is an increasing area of clinical focus extending beyond 3-D volume restoration, as naturalness of clinical outcomes at rest and with animation may vary. We evaluated the dynamic face using subjective and objective methods following treatment with dermal fillers formulated with physicochemical properties for facial movement adaptation.

**METHODS:** Thirty Caucasian females (40–65 years) with moderate to severe, bilateral wrinkles in the lower face were treated with HA fillers (20mg/mL with XpresHAn Technology™) and followed 4 weeks post-optimal correction. Subjective, dynamic assessments evaluated pre- versus post-expressions in motion (2D videos), using a series of standardized expressions. Facial dynamics were objectively evaluated and quantified using 3-D stereophotogrammetry (Canfield Scientific, Inc), including a younger, untreated Caucasian female cohort (N=20; 25–35 years). Satisfaction of treated subjects was assessed using a 5-point Likert scale.

**RESULTS:** Subjective facial dynamics revealed naturalness of the lower face in motion to be at least maintained in 100% of subjects (naturalness maintained or enhanced). Collectively, 83.3% of subjects were rated with enhanced attractiveness and looked younger, without compromise in naturalness. Rater agreement was high for individual assessments of attractiveness, youthfulness, and naturalness (70.0% – 83.3%). Subject satisfaction ratings were consistent with treating investigator assessment, with post-treatment improvement across all items assessed based on proportions of subject agreement (strongly agree or agree). Highest levels of subject satisfaction (>80%) observed post-treatment pertained to overall facial appearance is pleasing (90.0%); overall facial appearance looking natural (100%); face looking natural when relaxed (96.7%) and when smiling (93.3%), and looking younger than actual age (83.3%). For specific anatomic areas (marionette lines), global dynamic assessment using 3-D stereophotogrammetry showed significantly higher levels of stretch in older (20.1%, pre-treatment) versus younger subjects (17.7%; p<.05), with stretch levels significantly reduced post-treatment (17.9%; p<.05) such that older subjects post-treatment resembled younger subjects.

**CONCLUSION:** Dermal fillers formulated with XpresHAn Technology™ resulted in subjective dynamic assessments characterized by improvements in attractiveness and youthfulness, without compromising naturalness. Objective facial dynamics provided quantitative evidence of stretch levels resembling a younger phenotype, in areas specifically prone to dynamic volumetric effects of facial aging. This work underscores the importance of objective dynamic assessment as the fourth dimension of facial aesthetics.

**Juvederm Volbella for Use in Periorbital Volumization**

**Presenter:** Lara Devgan, MD, MPH, FACS  
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**INTRODUCTION:** Periorbital volume loss contributes significantly to facial aging and can result in tear trough deformities and infero-lateral skeletonization of the orbit. Tear trough augmentation with injectable hyaluronic acid based filler is an established technique for augmenting periorbital volume loss, but it has thus far been limited by swelling, contour abnormalities, and the Tindell effect. Juvederm Volbella (Allergan Inc., Irvine, CA, USA) is a new 15mg/mL hyaluronic acid dermal filler formulated using a majority of low molecular weight hyaluronic acid and a minority of high molecular weight hyaluronic acid for tighter cross-linking (“VYCROSS”). As a hydrophilic, malleable, homogenous matrix, the rheology of Volbella allows it to distribute evenly in treated tissue beds.

**PURPOSE:** To date, tear trough augmentation has most commonly been performed with Restylane, Belotero, and Juvederm. In this paper, we studied Volbella, which has been FDA approved for lip augmentation and perioral rhytids, for off-label use in tear trough augmentation.

**METHODS:** A retrospective chart review was conducted on a cohort of all periorbital aging patients in a single-surgeon practice who underwent tear trough augmentation using Volbella. Patients who underwent tear trough augmentation with other dermal fillers or with autologous fat grafting were excluded. Mean follow up time was 2 weeks.

**RESULTS:** 81 patients met inclusion criteria and were included in this technique analysis. Of those, 2 had had previous lower eyelid blepharoplasties. Patients were treated with between 0.55cc and
1.65cc of Volbella. All patients had uneventful pro-
cedural courses. Post-procedure, 7 patients (8.6%) 
reported swelling, and 5 (6.1%) required an oral 
course of methylprednisolone to reduce inflamma-
tion. No patients experienced the Tindell effect or 
contour abnormalities, and no patients required 
dissolution of filler. There were no instances of 
skin necrosis, tissue injury, or intravascular injec-
tion. All 81 patients were satisfied with their aes-
thetic results, and no patients requested or were 
advised to have filler dissolution.

CONCLUSION: Volbella is a safe and effective 
option for tear trough augmentation.

DWP-450, Purified Botulinum Toxin Type 
A, for the Treatment of Moderate-to-
Severe Glabellar Lines in Adult Subjects: 
Results from a Multi-Center, Open Label, 
Repeat Dose, Long Term Exposure, Year 
Long Phase II Safety Study

Presenter: Z. Paul Lorenc, MD, FACS

Affiliation: Lenox Hill hospital, New York, NY

INTRODUCTION: To demonstrate the safety of 
multiple doses of DWP-450, a 900kDA botulinum 
toxin type A for the treatment of moderate-to-
severe glabellar lines associated with corrugator 
and/or procerus muscle activity in adult subjects.

DESIGN: EV006 was a multicenter, open label, 
repeat dose, long term exposure, year long, Phase 
II safety study.

METHODS: 570 enrolled study subjects were at 
least 18 years of age and had moderate (GLS=2) 
to severe (GLS=3) glabellar lines at maximum 
frown, on the 4-point photonumeric Glabellar 
Line Scale (GLS, 0=no lines, 1=mild, 2=moderate, 
3=severe).

On Day 0, eligible subjects were administered 
a single treatment of DWP-450 (total of 20U, 
administered as 4U/ 0.1mL injected into each of 
5 sites in the glabella).

On and after Day 90, subjects were eligible for a 
repeat treatment if their GLS score returned to ≥2 
at maximum frown, as assessed by the Investigator.

RESULTS: The 570 subjects had a mean age of 
50.8 years; 8.9% (51/570) were 65 years of age or 
older. Most (510/570, 89.5%) were female.

570 subjects received a median total dose of 60 U 
– i.e. 3 treatments.

235 subjects (235/570, 41.2%) experienced a 
total of 475 AEs (Adverse Event). Sixty-one sub-
jects (61/570, 10.7%) experienced a total of 91 
AEs (91/475 events, 19.2%) assessed by the Inves-
tigator as study drug related.

Seven subjects (7/570, 1.2%) experienced 8 SAEs 
(Serious Adverse Event). No SAE was assessed as 
study drug related.

There were 6 related events of eyelid ptosis 
(6/570, 1.1%).

There were no cases of antibotulinum toxin anti-
body seroconversion during the trial.

At Day 30 after initial treatment, by Investigator 
assessment, 96.9% (538/566) of subjects had a ≥1 
point improvement on the GLS.

CONCLUSION: DWP-450, a purified botulinum 
toxin type A, used for the treatment of moderate-
to-severe glabellar lines was studied in a 570 sub-
ject, multi-center, open label, repeat dose, long 
term exposure, year long Phase II safety study. 
Most AEs were injection site reactions of mild to 
moderate severity.

DWP-450, Purified Botulinum Toxin Type 
A, for the Treatment of Moderate-to-
Severe Glabellar Lines in Adult Subjects: 
Results from Two Randomized, Double-
Blind, Placebo-Controlled, Single Dose 
Phase III Safety and Efficacy Studies

Presenter: Z. Paul Lorenc, MD, FACS