

Background

Premaxillary osteotomy may be needed during primary lip repair to **normalize labial topography**.

There is **a paucity of guidelines** and long-term data regarding premaxillary setback at primary lip repair.

This study analyzes **indications and outcomes** for **premaxillary osteotomy (PO)** and **presents an algorithm** for its use in the management of patients with bilateral cleft lip (BCL).

Methods

A **retrospective review** was conducted evaluating patients undergoing **bilateral cleft lip (BCL) repair** at our institution from 2003-2023.

Cohorts included patients with **BCL ± cleft palate** who underwent lip repair with simultaneous PO(**BCL+PO**) or without PO(**BCL-PO**).

Indications, timing of surgery, complications, and the need for orthognathic surgery to correct midface hypoplasia were assessed.

	BCL+PO	BCL-PO	p-value
Wound Dehiscence	1 (2.0%)	8 (3.8%)	0.939
Suture Abscess Formation	0 (0.0%)	7 (3.3%)	0.403
Post-Operative Infection	0 (0.0%)	2 (0.9%)	>0.999
Stent Dislodgement	0 (0.0%)	2 (0.9%)	>0.999
Lip Revisions	7 (7.8%)	6 (2.8%)	0.932

Table 1: Postoperative complications for patients undergoing bilateral cleft lip repair

Results

266 patients with BCL/P were included in the study
51 patients underwent lip repair **with premaxillary setback** NAM

149 Patients were recommended to undergo NAM
12 patients **FAILED NAM** treatment
31 patients were **not candidates** of NAM
8 patients **presented late**

Notably, there were **no instances of avascular necrosis** of the premaxilla.

Compared to BCL-PS, BCL+PS had **comparable rates** of **wound dehiscence** (2.8%vs. 7.8%; p=0.932), **lip revisions** (10.0% vs. 11.3%; p=0.976), and **orthognathic surgery rates** (50.0% vs. 56.3%; p>0.999).

Conclusion

Premaxillary osteotomy is a **safe procedure** with **comparable outcomes** to traditional bilateral cleft lip. We advocate for premaxillary setback at primary lip repair for the protuberant premaxilla promoting tension-free closure. This algorithm provides safe **experiential based guidance** for the management of the premaxillary segment.

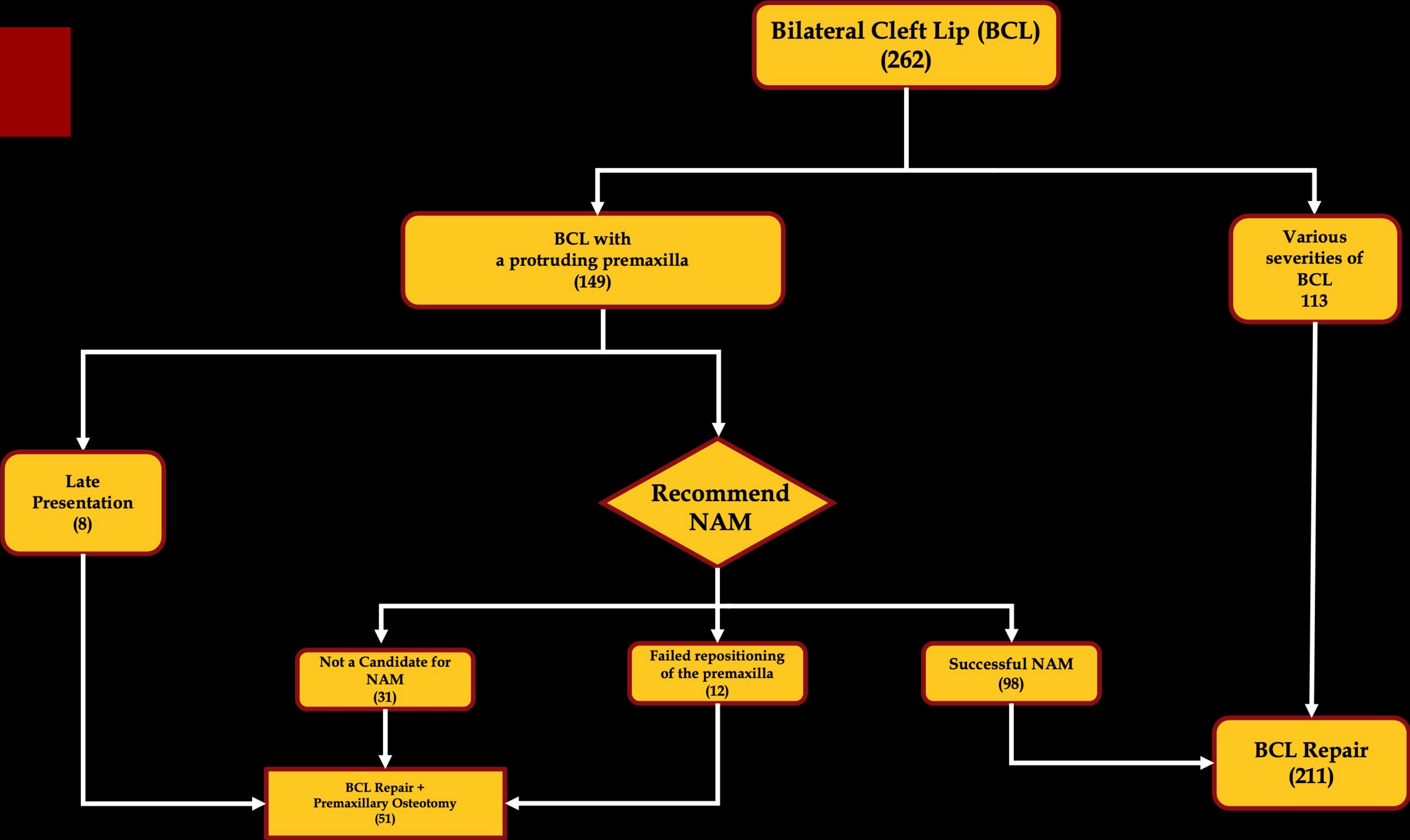


Figure 1. An algorithm for the management of patients with bilateral cleft lip ± palate