

IAO Puerto Rico

Cephalometrics







To help achieve predictable results.

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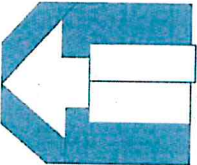
Agenda

- Cephalometric Landmarks
- Connecting the Points (tracing)
- Compiling the Data
- Bolton analysis (whole arch-Anterior only)
- Arch length discrepancy
- Chu analysis
- Completed Data form for Patient

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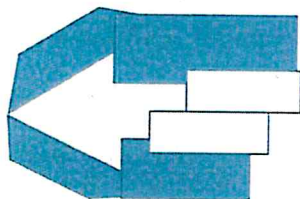
What are we trying to Discover?

- Class 1 Skeletal and Class 1 Dental



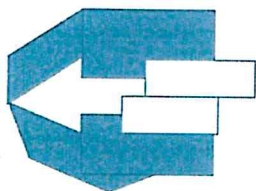
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- Class 2 Skeletal and Class 2 Dental



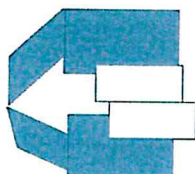
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- Class 1 skeletal Class 2 Dental



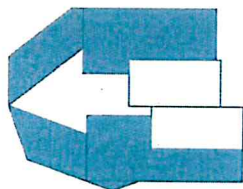
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- Class 1 Skeletal Class 3 Dental



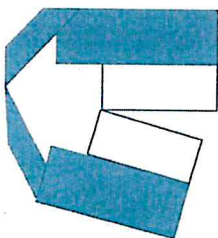
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- Class 3 Skeletal and Class 3 Dental



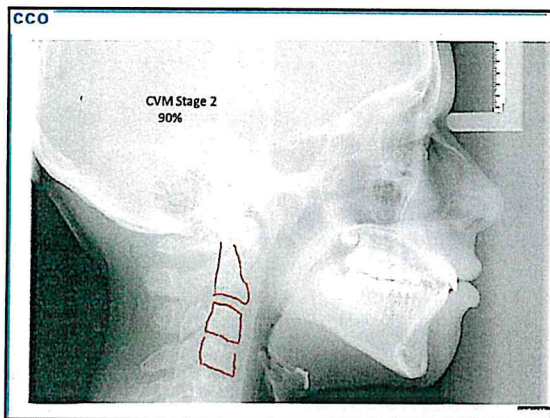
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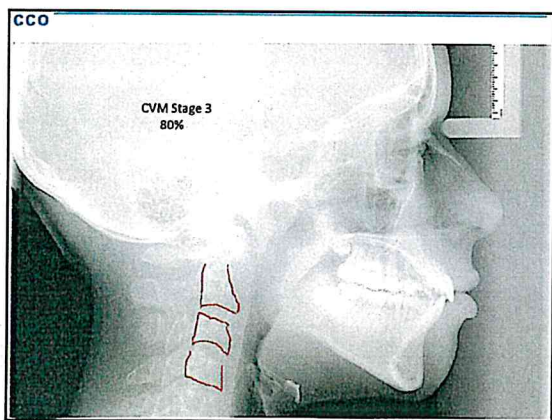
Vertical Growth PATTERN

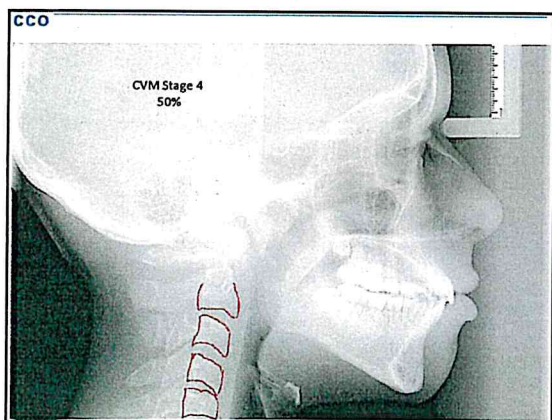


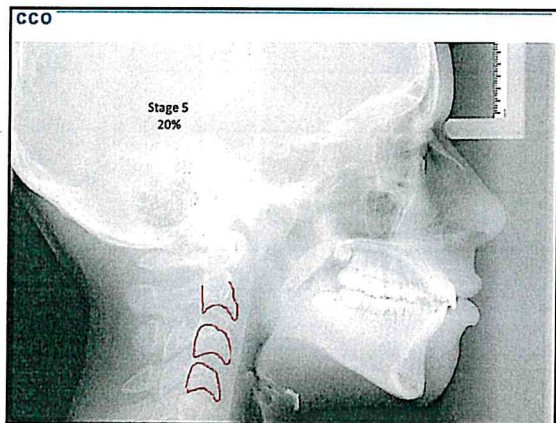
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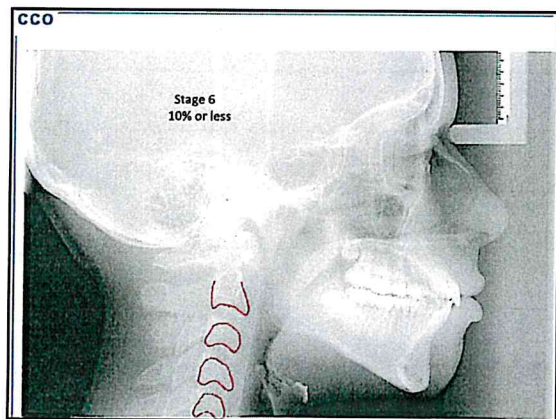


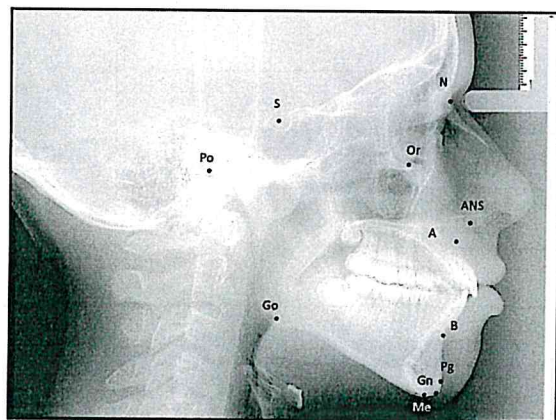


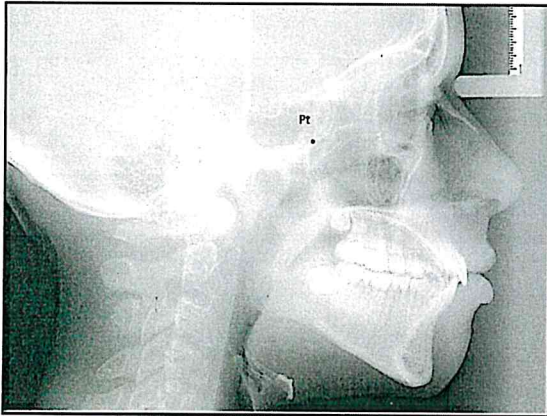


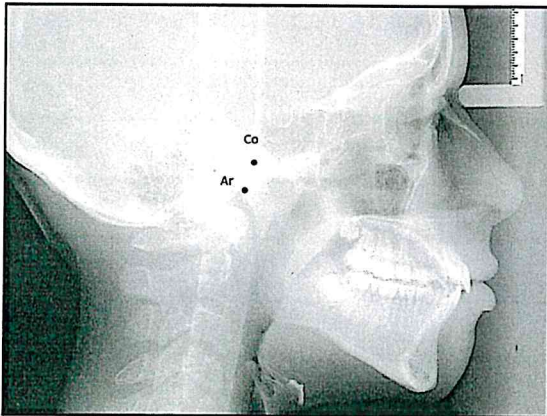


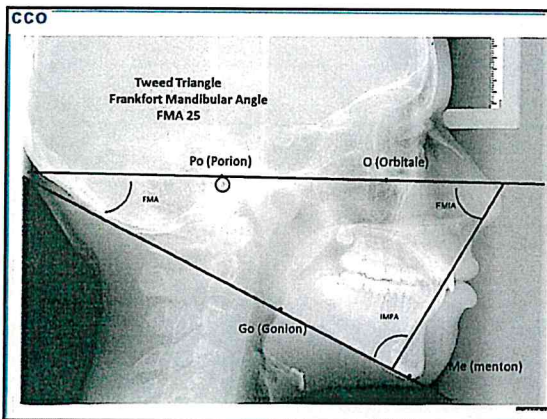


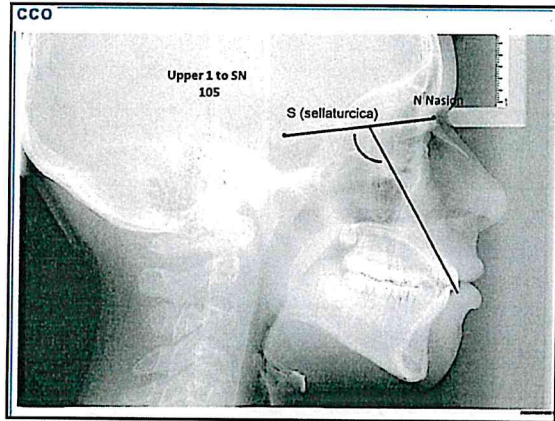


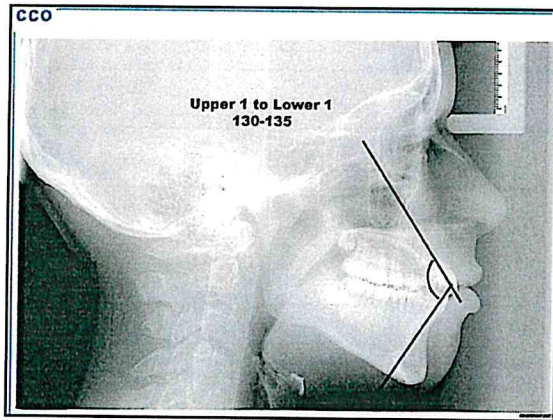


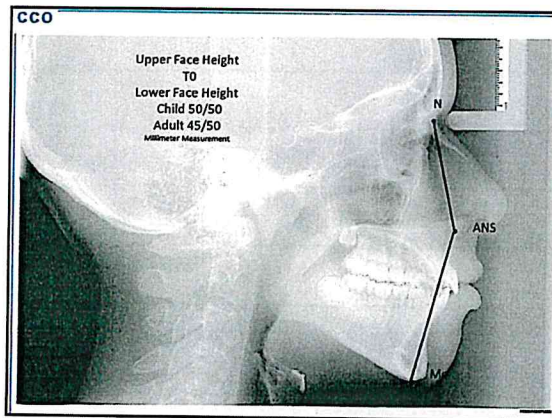


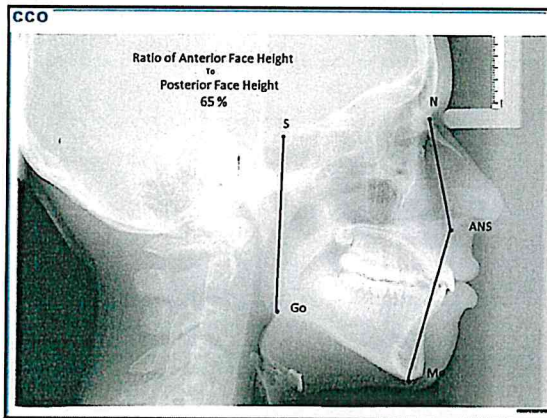


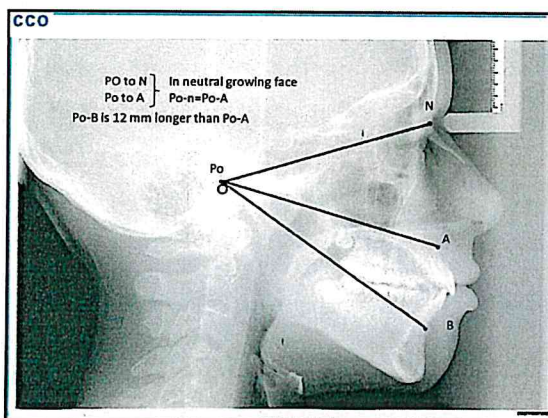


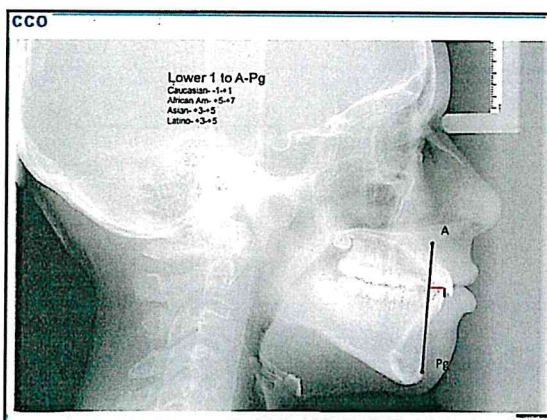








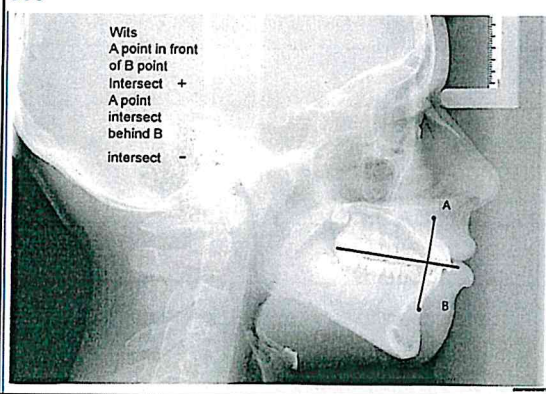




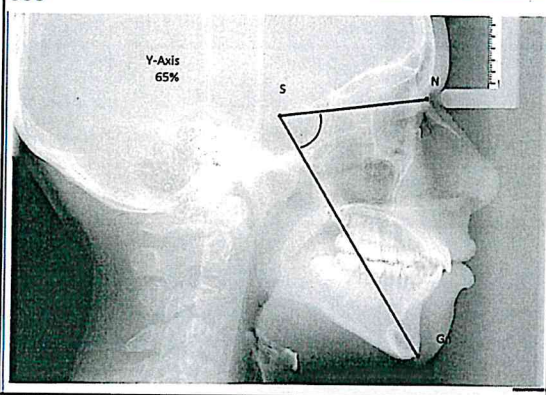
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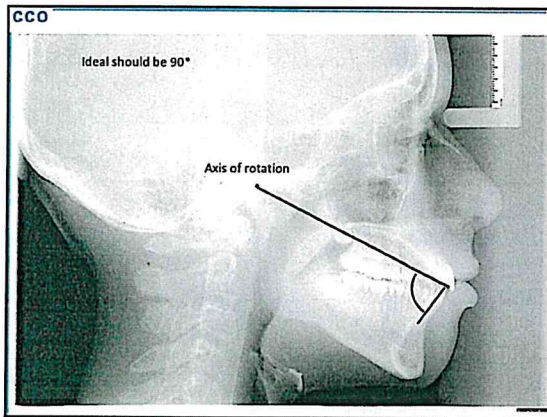
- Is Wits?
- Wits asses the Horizontal difference but does not asses the blame.

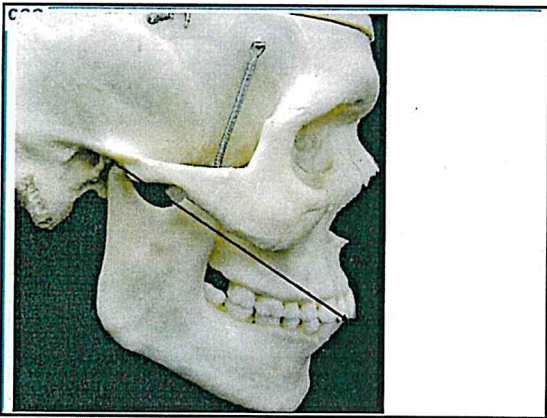
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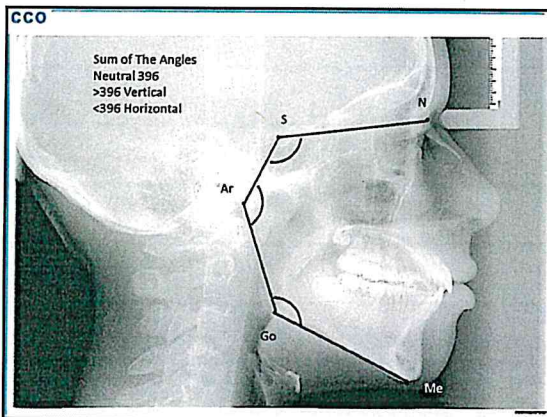


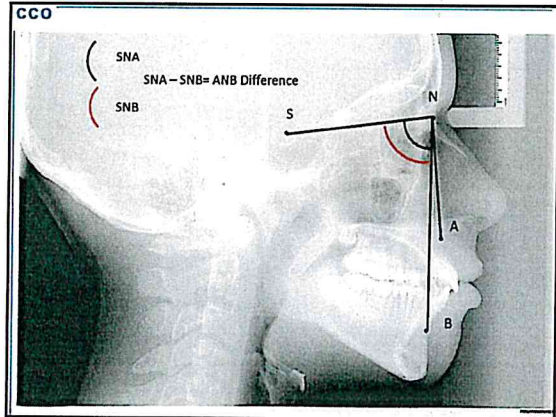
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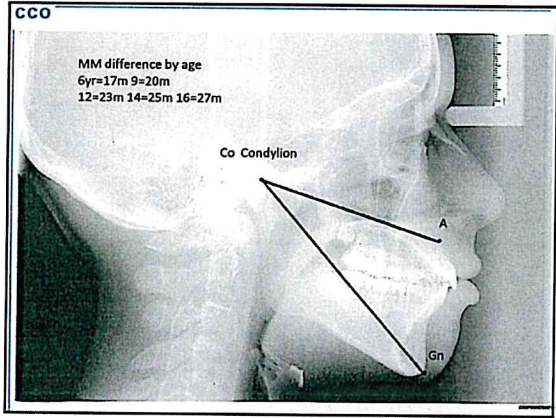


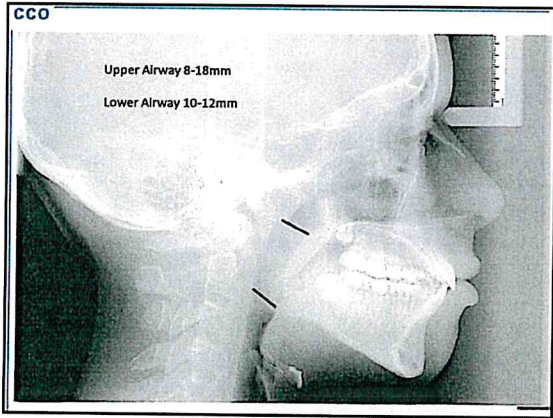


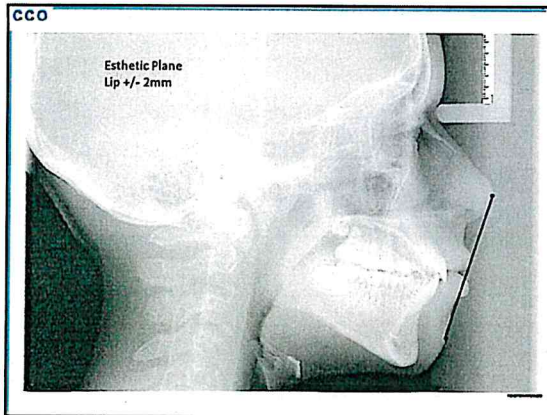


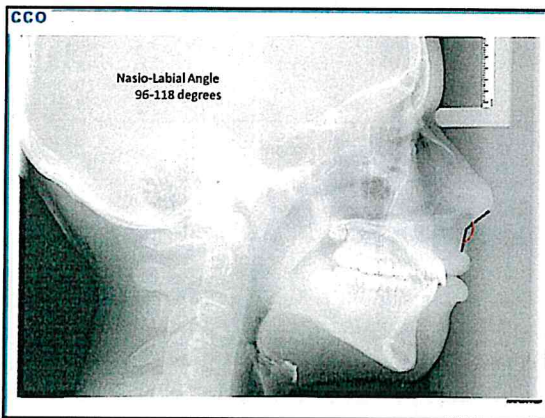


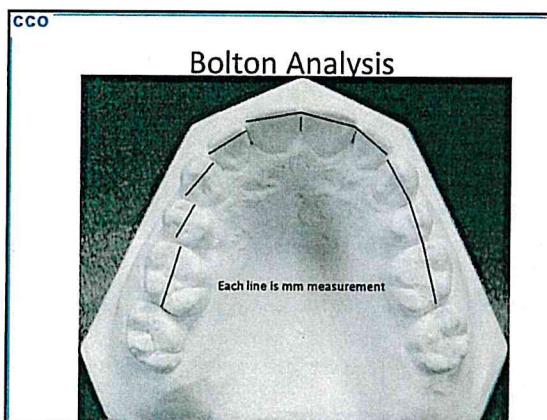












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Bolton Analysis

- You add the mm measurements from both Upper and Lower Teeth

Maxillary Arch= mm

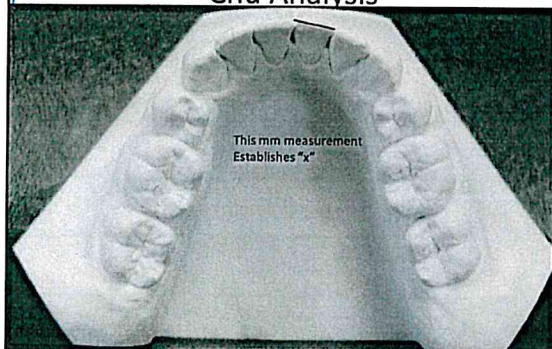
Mandibular Arch= mm

$$\text{Bolton Number} = \frac{\text{Mandibular Number}}{\text{Maxillary Number}} \times 100$$

Gives you the Percentage Bolton Number

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Chu Analysis



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Chu Analysis Continued

- Once "x" has been determined then the following formulas can be applied:

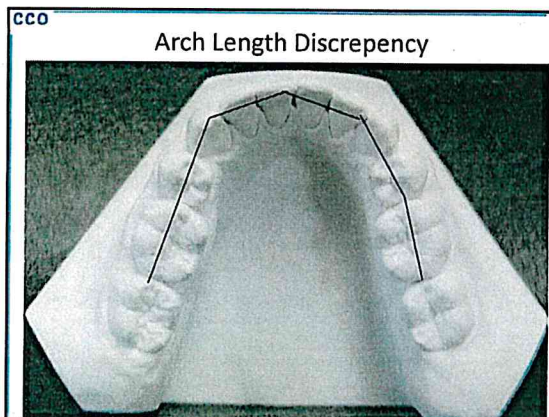
Upper 1 M-D width = $x+3\text{mm}$

Upper 2 M-D width = $x+1\text{ mm}$

Upper 3 M-D width = $x+2\text{ mm}$

Lower 2 M-D width = $x+1/2\text{ mm}$

Lower 3 M-D width = $x+1\text{ mm}$



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How to collect the Data In Usable form

Esthetic Discovery Sheet
Arch Length Discrepancy

Maxillary Arch: Space Available: _____
Space Required: _____
Difference: _____

Mandibular Arch: Space Available: _____
Space Required: _____
Difference: _____

Tooth Proportion Ratios:

Lower Central width = x , $x =$ _____ mm
Upper Central width = $x+3$

*Upper central Width 80% of length Upper Lateral width = $(x+3)-2$ Lower Lateral = $x+1/2$
*Lower Central Width 60% of length Upper Canine width = $(x+3)-1$ Lower Canine = $x+1$

Bottom Analysis

Totals Mand/Max Ratio

50.1% = 100% Max, +44 Mand larger, + 88 Max larger

Maxillary Arch: _____
Mandibular Arch: _____

Proximal Spaces between (front picture count): _____

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Esthetic Discovery Sheet

Arch Length Discrepancy

Maxillary Arch: Space Available: _____
Space Required: _____
Difference: _____

Mandibular Arch: Space Available: _____
Space Required: _____
Difference: _____

Tooth Proportion Ratios:

Lower Central width = x , $x =$ _____ mm
Upper Central width = $x+3$

*Upper central Width 80% of length Upper Lateral width = $(x+3)-2$ Lower Lateral = $x+1/2$
*Lower Central Width 60% of length Upper Canine width = $(x+3)-1$ Lower Canine = $x+1$

Bottom Analysis

Totals Mand/Max Ratio

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Lower Central Width 60% of length Upper Canine width $(x+3) \cdot 1$ Lower Canines $x \cdot 1$

Bolton Analysis

Totals	Mand/Max	Ratio
93.1% arches fit. >94 Mand larger, < 93 Max larger		

Maxillary Arch

Mandibular Arch

Patient Expectations: (What picture used?)

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and incisal relationship

- Identify occlusal misfit produced by interarch tooth size discrepancies.

Procedure

- Sum of the widths of the 12 mandibular teeth divided by the sum of the width of the maxillary 12 teeth multiplied by 100. The mean ratio is 91.3

Greater than 91.3 – excessive mandibular tooth material

Less than 91.3 – excessive maxillary tooth material

Or

Sum of width of mandibular 6 anterior teeth divided by the sum of the width of the maxillary 6 anterior teeth multiplied by 100. Mean ratio is 77.2

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Greater than 91.3 – excessive mandibular tooth material

Less than 91.3 – excessive maxillary tooth material

Or

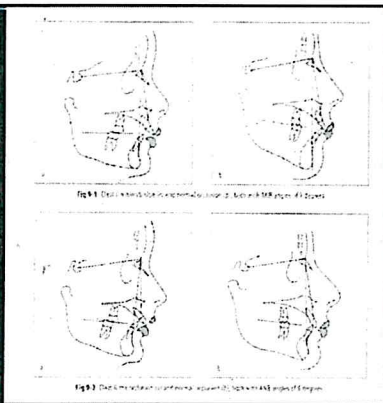
Sum of width of mandibular 6 anterior teeth divided by the sum of the width of the maxillary 6 anterior teeth multiplied by 100. Mean ratio is 77.2

Use chart to help determine actual size differential

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- Is ANB the best or most accurate way to assess the Horizontal relationship of the dentition?

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