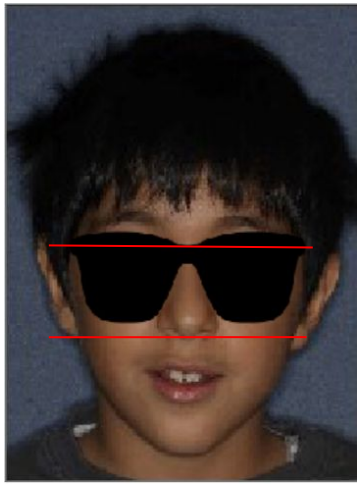
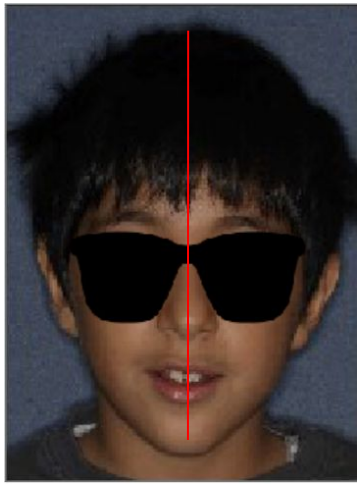
Orthodontics Case 1

Sepideh, Luci, Michael, Rachelle

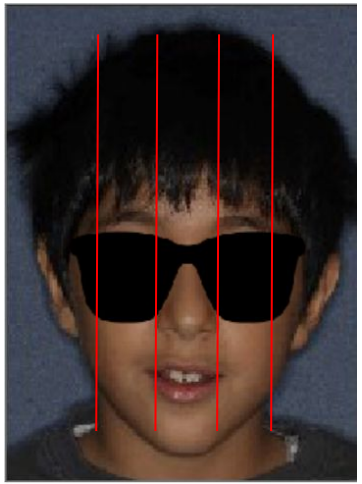
Facial Form Analysis





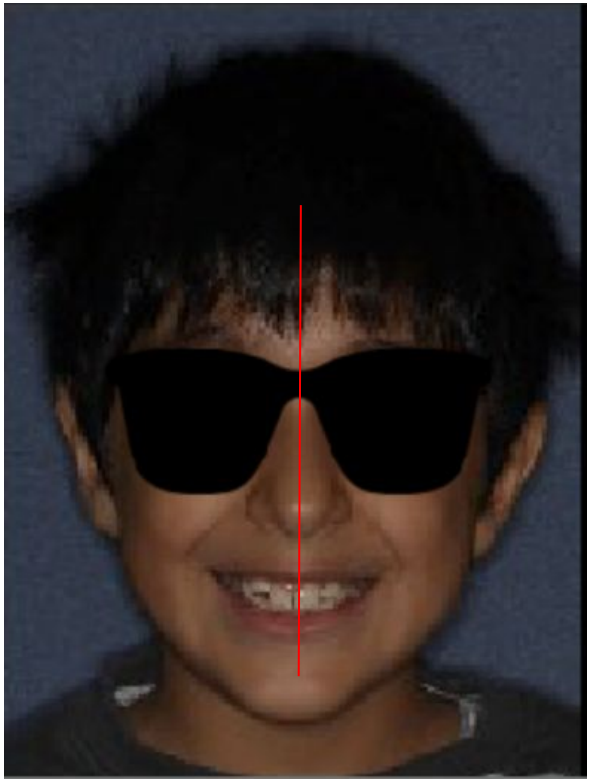






Frontal View

- Facial view:
  - Mild asymmetry
  - LHS larger
- Vertical jaw relationship:
  - Larger bottom ⅓
  - Long face
- Incisor display at rest:
  - Within normal limits



Facial and dental midlines:

- Dental midline slightly deviated right of facial midline

Anterior tooth display smiling:

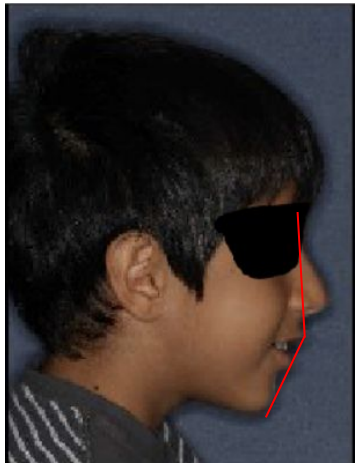
- Within normal limits

Posterior tooth display smiling:

- RHS buccal corridor - within normal limits
- LHS buccal corridor - not enough

Smile arch:

- Within normal limits



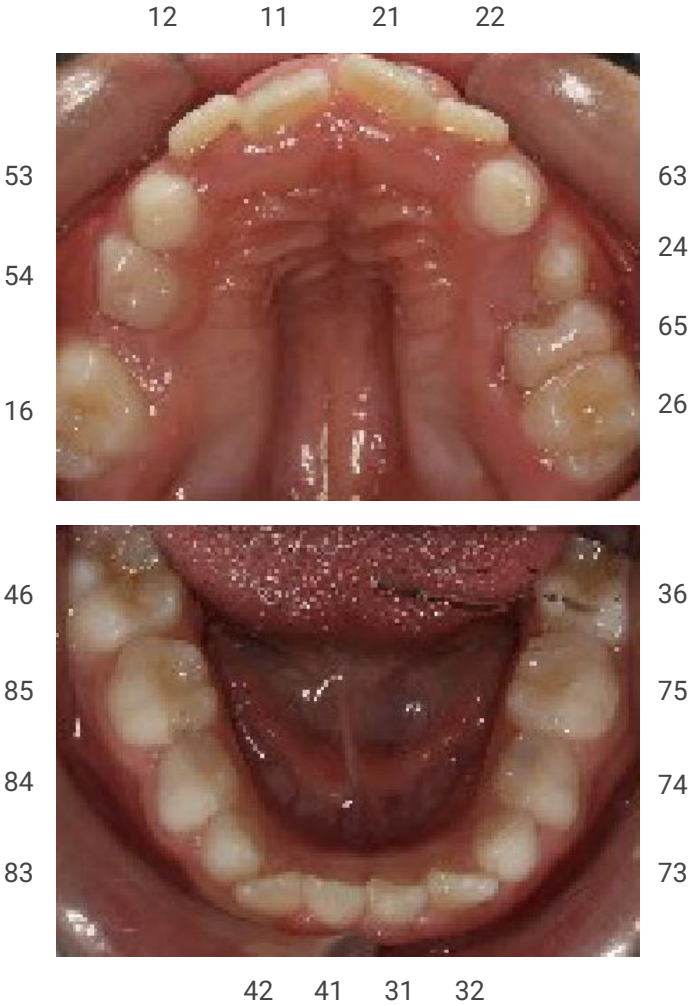


Transverse view:

- A-P jaw relationship:
  - Convex facial profile
- Lip competence:
  - Incompetent
- Lip prominence:
  - Upper: prominent
  - Lower: within normal limits

Intraoral photographs





Occlusal view:

Teeth present, as shown on slide.

Arch forms

- Maxilla: narrow tapered
- Mandible: normal ovoid

Nil caries detected, however bitewings more appropriate for diagnosis.

Spacing

- Lower: mostly okay, ~2-3 mm crowding
- Upper: anterior crowding
    - Lack of space for 2nd premolar eruption





Buccal view:

Canine/ molar relationship:

RHS molar class 2 (full unit)

LHS molar class 2 (1/2 unit)

RHS and LHS canine class 1



Normal overjet/ overbite

Nil crossbite

12 and 22 protruding

Anterior crowding present, lack of primate spacing

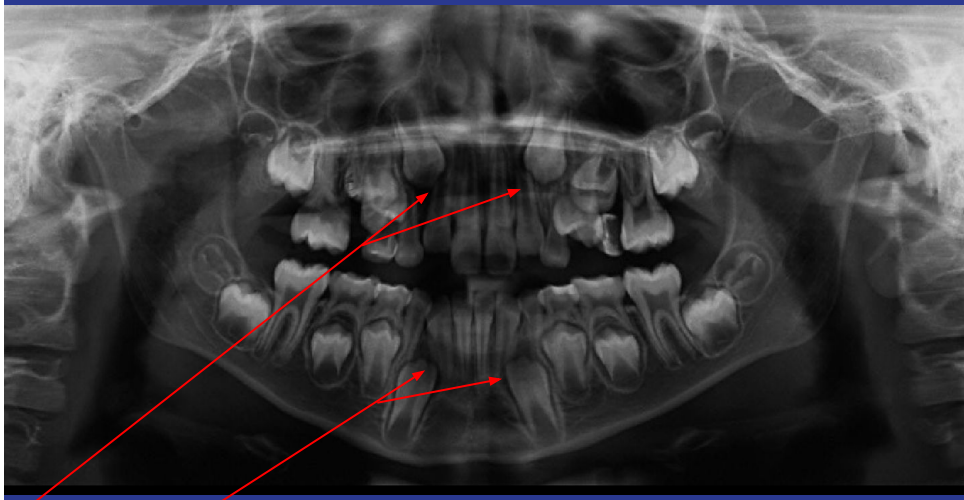
Midline ~1mm off centre

Oral health - good

OPG findings:

Dental Age: ~ 8-9 years old

- **Teeth present:**
  - Permanent:
    - Mx & Md incisors
    - Mx & Md 6s
  - Primary:
    - 53, 54, 63, 65
    - 73, 74, 75, 83, 84, 85
- **Findings:**
  - Missing: 55, 64
  - Developing teeth:
    - Permanent canines
    - Premolars
    - 7s & 8s
  - Canine impaction
    - 13 & 23 impacting on 12 & 22 roots respectively
    - 33 & 43 impacting on 32 & 42 roots respectively



Problem List

- Facial
  - Convex facial form
  - Long face
  - Incompetent lips
- Dental
  - Mild-Moderate maxillary and mandibular incisor crowding
  - Protrusion of maxillary lateral incisors
  - Q2 space loss
  - Canine impaction
- Skeletal
  - Class 2 skeletal relationship

Ideal Treatment Goals

- Distalization of 26 to **regain** space and for permanent premolars
- Correction of maxillary midline to be consistent with facial midline
- Correction of incisor crowding and protrusion
- Correction of class 2 skeletal relationship

When should treatment be performed?

- Space **REGAINING** and midline alignment: Prior to eruption of premolars. Treatment to commence immediately
- Correction of class 2 skeletal relationship: During pubertal growth spurt. Early permanent dentition

What happens if we do nothing?

Lack of treatment may lead to:

- Poorer **aesthetics**, possibly leading to self-consciousness or bullying (psychosocial concerns).
- Crowding can lead to more difficulty with **oral hygiene** (plaque retention), leading to greater susceptibility to **caries** and periodontitis/ gingivitis.
- Protruding lateral incisors may be more prone to trauma to the teeth and soft tissues.

What options are available for treatment?

Dental Treatment

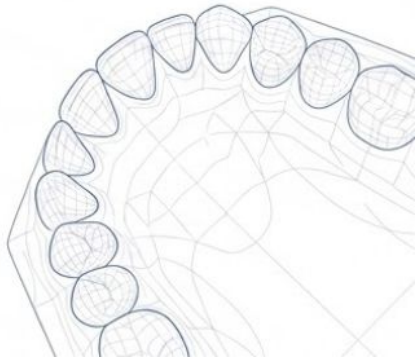
- **Aim:** Create space + improve eruption path
- **Expansion of Mx arch**
  - To address narrow maxilla
  - To gain space for permanent teeth
- **Distalise maxillary molars (6s)**
  - To **regain** space
  - To reduce continued canine impaction

Expansion appliances:

Adjustable lingual arch
W-Arch
Quad Helix
Finger Spring or Pendulum Device

Skeletal/Growth Modification

- **Aim:** Use growth to improve Class II relationships
- **Headgear**
  - If patient is compliant :)
  - Limits worsening of skeletal Class II discrepancy
  - Distalise and de-rotate maxillary molars



What is the Cost/Benefit ratio

- **Costs:** Financial, biological (root resorption), temporarily increased caries risk

- **Benefits:** Facial aesthetics, functional occlusion (canine guidance, wear prevention), utilization of growth window