

**Supplementary Material A. An example of the orbital measurements**

Anterior interorbital distance (AIOD)

Globe protrusion (GP) left and right eye



**Supplementary Material B. Detailed patient characteristics and pre- and postoperative ophthalmological examinations sorted on age and disorder**

**Abbreviations:**

OD: oculo dextra (right eye)

OS: oculo sinistra (left eye)

VA: visual acuity

NLDO: nasolacrimal duct obstruction

AIOD: anterior interorbital distance

GP OD: globe protrusion right eye

GP OS: globe protrusion left eye

RED: rigid external distraction

OSAS: obstructive sleep apnea syndrome

ICP: intracranial pressure

CFNS: craniofrontonasal dysplasia.

	Disorder Sex	Age surgery	Type surgery	Indication surgery	Pre-operative orbital measurements (mm)	Post-operative orbital measurements (mm)	Pre-operative ocular examination	Postoperative ocular examination	Effect surgery on ocular outcomes
1	Apert Male	22.3	Monobloc + internal distraction	Malocclusion OSAS Esthetical	AIOD: 28.5 GP OD: 25.0 GP OS: 24.0	AIOD: 26.0 GP OD: 12.6 GP OS: 13.4	<u>VA</u> : OD 0.7, OS 0.7 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia, astigmatism OD +4.00=C-3.25x100 OS +4.75=C-1.5x50 <u>Binocular vision</u> : not measured	<u>VA</u> : OD 0.8, OS 0.8 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia, astigmatism OD +4.00=C-3.25x100 OS +4.75=C-1.5x50 <u>Binocular vision</u> : not measured	<u>Improvements</u> : - <u>Deteriorations</u> : VA: 0.1 decrease ODS.  <u>Explanation</u> : Patient was known with a poor vision due to a car accident with brain trauma.
2	Apert Female	19.3	Le Fort III + RED	Malocclusion	AIOD: 23.3 GP OD: 19.9 GP OS: 20.4	AIOD: 23.0 GP OD: 17.4 GP OS: 17.9	<u>VA</u> : OD 0.1, OS 0.05 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : astigmatism, hypermetropia OD +1.50=C-1.75x96 OS +1.75=C-2.00x85 <u>Binocular vision</u> : poor	<u>VA</u> : OD 0.05, OS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : astigmatism, hypermetropia OD +1.50=C-1.75x85 OS +1.75=C-2.50x100 <u>Binocular vision</u> : poor	<u>Improvements</u> : VA: ODS 0.05  <u>Deteriorations</u> : -
3	Apert Female	17.9	Monobloc + internal distraction	Malocclusion Proptosis Esthetical	AIOD: 25.6 GP OD: 20.5 GP OS: 20.8	AIOD: 20.3 GP OD: 10.1 GP OS: 12.6	<u>VA</u> : OD 0.7, OS 0.4 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia, hypotropia <u>Refraction</u> : myopia, astigmatism OD -1.5=C-3.25x30 OS -3.5=C-3.75x155 <u>Binocular vision</u> : not present	<u>VA</u> : OD 0.7, OS 0.5 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia, hypotropia <u>Refraction</u> : myopia, astigmatism OD -1.75=C-2.5x30 OS -4.0=C-4.0x155 <u>Binocular vision</u> : not present	<u>Improvements</u> : - <u>Deteriorations</u> : VA: 0.1 decrease OS  <u>Explanation</u> : post- operative exposure keratitis OD. During monobloc OD remained dry. No reason for VA decrease OS could be found.

4	Apert Female	16.8	Monobloc + internal distraction	Malocclusion Proptosis Esthetical	AIOD: 27.1 GP OD: 26.4 GP OS: 26.4	AIOD: 26.3 GP OD: 19.0 GP OS: 18.7	<u>VA:</u> ODS 0 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> hypermetropia, astigmatism OD +2.00=C-0.75x10 OS +2.00=C-1.00x152 <u>Binocular vision:</u> not measured <u>Neuro-ophthalmic:</u> low papilledema	<u>VA:</u> ODS 0 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> hypermetropia, astigmatism OD +2.00=C-0.75x10 OS +2.00=C-1.00x152 <u>Binocular vision:</u> not measured	<u>Improvements:</u> No more papilledema  <u>Deteriorations:</u> -
5	Apert Male	15.9	Le Fort III + RED	OSAS Malocclusion	AIOD: 28.1 GP OD: 17.7 GP OS: 19.4	AIOD: 28.0 GP OD: 14.8 GP OS: 17.4	<u>VA:</u> OD 0.3, OS 0.3 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> not present <u>Refraction:</u> hypermetropia, astigmatism OD +7.0=C-2.25x3 OS +7.50=C-1.75x15 <u>Binocular vision:</u> poor	<u>VA:</u> OD 0.4, OS 0.5 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> not present <u>Refraction:</u> hypermetropia, astigmatism OD +7.25=C-3.00x2 OS +7.25=C-2.75x10 <u>Binocular vision:</u> poor	<u>Improvements:</u> -  <u>Deteriorations:</u> VA OD decrease 0.1, OS decrease 0.2
6	Apert Female	15	Le Fort III + RED	Malocclusion OSAS	AIOD: 30.8 GP OD: 18.7 GP OS: 22.1	AIOD: 30.1 GP OD: 17.6 GP OS: 19.3	<u>VA:</u> OD 0.15, OS 0.2 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> not present <u>Refraction:</u> hypermetropia OD +2.5=C-0.75x34 OS +4.5=C-0.5x38 <u>Binocular vision:</u> not measured	<u>VA:</u> OD 0.1, OS 0.1 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> not present <u>Refraction:</u> hypermetropia, astigmatism OD +2.50=C-1.50x22 OS + 5.0 <u>Binocular vision:</u> not measured	<u>Improvements:</u> VA: Increase of 0.1 OS, increase 0.05 OD  <u>Explanation:</u> Did not wear glasses pre-operatively, but started to wear them postoperatively  <u>Deteriorations:</u> -
7	Apert Female	12	Le Fort III + RED	Malocclusion Proptosis	AIOD: 25.5 GP OD: 20.5 GP OS: 19.5	AIOD: 24.8 GP OD: 17.8 GP OS: 16.4	<u>VA:</u> ODS 0.7 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia, hypotropia	<u>VA:</u> OD 0.5, OS 0.4 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia, hypotropia	<u>Improvements:</u> VA 0.2 increase OD, 0.3 increase OS

							<u>Refraction:</u> myopia, astigmatism OD -1.0=C-3.00x325 OS -3.00=C-3.50x160 <u>Binocular vision:</u> not present	<u>Refraction:</u> myopia, astigmatism OD -2.00=C-4.00x25 OS -3.75=C-4.25x165 <u>Binocular vision:</u> not present	<u>Explanation:</u> VA improvement less proptosis post-op.  <u>Deteriorations:</u> Increase myopia and astigmatism OD.
8	Apert Male	10.3	Monobloc + internal distraction	Malocclusion	AIOD: 23.5 GP OD: 17.4 GP OS: 18.2	AIOD: 22.4 GP OD: 13.5 GP OS: 13.8	<u>VA:</u> OD 0.15, OS 0.5 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia, hypotropia <u>Refraction:</u> hypermetropia, astigmatism OD -0.50=C-1.00x99 OS +2.00=C-0.50x26 <u>Binocular vision:</u> moderate <u>Amblyopia:</u> present OS <u>Torticollis:</u> present	<u>VA:</u> OD 0.1, OS 0.4 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia, hypotropia <u>Refraction:</u> hypermetropia, astigmatism <u>OD -0.50=C-1.50x90</u> <u>OS +5.50=C-4.50x50</u> <u>Binocular vision:</u> moderate <u>Amblyopia:</u> present OS <u>Torticollis:</u> present	<u>Improvements:</u> VA increase 0.05 OD, 0.1 OS  <u>Explanation:</u> VA OS improved due to amblyopia treatment  <u>Deteriorations:</u> Increase of hypermetropia and astigmatism OS
9	Apert Male	9.7	Monobloc + internal distraction	Malocclusion Proptosis	AIOD: 27.8 GP OD: 21.3 GP OS: 19.5	AIOD: 23.7 GP OD: 12.1 GP OS: 11.4	<u>VA:</u> OD 0.3, OS 0.5 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia, <u>Refraction:</u> astigmatism, hypermetropia OD +4.00=C-2.75x20 OS +2.75=C-3.50x150 <u>Binocular vision:</u> not present <u>Eyelid:</u> lagophthalmus	<u>VA:</u> OD 0.3, OS 0.4 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia, <u>Refraction:</u> astigmatism, hypermetropia OD +3.50=C-2.75x14 OS +2.50=C-3.00x166 <u>Binocular vision:</u> not present	<u>Improvements:</u> VA OS 0.1 improved due to reduction of proptosis and lagophthalmus  <u>Deteriorations:</u> Postoperative keratitis ODS due to air blown by oxygen mask during surgery.
10	Apert Female	8.9	Monobloc + internal distraction	Malocclusion OSAS	AIOD: 20.0 GP OD: 20.4 GP OS: 21.8	AIOD: 21.3 GP OD: 18.2 GP OS: 15.6	<u>VA:</u> ODS 0.4 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia	<u>VA:</u> ODS 0.4 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia	<u>Improvements:</u> No more tearing of eyes due to correct closure eyelids.

							<u>Refraction:</u> hypermetropia, astigmatism OD +3.00=C-2.50x125 OS +2.25=C-3.00x42 <u>Binocular vision:</u> moderate <u>Torticollis:</u> present <u>Lacrimal:</u> tearing eyes <u>Eyelid:</u> lagophthalmus	<u>Refraction:</u> hypermetropia, astigmatism OD +2.50=C-2.50x121 OS +3.00=C-3.00x25 <u>Binocular vision:</u> moderate <u>Torticollis:</u> present	Lagophthalmus.  <u>Deteriorations:</u> -
11	Apert Female	8.3	Monobloc + internal distraction	Malocclusion Proptosis	AIOD: 22.5 GP OD: 17.1 GP OS: 16.2	AIOD: 18.7 GP OD: 14.6 GP OS: 13.7	<u>VA:</u> OD 0, OS 0.1 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia, <u>Refraction:</u> astigmatism OD +0.25=C-0.50x130 OS +0.75=C-1.00x75 <u>Binocular vision:</u> not measured	<u>VA:</u> OD 0, OS 0.1 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia, <u>Refraction:</u> astigmatism <u>OD +0.25=C-0.50x130</u> <u>OS +0.75=C-1.00x75</u> <u>Binocular vision:</u> not measured	<u>Improvements:</u> -  <u>Deteriorations:</u> -
12	Apert Male	6.2	Facial bipartition	Malocclusion	AIOD: 20.2 GP OD: 16.0 GP OS: 15.4	AIOD: 20.4 GP OD: 11.1 GP OS: 10.8	<u>VA:</u> OD 0.1, OS 0 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> not present <u>Refraction:</u> hypermetropia OD +3.75=C-0.5x110 OS +3.25=C-0.25x95 <u>Binocular vision:</u> moderate <u>Amblyopia:</u> present OD	<u>VA:</u> ODS 0 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> not present <u>Refraction:</u> hypermetropia OD +3.00 OS +2.50=C-0.75x155 <u>Binocular vision:</u> moderate <u>Amblyopia:</u> present OD	<u>Improvements:</u> VA increase 0.1 OD  <u>Explanation:</u> VA improvement due to amblyopia treatment OD.  <u>Deteriorations:</u> -

13	Apert Male	5.4	Monobloc + internal distraction	Malocclusion OSAS High ICP	AIOD: 15.8 GP OD: 19.1 GP OS: 18.9	AIOD: 17.5 GP OD: 15.6 GP OS: 15.2	<u>VA:</u> OD 0.5, OS 0.2 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> astigmatism, hypermetropia OD +6.00=C-4.75 as 24 OS +5.00=C-3.50 as 170 <u>Binocular vision:</u> moderate <u>Amblyopia:</u> present OD <u>Torticollis:</u> present <u>Diplopia:</u> present <u>Neuro-ophthalmic:</u> Low papilledema <u>Lacrimal:</u> tearing of eyes	<u>VA:</u> ODS 0.7 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> astigmatism, hypermetropia OD +6.00=C-5.25x18 OS +5.25=C-5.25x170 <u>Binocular vision:</u> moderate <u>Amblyopia:</u> present OD <u>Lacrimal:</u> tearing of eyes	<u>Improvements:</u> No more papilledema. Torticollis. Diplopia.  <u>Deteriorations:</u> VA decrease 0.2 OD, 0.5 OS. Astigmatism  <u>Explanation:</u> did not wear glasses postoperatively, increase of amblyopia and astigmatism reason for VA decrease.
14	Apert Male	4.3	Monobloc + internal distraction	Severe proptosis	AIOD: 17.2 GP OD: 19.6 GP OS: 20.8	AIOD: 17.3 GP OD: 15.5 GP OS: 12.4	<u>VA:</u> OD 0.3, OS 0.1 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> not present <u>Refraction:</u> astigmatism, hypermetropia OD +2.75=C-2.00x30 OS +3.25=C-2.50x180 <u>Binocular vision:</u> moderate <u>Eyelid:</u> lagophthalmus <u>Lacrimal:</u> tearing of eyes	<u>VA:</u> OD 0.4, OS 0.2 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> not present <u>Refraction:</u> astigmatism, hypermetropia OD +3.75=C-2.00x20 OS +3.25=C-2.25x156 <u>Binocular vision:</u> poor <u>Lacrimal:</u> tearing of eyes	<u>Improvements:</u> Lagophthalmus  <u>Deteriorations:</u> VA decrease 0.1 ODS. Binocular vision Hypermetropia OD.  <u>Explanation:</u> VA worsened due to amblyopia OD for which glasses therapy started.
15	Apert Male	4	Monobloc + internal distraction	Malocclusion Proptosis OSAS High ICP	AIOD: 20.1 GP OD: 18.5 GP OS: 18.7	AIOD: 22.7 GP OD: 15.2 GP OS: 14.0	<u>VA:</u> OD 0.5, OS 0.3 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> hypermetropia, astigmatism	<u>VA:</u> ODS 0.1 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> hypermetropia, astigmatism	<u>Improvements:</u> No more papilledema. VA increase 0.4 OD, 0.2 OS. Torticollis.

							OD +1.75=C-1.50x100 OS -0.25=C-3.25x160 <u>Binocular vision</u> : not present <u>Torticollis</u> : present <u>Neuro-ophthalmic</u> : minimal papilledema ODS	OD +0.50=C-1.75x30 OS 0.00=C-2.75x145 <u>Binocular vision</u> : not present	Hypermetropia OD.  <u>Explanation</u> : VA ODS improved due to improvement of papilledema and due to wearing new glasses postoperatively.  <u>Deteriorations</u> : -
16	Apert Male	7 months	Le Fort III + cranio- plasty	Proptosis Malocclusion Hydro- cephalus	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	<u>VA</u> : follows and fixes <u>Strabismus pattern</u> : V <u>Strabismus type</u> : esotropia <u>Refraction</u> : hypermetropia, astigmatism OD +2.50=C-1.25x90 OS +2.50=C-1.25x90 <u>Binocular vision</u> : not measured <u>Lacrima</u> : NLDO	<u>VA</u> : Follows and fixes <u>Strabismus pattern</u> : V Strabismus type: esotropia <u>Refraction</u> : hypermetropia, astigmatism OD +2.50=C-1.25x90 OS +2.50=C-1.25x90 <u>Binocular vision</u> : not measured <u>Lacrima</u> : NLDO	<u>Improvements</u> : -  <u>Deteriorations</u> : -
17	Crouzon Male	18	Le Fort III + RED	Malocclusion	AIOD: 22.9 GP OD: 21.5 GP OS: 19.5	AIOD: 22.6 GP OD: 20.1 GP OS: 19.4	<u>VA</u> : ODS 0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : esotropia <u>Refraction</u> : hypermetropia, astigmatism OD +3.75=C-3.50x89 OS +3.5=C-3.50x78 <u>Binocular vision</u> : not measured	<u>VA</u> : OD 0.0, OS 0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : esotropia <u>Refraction</u> : hypermetropia, astigmatism OD +3.75=C-3.50x89 OS +3.5=C-3.50x78 <u>Binocular vision</u> : not measured	<u>Improvements</u> : VA increase OD 0.1  <u>Deteriorations</u> : -
18	Crouzon Female	17.8	Le Fort III + RED	Malocclusion	AIOD: 23.5 GP OD: 21.1 GP OS: 22.3	AIOD: 20.6 GP OD: 12.9 GP OS: 14.7	<u>VA</u> : ODS -0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : myopia, astigmatism	<u>VA</u> : OD ODS -0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : myopia, astigmatism OD -0.75=C-1.00x30 OS -1.75=C-1.25x140	<u>Improvements</u> : -  <u>Deteriorations</u> : Tearing of eyes



							OD -0.75=C-1.00x22 OS -1.75=C-1.25x138 <u>Binocular vision</u> : not measured	<u>Lacrimal</u> : tearing of eyes <u>Binocular vision</u> : not measured	
19	Crouzon Female	15.7	Le Fort III + RED	Malocclusion	AIOD: 27.7 GP OD: 20.2 GP OS: 20.7	AIOD: 26.1 GP OD: 15.4 GP OS: 15.6	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : ametropic <u>Binocular vision</u> : not measured	<u>VA</u> : not measured <u>Strabismus pattern</u> : V <u>Strabismus type</u> : present <u>Refraction</u> : ametropic <u>Binocular vision</u> : not measured	<u>Improvements</u> : -  <u>Deteriorations</u> : -
20	Crouzon Male	15.7	Monobloc + internal distraction	High ICP OSAS	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : OD +0.25=C-0.50x1 OS +0.25=C-0.50x145 <u>Binocular vision</u> : moderate	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : OD +0.25=C-0.50x148 OS +0.25=C-0.50x160 <u>Binocular vision</u> : moderate	<u>Improvements</u> : - <u>Deteriorations</u> : 3 days postoperatively subconjunctival bleeding with chemosis OD, for which therapy started
21	Crouzon Female	14.2	Le Fort III + RED	Malocclusion Proptosis	AIOD: 23.6 GP OD: 19.0 GP OS: 19.9	AIOD: 23.9 GP OD: 16.5 GP OS: 17.5	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia, astigmatism OD +5.0= C-3.50x75 OS +4.0=C-0.75x90 <u>Binocular vision</u> : moderate	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia, astigmatism OD +5.25=C-3.50x75 OS +3.75=C-0.25x125 <u>Binocular vision</u> : moderate	<u>Improvements</u> : - <u>Deteriorations</u> : -
22	Crouzon Male	12.3	Le Fort III + RED and internal distraction	Elevated ICP OSAS	AIOD: 26.2 GP OD: 23.0 GP OS: 17.4	AIOD: 22.3 GP OD: 18.8 GP OS: 14.3	<u>VA</u> : OD 0.15, OS 0.7 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : astigmatism OD -0.25=C-1.00x32 OS -0.25=C-1.25x58 <u>Binocular vision</u> : not measured <u>Neuro-ophthalmic</u> : moderate papilledema	<u>VA</u> : OD 0.05 OS 0.7 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : astigmatism OD -0.25=C-1.00x32 OS -0.25=C-1.25x58 <u>Binocular vision</u> : not measured	<u>Improvements</u> : VA increase of 0.1 OD due to decrease papilledema.  <u>Deteriorations</u> : -

								Neuro-ophthalmic: moderate papilledema (remained stable)	
23	Crouzon Male	11.8	Le Fort III + RED	Malocclusion OSAS	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	<u>VA</u> : OD 0.05, OS 0.5 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : myopia, astigmatism OD -1.00=C-1.25x135 OS 0.00 <u>Binocular vision</u> : not measured	<u>VA</u> : not measured <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : myopia, astigmatism OD -1.00=C-1.25x135 OS 0.00 <u>Binocular vision</u> : not measured	<u>Improvements</u> : -  <u>Deteriorations</u> : -
24	Crouzon Female	11.7	Le Fort III + RED	Malocclusion	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	<u>VA</u> : OD 0.3, OS 1.0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : myopia, astigmatism <u>Binocular vision</u> : not measured <u>Lacrimal</u> : tearing of eyes <u>Amblyopia</u> : present OS	<u>VA</u> : OD 0.3, OS 1.0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : myopia, astigmatism <u>Binocular vision</u> : not measured <u>Amblyopia</u> : present OS	<u>Improvements</u> : Tearing of eyes  <u>Deteriorations</u> : -
25	Crouzon Male	10.3	Monobloc without distraction	Malocclusion Proptosis	AIOD: 24.7 GP OD: 20.3 GP OS: 21.9	AIOD: 25.6 GP OD: 16.6 GP OS: 17.3	<u>VA</u> : ODS: 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia, astigmatism OD +0.75=C-0.50x6 OS +1.50=C-1.75x28 <u>Binocular vision</u> : moderate <u>Torticollis</u> : present	<u>VA</u> : OD 0.15, OS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : astigmatism OD 0.00=C-1.25x180 OS +0.75=C-1.00x22 <u>Binocular vision</u> : moderate <u>Torticollis</u> : present	<u>Improvements</u> : - <u>Deteriorations</u> : VA decrease of 0.15 OD. Diplopia for one month.  <u>Explanation</u> : eye dryness complaints and not wearing glasses postoperatively.
26	Crouzon Male	10.2	Le Fort III + RED	Malocclusion Proptosis	AIOD: 30.4 GP OD: 21.4 GP OS: 20.2	AIOD: 28.4 GP OD: 15.8 GP OS: 13.9	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : ODS +0.50	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : ODS +0.50	<u>Improvements</u> : -  <u>Deteriorations</u> :

							<u>Binocular vision</u> : not measured	<u>Binocular vision</u> : not measured <u>Diplopia</u> : present for one month	Diplopia for one month
27	Crouzon Female	9.6	Monobloc + internal distraction	Malocclusion Proptosis OSAS	AIOD: 20.7 GP OD: 17.6 GP OS: 21.3	AIOD: 20.8 GP OD: 9.8 GP OS: 11.0	<u>VA</u> : OD 0.1, OS 0.5 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia, astigmatism OD +4.5=C-2.50x19 OS +3.50=C-2.00x163 <u>Binocular vision</u> : not present <u>Amblyopia</u> : present OS	<u>VA</u> : OD 0.1, OS 0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia, astigmatism OD +3.75=C-2.00x28 OS +3.75=C-3.50x150 <u>Binocular vision</u> : not present <u>Amblyopia</u> : improved OS	<u>Improvements</u> : VA increase 0.4 OS  <u>Explanation</u> : VA improved due to occlusion therapy.  <u>Deteriorations</u> : -
28	Crouzon Female	9.6	Le Fort III + RED	Malocclusion Proptosis	AIOD: 21.9 GP OD: 18.6 GP OS: 20.1	AIOD: 20.6 GP OD: 12.3 GP OS: 14.5	<u>VA</u> : ODS 0.5 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : myopia, astigmatism OD -7=C-3.00x20 OS -7=C-4.00x170 <u>Binocular vision</u> : moderate	<u>VA</u> : ODS 0.15 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : myopia, astigmatism OD -9.5=C-3.0x110 OS -8.75=C-4.00x162 <u>Binocular vision</u> : good	<u>Improvements</u> : VA increase 0.35 ODS. Binocular vision from moderate to good.  <u>Deteriorations</u> : Myopia ODS
29	Crouzon Male	8.9	Le Fort III + RED	Malocclusion OSAS	AIOD: 25.2 GP OD: 19.8 GP OS: 18.4	AIOD: 26.1 GP OD: 12.8 GP OS: 9.1	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : ametropic <u>Binocular vision</u> : not measured <u>Neuro-ophthalmic</u> : Low papilledema	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : ametropic <u>Binocular vision</u> : not measured	<u>Improvements</u> : No more papilledema  <u>Deteriorations</u> : -
30	Crouzon Female	8.6	Facial bipartition + external distraction	Malocclusion Proptosis OSAS	AIOD: 27.5 GP OD: 18.8 GP OS: 20.7	AIOD: 17.0 GP OD: 12.9 GP OS: 14.8	<u>VA</u> : OD 0.3, OS 0.3 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exophoria OD <u>Refraction</u> : hypermetropia OD +4.25=C-0.75x67 OS +4.0=C-0.5x13 <u>Binocular vision</u> : moderate	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : esotropia OD <u>Refraction</u> : hypermetropia OD +4.00=C-0.75x28 OS +3.25 <u>Binocular vision</u> : moderate	<u>Improvement</u> : VA increase of 0.3 ODS.  <u>Deteriorations</u> : Torticollis. Post-op developed esotropia OD, pre-

								<u>torticollis</u> : present	op this was exophoria. However no effect on binocular vision.
31	Crouzon Female	8.4	Monobloc + internal distraction	Malocclusion	AIOD: 21.4 GP OD: 18.2 GP OS: 19.1	AIOD: 16.7 GP OD: 15.4 GP OS: 16.4	<u>VA</u> : OD 0.05, OS -0.1 <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia OD +1.5 OS +1.5 <u>Binocular vision</u> : not measured	<u>VA</u> : OD 0.05, OS -0.1 <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia OD +1.5 OS +1.5 <u>Binocular vision</u> : not measured	<u>Improvements</u> : -  <u>Deteriorations</u> : -
32	Crouzon Male	8.2	Le Fort III + RED	Malocclusion	AIOD: 25.3 GP OD: 22.8 GP OS: 21.5	AIOD: 26.9 GP OD: 22.2 GP OS: 20.0	<u>VA</u> : OD 0.05, OS 0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia OD +1.75=C-0.25x135 OS +2.00=C-0.50x25 <u>Binocular vision</u> : good	<u>VA</u> : ODS: 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : OD +0.50 OS +0.50=C-0.50x9 <u>Binocular vision</u> : good	<u>Improvements</u> : VA increase OD 0.05, OS 0.1. Hypermetropia ODS.  <u>Explanation</u> : started wearing glasses postoperatively.  <u>Deteriorations</u> : -
33	Crouzon Female	8	Le Fort III + RED	Malocclusion Proptosis	AIOD: 20.0 GP OD: 18.4 GP OS: 20.8	AIOD: 20.9 GP OD: 17.0 GP OS: 15.2	<u>VA</u> : OD 0, OS 0.05 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : esotropia <u>Refraction</u> : hypermetropia OD +3.0=C-0.50x105 OS +3.0 <u>Binocular vision</u> : not measured <u>Neuro-ophthalmic</u> : minimal papilledema <u>Lacrimal</u> : tearing of eyes	<u>VA</u> : OD 0, OS 0.05 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : esotropia <u>Refraction</u> : hypermetropia OD +3.0=C-0.50x105 OS +3.0 <u>Binocular vision</u> : not measured <u>Lacrimal</u> : tearing of eyes	<u>Improvements</u> : No more papilledema. Less tearing of eyes, still present.  <u>Deteriorations</u> : -
34	Crouzon Male	7.9	Monobloc + internal distraction	Malocclusion OSAS	AIOD: 20.7 GP OD: 20.3 GP OS: 19.3	AIOD: 20.9 GP OD: 14.5 GP OS: 14.5	<u>VA</u> : ODS 0.2 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : astigmatism	<u>VA</u> : ODS 0.15 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : astigmatism	<u>Improvements</u> : VA increase of 0.05 ODS.

							OD +0.75=C-1.00x70 OS 0.00=C-1.00x95 <u>Binocular vision</u> : moderate <u>Amblyopia</u> : present	OD +0.50=C-1.00x85 OS -0.25=C-0.75x65 <u>Binocular vision</u> : moderate <u>Amblyopia</u> : present	<u>Deteriorations</u> : -
35	Crouzon Female	7	Monobloc + internal distraction	Malocclusion OSAS High ICP	AIOD: 23.1 GP OD: 22.3 GP OS: 23.1	AIOD: 23.3 GP OD: 15.6 GP OS: 17.2	<u>VA</u> : OD 0,1 OS 0.15 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : esotropia, hypotropia <u>Refraction</u> : hypermetropia, astigmatism OD +0.25=C-2.75x65 OS +1.25=C-3.5x135 <u>Binocular vision</u> : poor <u>Neuro-ophthalmic</u> : moderate papilledema	<u>VA</u> : ODS 0.2 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : esotropia, hypotropia <u>Refraction</u> : hypermetropia, astigmatism OD -1.0=C-2.0x62 OS +1.00=C-3.50X150 <u>Binocular vision</u> : moderate	<u>Improvements</u> : Binocular vision from poor to moderate. No more papilledema.  <u>Deteriorations</u> : VA decrease 0.1 OD, 0.05 OS.
36	Crouzon Female	6.9	Monobloc + internal distraction	Proptosis OSAS	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	<u>VA</u> : ODS 0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia, astigmatism OD +1.25=C-0.75x10 OS +1.00=C-1.00x175 <u>Binocular vision</u> : moderate	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia OD +1.00=C-0.75x10 OS +1.00=C-0.75x165 <u>Binocular vision</u> : moderate	<u>Improvements</u> : VA increase of 0.1 ODS.  <u>Deteriorations</u> : -
37	Crouzon Male	5.6	Le Fort III + RED and internal distraction	Severe OSAS Malocclusion	AIOD: 25.4 GP OD: 20.9 GP OS: 20.7	AIOD: 25.1 GP OD: 18.7 GP OS: 18.7	<u>VA</u> : ODS 0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : ametropic <u>Binocular vision</u> : moderate	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : ametropic <u>Binocular vision</u> : not measured	<u>Improvements</u> : VA increase 0.1 ODS.  <u>Deteriorations</u> : -
38	Crouzon Female	5	Le Fort III + RED	Malocclusion	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	<u>VA</u> : ODS 0.3 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia, astigmatism OD +1.5=C-3.5x25 OS +1.5=C-4.0x50 <u>Binocular vision</u> : not measured	<u>VA</u> : ODS 0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : astigmatism OD +0.5=C-4.25x15 OS +0.5=C-4.25x170 <u>Binocular vision</u> : not measured <u>Diplopia</u> : present	<u>Improvements</u> : No more papilledema. VA increase 0.2 ODS. Hypermetropia improved ODS.  <u>Deteriorations</u> :

							<u>Neuro-ophthalmic:</u> low papilledema		Diplopia for one month postoperatively.
39	Crouzon Male	4.3	Monobloc + internal distraction	Malocclusion Proptosis	AIOD: 21.3 GP OD: 20.1 GP OS: 19.8	AIOD: 17.4 GP OD: 12.4 GP OS: 13.1	<u>VA:</u> not measured <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> hypermetropia OD +0.75 OS +1.00 <u>Lacrima:</u> tearing of eyes <u>Binocular vision:</u> not measured	<u>VA:</u> OD 0.4, OS 0.15 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> hypermetropia, astigmatism OD +1.75=C-2.75x34 OS +2.25=C=2.25x152 <u>Binocular vision:</u> not measured	<u>Improvements:</u> Tearing of eyes. Exotropia OS reduced postoperatively, no more manifest strabismus.  <u>Deteriorations:</u> Hypermetropia and astigmatism ODS
40	Crouzon Female	4	Monobloc Without distraction	Malocclusion	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	<u>VA:</u> OD 0.3, OS 0.2 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> hypermetropia, astigmatism OD +2.25=C-4.00x173 OS +2.50=C-3.75x176 <u>Binocular vision:</u> not measured <u>Amblyopia:</u> present OD <u>Torticollis:</u> present	<u>VA:</u> OD 0.3, OS 0.6 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> hypermetropia, astigmatism OD -1.00=C-0.50x141 OS +2.50=C-4.75x180 <u>Binocular vision:</u> not measured <u>Amblyopia:</u> present ODS <u>Torticollis:</u> present	<u>Improvements:</u> Refraction change OD. Astigmatism OD. Esotropia OS reduced, still present. Refraction amblyopia improved OD.  <u>Deteriorations:</u> Esotropia OD, was not present pre-operatively. VA decrease 0.4 OS. Amblyopia OS increased, does not wear glasses.
41	Crouzon Male	4	Monobloc + internal distraction	Eyeball luxation due to proptosis OSAS	AIOD: 23.5 GP OD: 20.9 GP OS: 20.9	AIOD: 20.2 GP OD: 17.1 GP OS: 17.5	<u>VA:</u> ODS 0 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> hypermetropia, astigmatism	<u>VA:</u> OD 0, OS 0.0 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> hypermetropia, astigmatism	<u>Improvements:</u> -  <u>Deteriorations:</u> -

							OD +1.25=C-1.00x100 OS +1.25=C-2.50x75 <u>Binocular vision</u> : not measured	OD +0.25=C-0.50x127 OS +1.00=C-1.75x84 <u>Binocular vision</u> : not measured	
42	Crouzon Male	3.5	Monobloc + internal distraction	Malocclusion OSAS	AIOD: 14.8 GP OD: 21.5 GP OS: 21.2	AIOD: 15.3 GP OD: 12.3 GP OS: 11.3	<u>VA</u> : not measured <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia OD +0.75 OS +1.25=C-0.50x110 <u>Binocular vision</u> : not measured <u>Lacrimal</u> : tearing of eyes	<u>VA</u> : not measured <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia, OD +0.75 OS +1.25=C-0.50x110 <u>Binocular vision</u> : not measured <u>Lacrimal</u> : tearing of eyes	<u>Improvements</u> : - <u>Deteriorations</u> : -
43	Crouzon Male	3.3	Monobloc + internal distraction	OSAS	AIOD: 27.8 GP OD: 17.8 GP OS: 19.4	AIOD: 29.4 GP OD: 16.8 GP OS: 17.0	<u>VA</u> : not measured <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia, astigmatism OD +4.50=C-1.75x15 OS +2.00=C-1.50x180 <u>Binocular vision</u> : not measured <u>Lacrimal</u> : dryness complaints	<u>VA</u> : not measured <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia, astigmatism OD +4.50=C-1.75x13 OS +2.00=C-1.50x175 <u>Binocular vision</u> : not measured	<u>Improvements</u> : Dryness complaints. <u>Deteriorations</u> : -
44	Crouzon Male	3.3	Monobloc + internal distraction	Malocclusion	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	<u>VA</u> : not measured <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : astigmatism OD -0.50=C-0.50x60 OS 0.00=C-3.50x140 <u>Amblyopia</u> : present <u>Binocular vision</u> : not measured	<u>VA</u> : not measured <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : myopia, astigmatism OD -2.00=C-2.00x45 OS -1.25=C-4.00x125 <u>Amblyopia</u> : present <u>Binocular vision</u> : not measured	<u>Improvements</u> : - <u>Deteriorations</u> : Myopia ODS. Astigmatism OD.
45	Crouzon Female	2.8	Monobloc + internal distraction	Malocclusion High ICP	AIOD: 22.3 GP OD: 21.5 GP OS: 20.9	AIOD: 19.4 GP OD: 11.0 GP OS: 14.2	<u>VA</u> : not measured <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> :	<u>VA</u> : ODS 0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia	<u>Improvements</u> : Papilledema <u>Deteriorations</u> :

							OD -0.25=C-0.75x180 OS +0.75 <u>Binocular vision</u> : not measured <u>Amblyopia</u> : present <u>Torticollis</u> : present <u>Neuro-ophthalmic</u> : moderate papilledema	<u>Refraction</u> : hypermetropia, astigmatism OD -0.50=C-2.50x30 OS +1.50=C-1.50x175 <u>Binocular vision</u> : not measured <u>Amblyopia</u> : present <u>Torticollis</u> : present <u>Neuro-ophthalmic</u> : low papilledema	Astigmatism ODS. Enophthalmus.
46	Crouzon Male	2.3	Monobloc + internal distraction	Malocclusion OSAS	AIOD: 23.1 GP OD: 24.7 GP OS: 24.2	AIOD: 21.4 GP OD: 17.5 GP OS: 20.4	<u>VA</u> : Fixes and follows <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia, hypertropia <u>Refraction</u> : hypermetropia, astigmatism OD +1.50=C-2.00x90 OS +1.50=C-1.50x45 <u>Binocular vision</u> : not measured <u>Lacrima</u> : tearing of eyes <u>Neuro-ophthalmic</u> : moderate papilledema	<u>VA</u> : Fixes and follows <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia, hypertropia <u>Refraction</u> : hypermetropia, astigmatism OD +1.50=C-1.50x180 OS +1.50=C-1.00x180 <u>Binocular vision</u> : not measured <u>Lacrima</u> : tearing of eyes	<u>Improvements</u> : No more papilledema.  <u>Deteriorations</u> : -
47	Crouzon Female	2.1	Facial bipartition	Malocclusion OSAS	AIOD: 17.0 GP OD: 22.4 GP OS: 17.7	AIOD: 14.5 GP OD: 10.1 GP OS: 12.3	<u>VA</u> : not able to measure <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia, astigmatism OD +5.00=C-2.75x34 OS +4.75=C-2.75x140 <u>Binocular vision</u> : poor <u>Eyelid</u> : lagophthalmus	<u>VA</u> : not able to measure <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia, astigmatism OD +5.00=C-2.75x34 OS +5.00=C-2.75x149 <u>Binocular vision</u> : poor	<u>Improvements</u> : Lagophthalmus  <u>Deteriorations</u> : -
48	Crouzon Female	1	Monobloc + internal distraction	Proptosis Malocclusion OSAS	AIOD: 12.8 GP OD: 20.0 GP OS: 19.5	AIOD: 13.4 GP OD: 17.8 GP OS: 18.3	<u>VA</u> : fix and follow good <u>Strabismus type</u> : not present <u>Refraction</u> : ametropic <u>Binocular vision</u> : not measured	<u>VA</u> : OD fix and follow good <u>Strabismus type</u> : not present <u>Refraction</u> : ametropic <u>Binocular vision</u> : not measured	<u>Improvements</u> : Lagophthalmus. Dryness complaints.  <u>Deteriorations</u> : -



							<u>Lacrima</u> : dryness complaints		
49	CFNS Female	20.3	Orbital box osteotomy	Esthetical	AIOD: 30.0 GP OD: 15.8 GP OS: 15.6	AIOD: 23.8 GP OD: 15.8 GP OS: 15.3	<u>VA</u> : OD 0.5, OS 0.7 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia, astigmatism OD +5.25=C-4.25x120 OS+5.5=C-8.00x50 <u>Binocular vision</u> : not present <u>Amblyopia</u> : present	<u>VA</u> : OD 0.5, OS 0.7 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : hypermetropia, astigmatism OD +5.00=C-4.50x127 OS +5.25=C-8.25x48 <u>Binocular vision</u> : not present <u>Amblyopia</u> : present	<u>Improvements</u> : - <u>Deteriorations</u> : -
50	CFNS Male	17.5	Facial bipartition	Esthetical	AIOD: 30.6 GP OD: 18.1 GP OS: 18.4	AIOD: 27.2 GP OD: 16.8 GP OS: 16.8	<u>VA</u> : ODS 0.05 <u>Strabismus type</u> : not present Refraction: ametropic <u>Binocular vision</u> : not measured	<u>VA</u> : ODS 0.05 <u>Strabismus type</u> : not present Refraction: ametropic <u>Binocular vision</u> : not measured	<u>Improvements</u> : - <u>Deteriorations</u> : -
51	CFNS Female	16.7	Le Fort III without distraction	Esthetical Malocclusion	AIOD: 21.1 GP OD: 14.4 GP OS: 16.1	AIOD: 18.6 GP OD: 8.6 GP OS: 11.2	<u>VA</u> : OD 1.5, OS 0.6 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : ametropic <u>Amblyopia</u> : present OD <u>Torticollis</u> : present <u>Binocular vision</u> : not measured	<u>VA</u> : OD 1.5, OS 0.6 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : not present <u>Refraction</u> : ametropic <u>Amblyopia</u> : present OD <u>Torticollis</u> : present <u>Lacrima</u> : dryness complaints <u>Binocular vision</u> : not measured	<u>Improvements</u> : - <u>Deteriorations</u> : Dryness complaints.
52	CFNS Female	14.5	Orbital box osteotomy	Esthetical	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	<u>VA</u> : ODS 0.1 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia, astigmatism OD +7.50=C-2.50x165 OS +6.0=C-0.50x180 <u>Binocular vision</u> : not present	<u>VA</u> : OD 0.05, OS 0.0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia, astigmatism OD +7.5=C-2.50x162 OS +6.25=C-1.00x178 <u>Binocular vision</u> : not present <u>Torticollis</u> : present	<u>Improvements</u> : VA increase 0.05 OD and 0.1 OS. <u>Deteriorations</u> : Torticollis
53	CFNS Female	10.7	Facial bipartition	Esthetical	AIOD: n.a. GP OD: n.a. GP OS: n.a.	AIOD: n.a. GP OD: n.a. GP OS: n.a.	<u>VA</u> : ODS 0.1 <u>Strabismus pattern</u> : V	<u>VA</u> : ODS 0 <u>Strabismus pattern</u> : V	<u>Improvements</u> : VA increase 0.1 ODS.

					No CT-scan available	No CT-scan available	<u>Strabismus type:</u> exotropia, hypertropia <u>Refraction:</u> hypermetropia, astigmatism OD +2.00=C-3.50x180 OS +1.00=C-1.00x175 <u>Binocular vision:</u> poor	<u>Strabismus type:</u> exotropia, hypertropia <u>Refraction:</u> hypermetropia, astigmatism OD +1.50=C-3.75x170 OS +0.25=C-1.75x180 <u>Binocular vision:</u> moderate	Binocular vision from poor to moderate.  <u>Deteriorations:</u> -
54	CFNS Female	10.6	Facial bipartition	Esthetical	AIOD: 35.1 GP OD: 15.7 GP OS: 14.2	AIOD: 22.0 GP OD: 12.2 GP OS: 11.7	<u>VA:</u> OD 0.7, OS 0.4 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> hypermetropia, astigmatism OD +0.50=C-1x25 OS +1.00=C-0.25x180 <u>Binocular vision:</u> poor	<u>VA:</u> OD 0.7, OS 0.5 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> astigmatism OD 0.00=C-2.00x180 OS +0.75=C-2.00x165 <u>Binocular vision:</u> not present	<u>Improvements:</u> Binocular vision improved 9 months postoperatively from poor to moderate after additional strabismus surgery.  <u>Deteriorations:</u> VA 0.1 decrease OS. Increase esotropia OD. Astigmatism ODS.
55	CFNS Female	9.4	Facial bipartition	Esthetical	AIOD: 37.2 GP OD: 18.7 GP OS: 19.7	AIOD: 31.9 GP OD: 18.1 GP OS: 18.7	<u>VA:</u> OD 0.3, OS 0.15 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> hypermetropia, astigmatism OD +2.50= C-0.50x75 OS +4.00=C-1.50x20 <u>Binocular vision:</u> not measured	<u>VA:</u> OD 0.2, OS 0.1 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> hypermetropia, astigmatism OD +2.50=C-0.25x75 OS +4.75=C-1.75x12 <u>Binocular vision:</u> not measured	<u>Improvements:</u> VA increase 0.1 OD, 0.05 OS.  <u>Deteriorations:</u> Exotropia OD increased postoperatively, for which patient received additional strabismus surgery.
56	CFNS Female	9	Facial bipartition	Esthetical	AIOD: 37.1 GP OD: 18.1 GP OS: 19.3	AIOD: 26.8 GP OD: 17.0 GP OS: 17.9	<u>VA:</u> ODS 0.1 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia OS <u>Refraction:</u> hypermetropia, astigmatism	<u>VA:</u> ODS 0 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> accommodative esotropia, trace exotropia with glasses OS	<u>Improvement</u> Binocular vision from poor to moderate. VA increase 0.1 ODS.

							OD +5.00=C-0.75x04 OS +6.26=C-2.00x51 <u>Binocular vision:</u> poor	<u>Refraction:</u> hypermetropia, astigmatism OD +4.75=C-1.50x120 OS +6.25=C-2.00x35 <u>Binocular vision:</u> moderate	<u>Deteriorations:</u> Patient had pre-operatively an intermitting exotropia OS this changed post-operatively to accommodative esotropia OS, and with glasses on a trace of exotropia OS was seen, this had no negative effect on binocular vision. Patient did not have additional strabismus surgery.
57	CFNS Male	8.9	Facial bipartition	Esthetical	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available	<u>VA:</u> ODS 0 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esophoria OS <u>Refraction:</u> hypermetropia, astigmatism OD +2.50=C-0.50x172 OS +1.25 <u>Binocular vision:</u> moderate	<u>VA:</u> OD 0, OS 0.05 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> hypermetropia, astigmatism OD +2.50=C-0.50x175 OS +1.25 <u>Binocular vision:</u> not present <u>Motility:</u> upshoot adduction, abduction restriction <u>Torticollis:</u> present	<u>Improvements:</u> - <u>Deteriorations:</u> Postoperatively the present esophoria changed to esotropia OS. VA decrease of 0.05 OS. Torticollis. Binocular vision from moderate to not present due to increase esotropia.
58	CFNS Female	7.9	Facial bipartition	Esthetical	AIOD: 33.4 GP OD: 17.3 GP OS: 15.6	AIOD: 22.1 GP OD: 12.2 GP OS: 11.7	<u>VA:</u> OD 0.5, OS 0.7 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> hypermetropia, astigmatism	<u>VA:</u> ODS 0.7 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> esotropia <u>Refraction:</u> hypermetropia, astigmatism	<u>Improvements:</u> - <u>Deteriorations:</u> Esotropia OS. VA decrease 0.2 OD.

							OD +3.0=C-2.00x23 OS +2.75=C-0.75x156 <u>Binocular vision</u> : poor	OD +2.75=C-2.25x15 OS +3.00=C-2.00x165 <u>Binocular vision</u> : poor	Diplopia (resolved within 1 month). Astigmatism OS.
59	CFNS Female	6.9	Facial bipartition	Esthetical	AIOD: 38.8 GP OD: 17.3 GP OS: 19.0	AIOD: n.a. GP OD: n.a. GP OS: n.a.  No CT-scan available.	<u>VA</u> : OD 0.4, OS 0.7 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia, astigmatism OD +1.75=C-0.50x32 OS +3.00=C-3.75x150 <u>Binocular vision</u> : not present <u>Motility</u> : upshoot adduction <u>Amblyopia</u> : present ODS <u>Torticollis</u> : present	<u>VA</u> : OD 0.5, OS 0.7 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia, hypotropia <u>Refraction</u> : hypermetropia, astigmatism OD +1.50 OS +3.00=C-4.50x145 <u>Binocular vision</u> : not present <u>Motility</u> : upshoot adduction <u>Amblyopia</u> : present ODS <u>Lacrima</u> : dryness complaints	<u>Improvements</u> : Torticollis  <u>Deteriorations</u> : Dryness complaints. Hypotropia OS. VA decrease 0.1 OD.  <u>Explanation</u> : VA OD worsened due to amblyopia.
60	CFNS Female	6.9	Facial bipartition	Esthetical	AIOD: 35.0 GP OD: 16.3 GP OS: 16.1	AIOD: 17.5 GP OD: 12.3 GP OS: 11.9	<u>VA</u> : OD 0.8, OS 0 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia <u>Refraction</u> : hypermetropia, astigmatism OD +6.00=C-3.00x160 OS +3.75=C-1.25x2 <u>Binocular vision</u> : not measured <u>Amblyopia</u> : present OD	<u>VA</u> : OD 0.5, OS 0.15 <u>Strabismus pattern</u> : V <u>Strabismus type</u> : exotropia, hypotropia OS <u>Refraction</u> : hypermetropia, astigmatism OD +6.50=C-3.00x160 OS +3.75=C-1.50x177 <u>Binocular vision</u> : not measured <u>Amblyopia</u> : present OD	<u>Improvements</u> : VA increase 0.3 OD  <u>Explanation</u> : VA OD improved due to amblyopia treatment.  <u>Deteriorations</u> : VA decrease 0.15 OS. Post-operatively hypotropia OS.
61	CFNS Female 9092324	5.2	Facial bipartition	Esthetical	AIOD: 39.1 GP OD: 20.8 GP OS: 21.1	AIOD: 24.0 GP OD: 14.4 GP OS: 14.1	<u>VA</u> : not correctly measured <u>Strabismus pattern</u> : V <u>Strabismus type</u> : esotropia <u>Refraction</u> : hypermetropia, astigmatism OD +5.00=C-3.75x10 OS +4.25=C-2.50x175 <u>Binocular vision</u> : not present	<u>VA</u> : ODS 0.6 <u>Strabismus pattern</u> : A <u>Strabismus type</u> : esotropia <u>Refraction</u> : hypermetropia, astigmatism OD +5.5=C-3.75x7 OS +4.75=C-4.25x164 <u>Binocular vision</u> : poor	<u>Improvements</u> : Binocular vision from not present to poor.  <u>Deteriorations</u> : Pattern change.

62	CFNS Female	4.9	Facial bipartition	Esthetical	AIOD: 34.5 GP OD: 16.1 GP OS: 17.4	AIOD: 27.0 GP OD: 14.5 GP OS: 14.3	<u>VA:</u> ODS 0.1 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> hypermetropia, astigmatism OD +2.75=C-2.25x165 OS +3.0=C-2.25x10 <u>Binocular vision:</u> moderate	<u>VA:</u> ODS 0.1 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> hypermetropia, astigmatism OD +3.25=C-3.00x160 OS +3.25=C-3.5x180 <u>Binocular vision:</u> moderate	<u>Improvements:</u> - <u>Deteriorations:</u> -
63	CFNS Female	3.7	Facial bipartition	Esthetical	AIOD: 39.7 GP OD: 16.6 GP OS: 14.6	AIOD: 33.3 GP OD: 16.6 GP OS: 14.9	<u>VA:</u> OD 0.6, OS 0.5 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> hypermetropia, astigmatism OD +0.75=C-3.25x153 OS +3.00=C-3.25x31 <u>Binocular vision:</u> not measured	<u>VA:</u> OD 0.6, OS 0.2 <u>Strabismus pattern:</u> V <u>Strabismus type:</u> exotropia <u>Refraction:</u> hypermetropia, astigmatism OD +1.25=C-3.75x172 OS +3.00=C-4.5x27 <u>Binocular vision:</u> not measured	<u>Improvements:</u> VA increase 0.3 OS  <u>Explanation:</u> VA improved due to wearing glasses postoperatively.  <u>Deteriorations:</u> -