|                              | GOOD RESPONDERS POOR RESPONDERS |      |      |      |      |      |      |       |      |      |      |      |      |      |               |      |      |      |      |              |       |       |      |       |       |       |      |
|------------------------------|---------------------------------|------|------|------|------|------|------|-------|------|------|------|------|------|------|---------------|------|------|------|------|--------------|-------|-------|------|-------|-------|-------|------|
|                              |                                 |      |      |      |      | Da   | ta M | easur | es   |      |      |      |      |      | Data Measures |      |      |      |      | ALL PATIENTS |       |       |      |       |       |       |      |
| Patient                      | S8                              | S13  | S18  | S11  | S6   | S2   | S24  | S5    | S16  | S22  | S1   | AVG  | SD   | S3   | S10           | S17  | S4   | S9   | S21  | S14          | S20   | S12   | AVG  | SD    | AVG   | SD    | P    |
| ANB (deg)                    | 8.3                             | -0.6 | -0.4 | 5    | 9.7  | INSF | -0.1 | 4.6   | -2.4 | 1.8  | 4.1  | 3.0  | 4.0  | -1.7 | 6.2           | 3.0  | 1.1  | 5.1  | -0.3 | -2.5         | 4.9   | 3.9   | 2.2  | 3.2   | 2.59  | 3.56  | 0.31 |
| WITS (mm)                    | 1.1                             | -10  | -7.7 | 4.5  | 3.7  | 3.5  | -1.7 | 2.4   | -7.4 | -3.3 | 1.7  | -1.2 | 5.2  | -8.4 | -0.3          | -5.0 | 1.0  | -0.8 | -3.1 | -4.3         | -0.9  | -2.5  | -2.7 | 2.9   | -1.95 | 4.28  | 0.21 |
| ODI                          | 74.9                            | 54.8 | 52.6 | 68   | 74.1 | 75.8 | 72.7 | 86.1  | 56.8 | 72.2 | 80.4 | 69.9 | 10.8 | 63.1 | 66.5          | 64.2 | 74.9 | 68.9 | 65.9 | 57.9         | 64.2  | 77.5  | 67.0 | 6.0   | 68.43 | 8.88  | 0.23 |
| Delta mid. pharyngeal muscle | -1.7                            | -5.1 | -3.9 | -0.2 | 0.2  | -2.5 | 0.5  | -3.9  | -3.4 | -1.7 | -0.9 | -2.1 | 1.9  | -5.3 | -7.6          | -1.5 | -2.1 | -3.2 | -7.4 | -1.4         | 2.0   | 2.0   | -2.7 | 3.5   | -2.39 | 2.69  | 0.31 |
| delta min axial airway %     | 154                             | 65.9 | 64.6 | 61.8 | 59.4 | 52   | 47.1 | 42.5  | 33.9 | 22.4 | 18.9 | 56.6 | 36.3 | 13.2 | 12.0          | 7.6  | 2.3  | 2.3  | 2.9  | -8.5         | -15.7 | -38.7 | -2.5 | 16.4  | 27.05 | 41.42 | 0.00 |
| AVG % airway change          |                                 |      |      |      |      | 56.6 |      |       |      |      |      |      |      | -2.5 |               |      |      |      |      |              |       |       | 27%  | 41.79 |       |       |      |

INSF- Insufficient data for measure

**Table 1.** Cephalometric and airway measurements. Good responders are identified in green as patients with greater than or equal to 16% minimal axial area airway increase with an oral appliance (OA) in place. Poor responders in red were patients with less than 16% minimal axial airway area increase with an OA in place. Change in the middle pharyngeal muscle length and minimal axial area were taken as the difference of measures with and without an OA in place. ODI = overbite depth indicator.

| <u></u>                        | Norm | 1 SD | Threshold | OAEI point value |
|--------------------------------|------|------|-----------|------------------|
| ANB (deg)                      | 2    | 3.5  | >4        | 2                |
| WITS (mm)                      | -1   | 1    | >3        | 1                |
| ODI                            | 75   | 5    | >70       | 3                |
| Delta middle pharyngeal muscle | -    | -    | >-3       | 2                |

**Table 2.** Standardized cephalometric values and assigned point values for OAEI scoring. Three cephalometric variables selected received increasing OAEI point values based on the value of 1 standard deviation (SD) from previously established means except for WITS (3 SDs). Because there is no current mean value for the length of the middle pharyngeal muscle length the median score was assigned as an OAEI point value. OAEI = oral appliance efficiency index; ODI = overbite depth indicator.