is to assess if any difference in patient reported satisfaction between the two groups exists. Additionally, to demonstrate that the Standardized Cosmesis and Health Nasal Outcomes Survey Description (SCHNOS) Patient-Recorded Outcome Measures (PROM) tool is a reliable, convenient instrument to analyze patient outcomes.

While dorsal preservation may be practiced frequently by the experienced rhinoplasty surgeon, its reemergence and growing popularity has led to its place as a necessary approach all surgeons should be familiar with. Dorsal preservation performed on appropriate patients allows for preservation of the nasal dorsum and its natural appearance. Further, as the nasal dorsum is preserved, the surgeon limits the amount of soft tissue trauma and midvault reconstruction is no longer necessary, thus decreasing operative time.

As preservation rhinoplasty continues to regain popularity and interest, it is only reasonable to assess if patients who have undergone dorsal preservation can be identified from those who have not undergone dorsal preservation. We predict that one will not be able to distinguish between the two techniques and that patient satisfaction will be the same if not greater in the dorsal preservation group.

## METHODS

The study includes 100 patients total, 50 dorsal preservation patients and 50 non-preservation patients. The operating surgeon began using the dorsal preservation approach during open primary rhinoplasty in December of 2019. Our inclusion criteria for subjects in the study include being between the ages of 15 and 75.

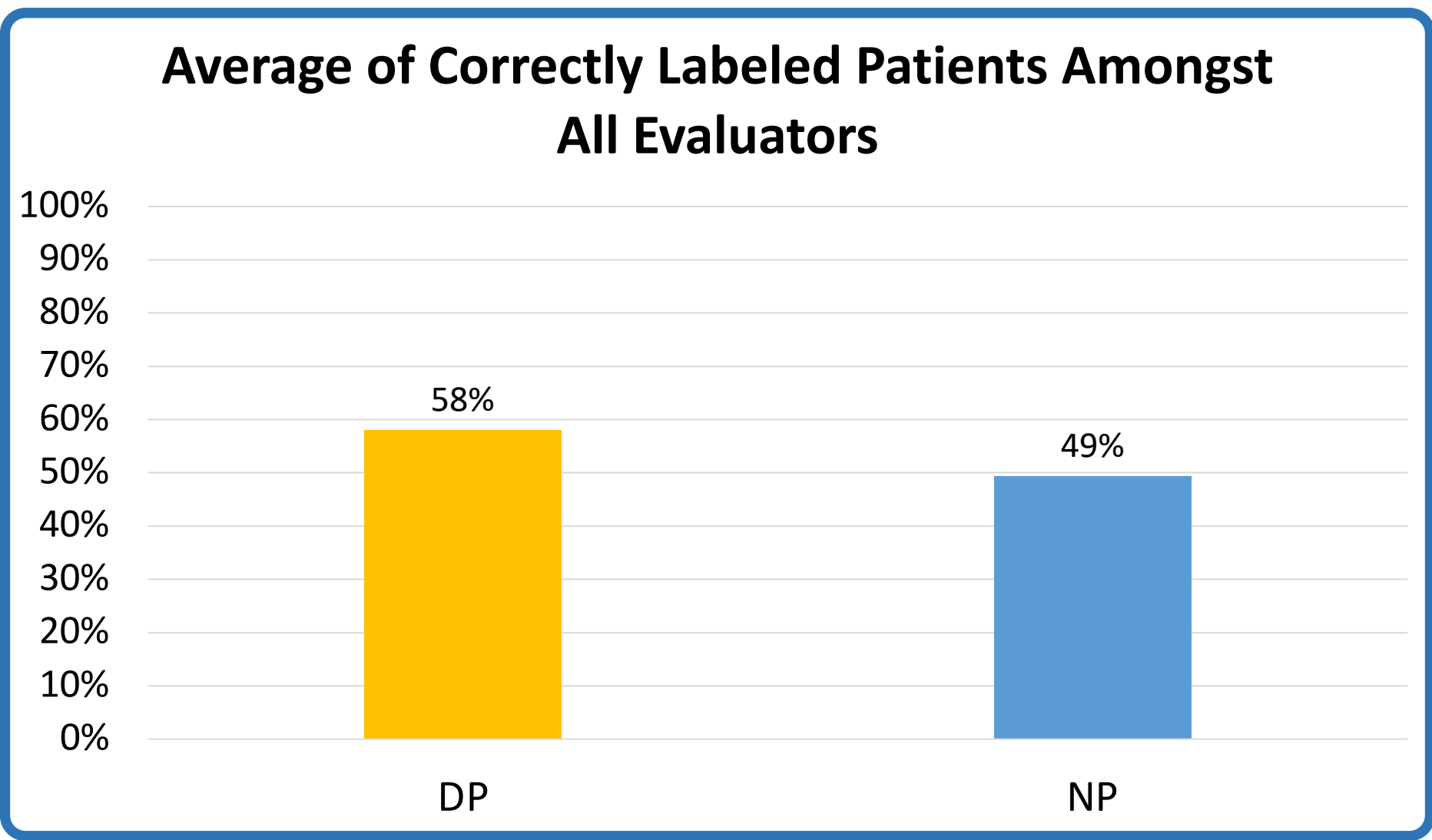
Multiple evaluators were selected to view the presentation and select if the patient has undergone dorsal preservation or separation of components rhinoplasty. A minimum of 3 evaluators in the field of Plastic and Reconstructive surgery (residents, clinic nurses, and/or attendings) were selected. Evaluators recorded their selections using the approved UCLA online survey platform, Qualtrics. Qualtrics is a HIPAA compliant tool that will be used to record and time the evaluators responses. A total of 100 prompts were associated with the displayed patients on the Powerpoint presentation. The evaluator had to select one of three options, "Dorsal Preservation", "Separation of Components" or "Unable to respond." The evaluators were instructed to select which approach they believe is correct for each patient. A secondary objective of this study was to determine if there is any significant difference in patient satisfaction between the dorsal preservation and non-preservation group. Two selected Patient-Recorded Outcome Measures (PROM) have been selected to use for this study. The Rhinoplasty Outcomes Evaluation (ROE) developed in 2000 and one of the newest rhinoplasty associated PROM, Standardized Cosmesis and Health Nasal Outcomes Survey Description (SCHNOS). The latter was developed in 2017.

## METHODS (CONTINUED)

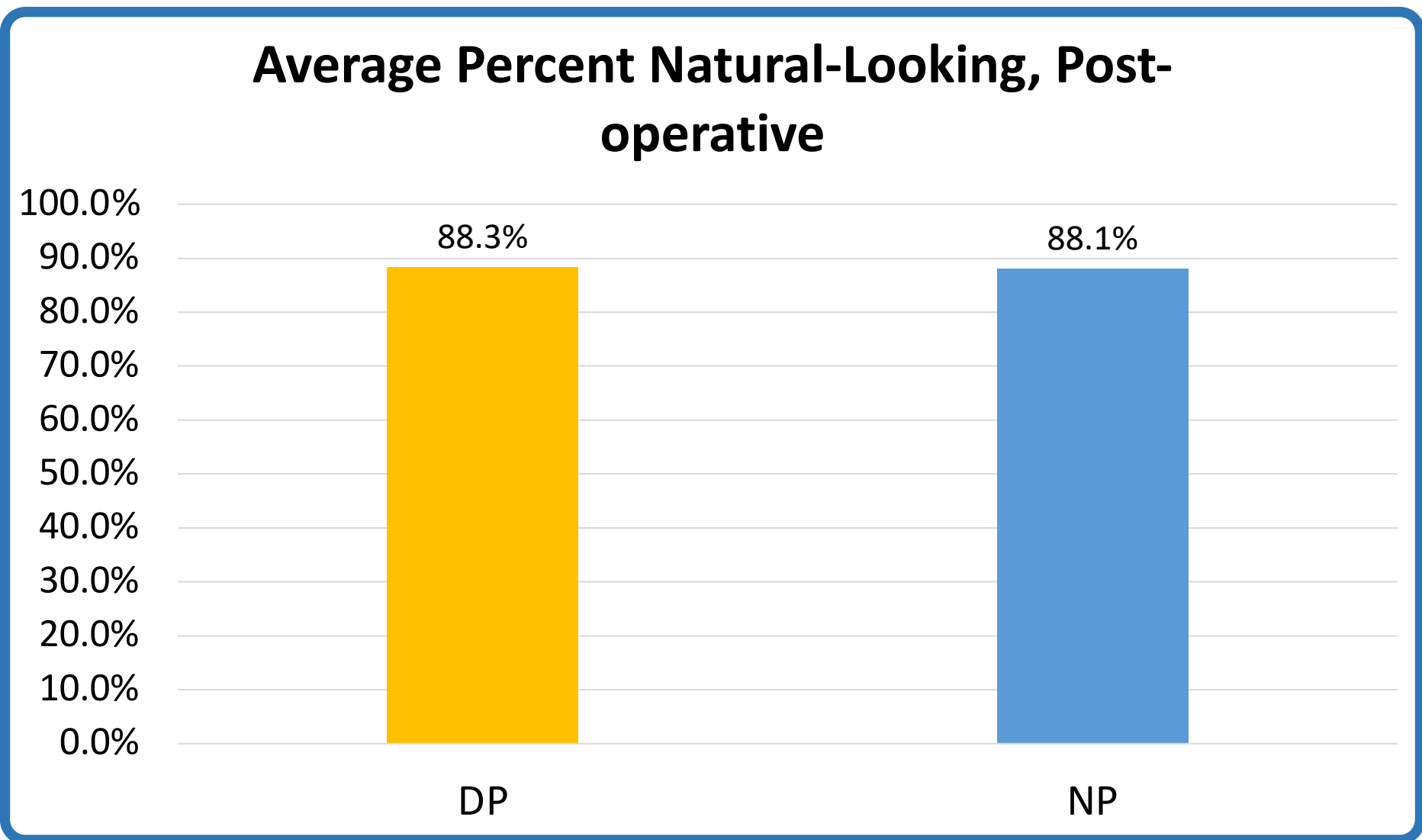
Both questionnaires are administered simultaneously using Qualtrics (UCLA approves, HIPPA compliant online survey platform). Using Qualtrics, patients receive an email with an invitation and link to participate in the questionnaire. Patients receive the invitation during the month prior to their scheduled operation and thrice post-operatively, three months, six months, and one year after their date of surgery. Responses will be recorded and saved on a password protected, Microsoft Excel sheet where the patients have been coded for further analysis.

## RESULTS

- Final results pending.
- A test trial was conducted with 25 dorsal preservation and 25 non-preservation patients. Six evaluators participated in this trial.



- Evaluators correctly labeled 58% of Dorsal Preservation (DP) patients and 49% of Non-Preservation (NP) patients, on average. The p-value was 0.2676.



- Evaluators graded each patient on how natural their nose looked, as a percent. The average percent natural for Dorsal Preservation patients was 88.3%. The average for Non-Preservation patients was 88.1%.

## DISCUSSION

We are proposing a study to investigate whether individuals are able to ascertain which primary rhinoplasty patients have undergone dorsal preservation compared to non-preservation or structural (separation of components). The test trial showed that evaluators correctly identified dorsal preservation 58% and non-preservation 49% of the time. With a p-value of 0.2676, the difference in correct answers was not significant. After completing the true trials, the final results will be gathered and analyzed.

While there have been several reports from authors describing their technique and success with dorsal preservation, there are limited studies comparing traditional rhinoplasty with dorsal preservation in regards to the postoperative results and patient-reported outcomes. This study provides the framework for future studies, including long term patient-reported outcomes, dorsal hump recurrence and further analysis of objective measures. While we are still in the early moments of this revolution, it is important to build the foundation in which further studies may be built upon. Additionally and equally as important, we desire to provide significant evidence to support the popularity of dorsal preservation and contribute to increasing the confidence of all rhinoplasty surgeons while they learn and master this technique.

Some of the benefits of Dorsal Preservation:

1. Prevents disruption of Natural Keystone Area
2. Maintenance of natural dorsal aesthetic lines
3. Patency of the internal nasal valve, improved nasal respiration
4. Prevents the irregularities that can result with osteotomies to close open-roof defects (1)
5. Eliminates the need for midvault reconstruction (1)
6. Reduces irregularities, asymmetries and long-term distortions
7. Facilitates structural rhinoplasty concepts (1)
8. Permits minor revisions (2)
9. Reduces major rib graft secondaries (2)

## FUTURE DIRECTIONS

Future directions include generating the final Powerpoint after patients have completed their one-year follow-up and conducting the final trials with at least three evaluators. As patients approach one-year post-operative status, they will complete the SCHNOS and ROE surveys, which will be used for the second objective of this study. Patient satisfaction amongst both preservation and non-preservation groups will be compared.

## REFERENCES

1. Daniel, Rollin K. "The Preservation Rhinoplasty: A New Rhinoplasty Revolution." Aesthetic Surgery Journal, vol. 38, no. 2, 2018, pp. 228–229., doi:10.1093/asj/sjx258.
2. Patel, Priyesh N., et al. "A Review and Modification of Dorsal Preservation Rhinoplasty Techniques." Facial Plastic Surgery & Aesthetic Medicine, vol. 22, no. 2, 2020, pp. 71–79., doi:10.1089/fpsam.2020.0017.