

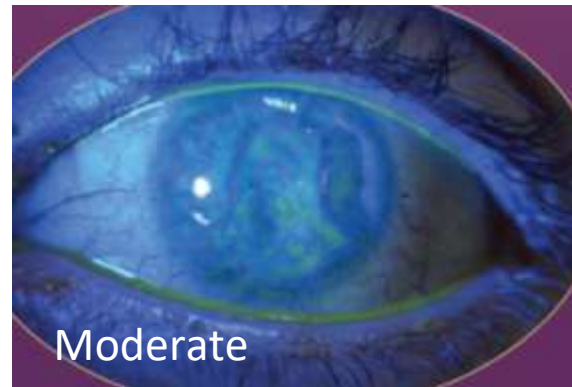
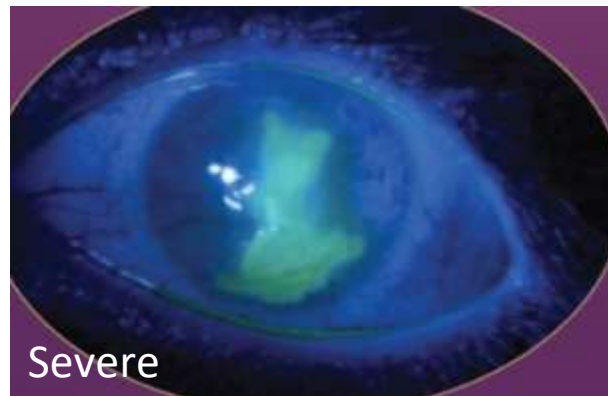


## Dry Eye – Past ,Present, Next Generation!

Paul Bent  
National Sales Manager  
VISUfarma UK

- Dry Eye disease – impact on quality of life.
- The Dry Eye market place.
  - What products are being used?
  - What is the cost to the NHS?
- Choosing the appropriate product.
- VisuXL®

## Dry eye typically seen in clinic



Clinical images reproduced with permission  
from Gumus K, *Eye & Contact Lens* 2017

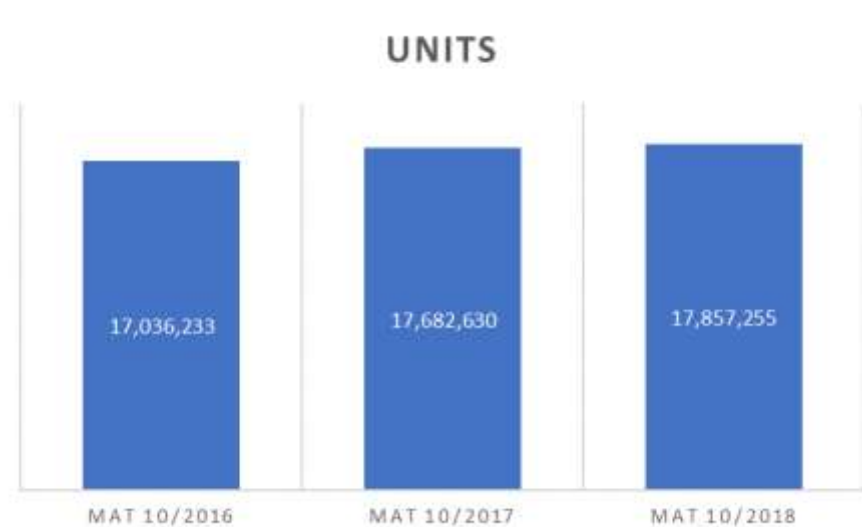
Ref 12: K Gummus , *Eye and Contact lens* 2017 ,Clinical images of dry eye

In a hospital-based study, 54% of those with diabetes had DES and there was a significant correlation between DES and the duration of diabetes. <sup>ref13</sup>

Ref 13. Manaviat M. R., Rashidi M., Afkhami-Ardekani M., Shoja M. R. Prevalence of dry eye syndrome and diabetic retinopathy in type 2 diabetic patients. *BMC Ophthalmology*. 2008;8, article 10 doi: 10.1186/1471-2415-8-10.

# Total UK prescription market

- The UK dry eye prescription market is valued at **£77million** over the past 12 months.
- This equates to nearly **18 million** units being dispensed over the same 12 month period.
- These numbers don't include patient self purchases via pharmacy, opticians or online.



# The changing market dynamics

- This means the NHS is prescribing **5%** more units than 2 years ago but the costs have gone up **19%** in the same period.
- This fact concerns payors.
- The challenge is prioritising the right product to treat patients effectively while managing the costs for the NHS.



# There are so many options...

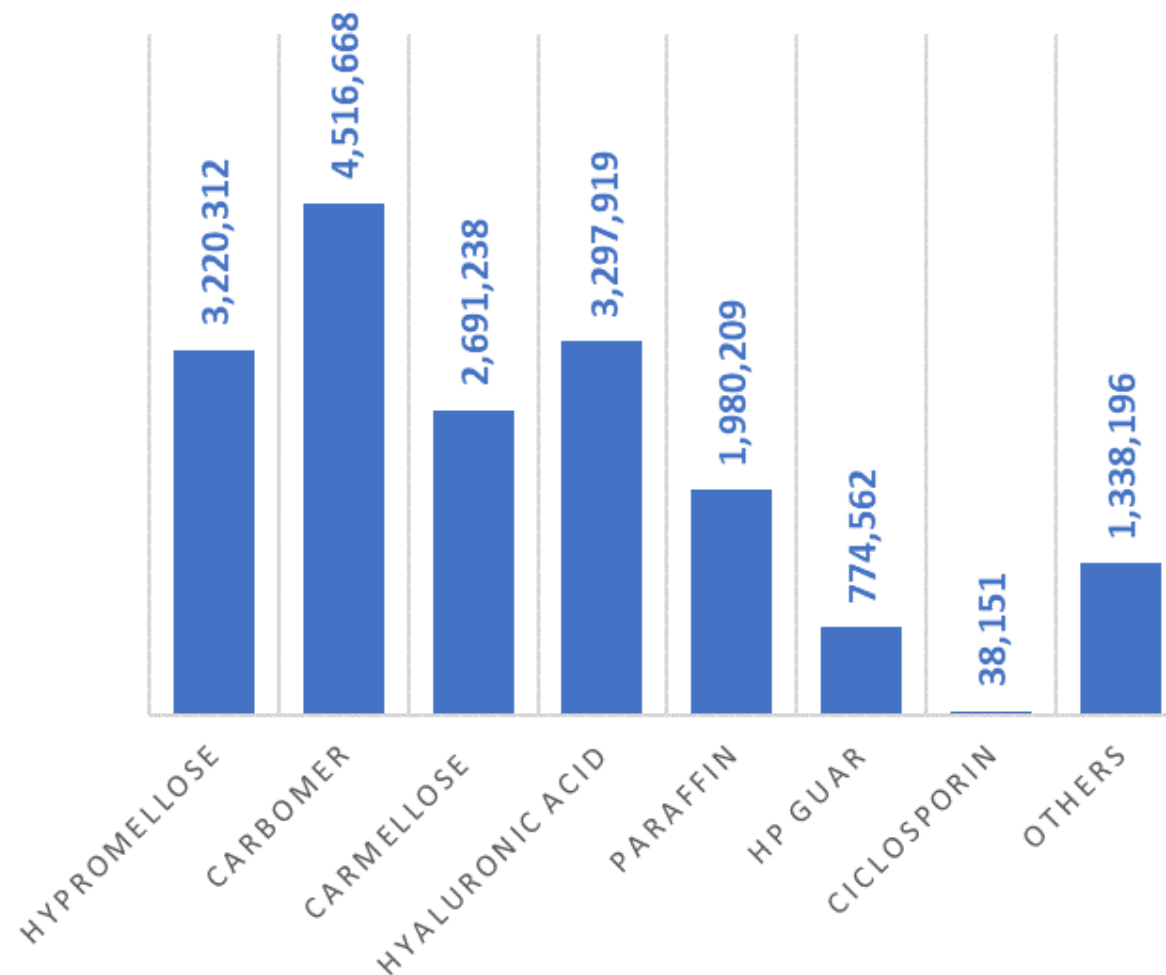
- There are now over **100 products** that can be prescribed in the UK



## Lets simplify it....

- All products fall into **7** main molecular groups (+others). These groups are;

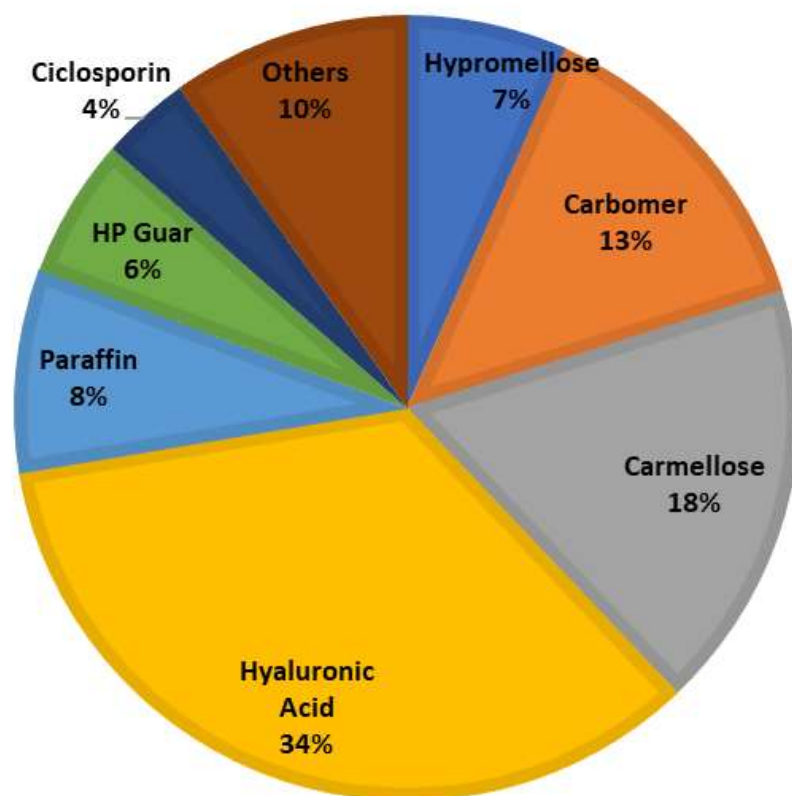
1. **Hypromellose**
2. **Carbomer Gels**
3. **Carmellose Sodium's**
4. **Hyaluronic Acids**
5. **Paraffins**
6. **HP Guar**
7. **Ciclosporin**
8. **Others**



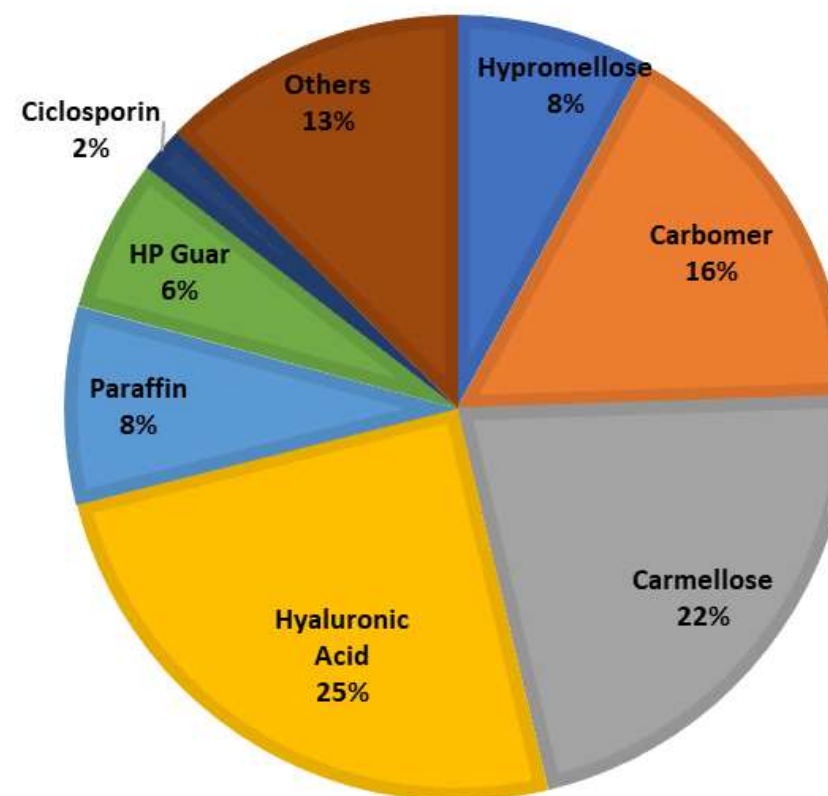


## NHS changing spend by molecule (10/18 v 10/16)...

- 2018 (10/18 MAT) cash sales by molecular class



- 2016 (10/16 MAT) cash sales by molecular class



# VisuXL – The innovation in dry eye

## CoQ10

- ✓ A natural antioxidant & free radical scavenger<sup>2,3,4</sup>
- ✓ Reduces apoptosis<sup>4</sup>
- ✓ CoQ10 supports a healthy ocular surface<sup>8</sup>

## Cross linked HA

- ✓ 3x longer retention time compared to Linear HA<sup>+6</sup>
- ✓ Allows dosing from 2 drops per day<sup>7,9</sup>
- ✓ Daily use is less expensive compared to other leading brands<sup>10</sup>

- VisuXL contain 2 unique ingredients;
  - ✓ Coenzyme Q10<sup>7,9</sup>
  - ✓ Cross Linked Hyaluronic Acid<sup>7,9</sup>
- Clinical data to demonstrate;
  - ✓ Improved symptom outcomes v linear HA<sup>8</sup>
  - ✓ Improvements in patients corneal damage v linear HA<sup>8</sup>
- Use VisuXL from **2 x a day**<sup>7,9</sup>
- Each VisuXL bottle will last **2 months**<sup>7,9</sup>
- Due to this - VisuXL costs only **£5.15** per month<sup>7,9</sup>



VisuXL improves your patients symptoms...

---

***Patients treated with VisuXL feel better compared to treatment with linear HA<sup>\*8</sup>***



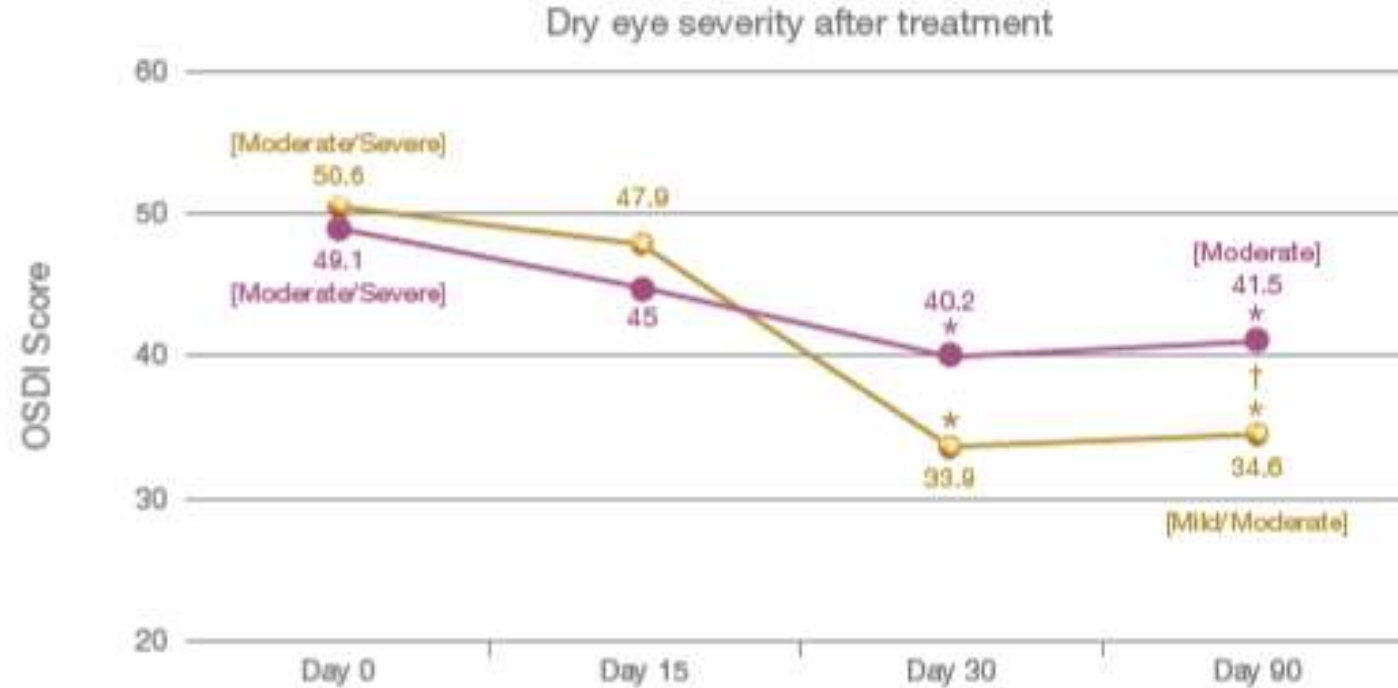
\* As assessed by the OSDI. Postorino E.I, *et al.* 2018.

# VisuXL improves your patients symptoms...

Relieve

## Example of products containing a linear HA

- HyloForte
- HyloTear
- Hyabak
- Evolve HA
- Optive Fusion
- Xailin HA



**Study design:** Randomized, single-masked, parallel-group, comparative study investigated the efficacy and safety, in the treatment of mild to moderate dry eye patients, of an ophthalmic solution containing XLHA with CoQ10 (VisuXL, n=20) versus a formulation containing 0.15% HA (Ocuyal, n=20). Eye drops were administered 4 times daily for 12 weeks.



## Ocular Surface Disease Index® (OSDI®)<sup>2</sup>

Ask your patients the following 12 questions, and circle the number in the box that best represents each answer. Then, fill in boxes A, B, C, D, and E according to the instructions beside each.

Have you experienced any of the following during the last week?	All of the time	Most of the time	Half of the time	Some of the time	None of the time
1. Eyes that are sensitive to light? ..	4	3	2	1	0
2. Eyes that feel gritty? .....	4	3	2	1	0
3. Painful or sore eyes? .....	4	3	2	1	0
4. Blurred vision? .....	4	3	2	1	0
5. Poor vision? .....	4	3	2	1	0

Subtotal score for answers 1 to 5 (A)

Have problems with your eyes limited you in performing any of the following during the last week?	All of the time	Most of the time	Half of the time	Some of the time	None of the time	N/A
6. Reading? .....	4	3	2	1	0	N/A
7. Driving at night? .....	4	3	2	1	0	N/A
8. Working with a computer or bank machine (ATM)? .....	4	3	2	1	0	N/A
9. Watching TV? .....	4	3	2	1	0	N/A

Subtotal score for answers 6 to 9 (B)

Have your eyes felt uncomfortable in any of the following situations during the last week?	All of the time	Most of the time	Half of the time	Some of the time	None of the time	N/A
10. Windy conditions? .....	4	3	2	1	0	N/A
11. Places or areas with low humidity (very dry)? .....	4	3	2	1	0	N/A
12. Areas that are air conditioned? ..	4	3	2	1	0	N/A

Subtotal score for answers 10 to 12 (C)

Add subtotals A, B, and C to obtain D (D = sum of scores for all questions answered) (D)

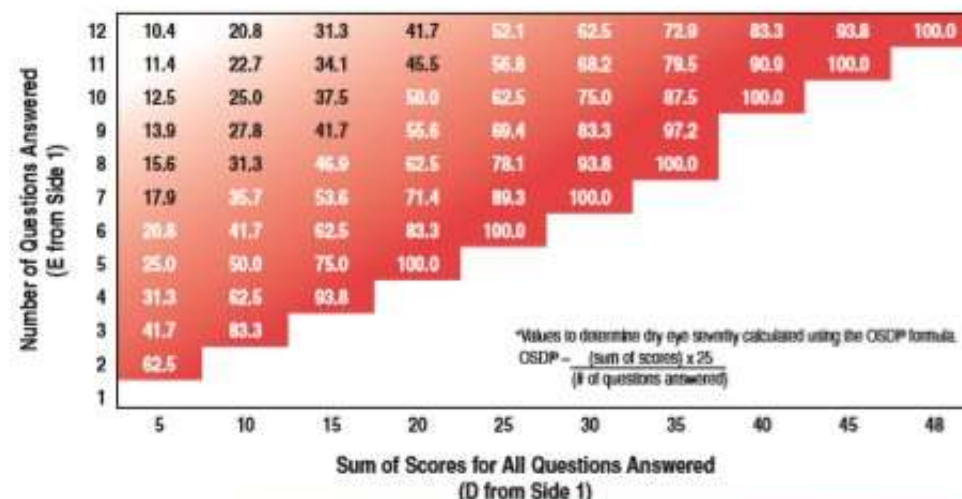
Total number of questions answered (do not include questions answered N/A) (E)

## Evaluating the OSDI® Score<sup>1</sup>

The OSDI® is assessed on a scale of 0 to 100, with higher scores representing greater disability. The index demonstrates sensitivity and specificity in distinguishing between normal subjects and patients with dry eye disease. The OSDI® is a valid and reliable instrument for measuring dry eye disease (normal, mild to moderate, and severe) and effect on vision-related function.

## Assessing Your Patient's Dry Eye Disease<sup>1,2</sup>

Use your answers D and E from side 1 to compare the sum of scores for all questions answered (D) and the number of questions answered (E) with the chart below.\* Find where your patient's score would fall. Match the corresponding shade of red to the key below to determine whether your patient's score indicates normal, mild, moderate, or severe dry eye disease.



Normal Mild Moderate Severe

Patient's Name: \_\_\_\_\_ Date: \_\_\_\_\_

How long has the patient experienced dry eye disease? \_\_\_\_\_

Eye Care Professional's Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# OSDI (Ocular Surface Disease Index) explanation...<sup>11</sup>

## All Questions ranked 0-4

0- none of the time  
1 Some of the time  
2 Half of the time  
3 Most of the time  
4 All of the time

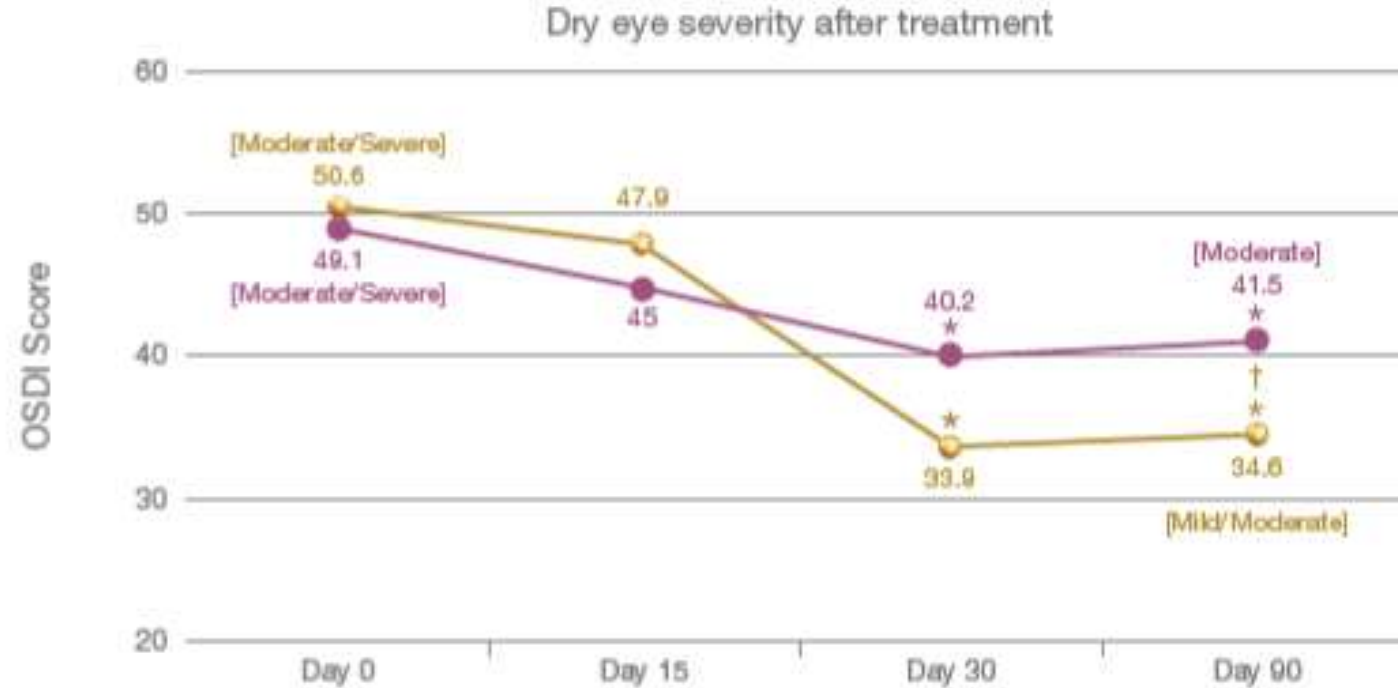
- **A measure of OSDI scores takes into account patients feedback on the following 12 parameters.**
- Have you experienced any of the following during the last week?
  - 1. Eyes that are sensitive to light*
  - 2. Painful or sore eyes*
  - 3. Poor Vision*
  - 4. Eyes that feel gritty*
  - 5. Blurred Vision*
- Have problems with your eyes limited you in performing any of the following during the last week?
  - 6. Reading*
  - 7. Driving at night*
  - 8. Watching TV*
  - 9. Working a computer or ATM*
- Have your eyes felt uncomfortable in any of the following situations during the last week?
  - 10. Places with low humidity*
  - 11. Areas that are air conditioned*
  - 12. Windy conditions*

# VisuXL improves your patients symptoms...

Relieve

## Example of products containing a linear HA

- HyloForte
- HyloTear
- Hyabak
- Evolve HA
- Optive Fusion
- Xailin HA



**Study design:** Randomized, single-masked, parallel-group, comparative study investigated the efficacy and safety, in the treatment of mild to moderate dry eye patients, of an ophthalmic solution containing XLHA with CoQ10 (VisuXL, n=20) versus a formulation containing 0.15% HA (Ocuyal, n=20). Eye drops were administered 4 times daily for 12 weeks.

# The NEXT generation dry eye treatment

***“crosslinked hyaluronate molecule, together with the presence of CoQ10, has a greater effectiveness compared to HA alone.” Postorino et al. 2018***



**Restore**



**Restore**

VisuXL supports the  
restoration of a healthy  
ocular surface

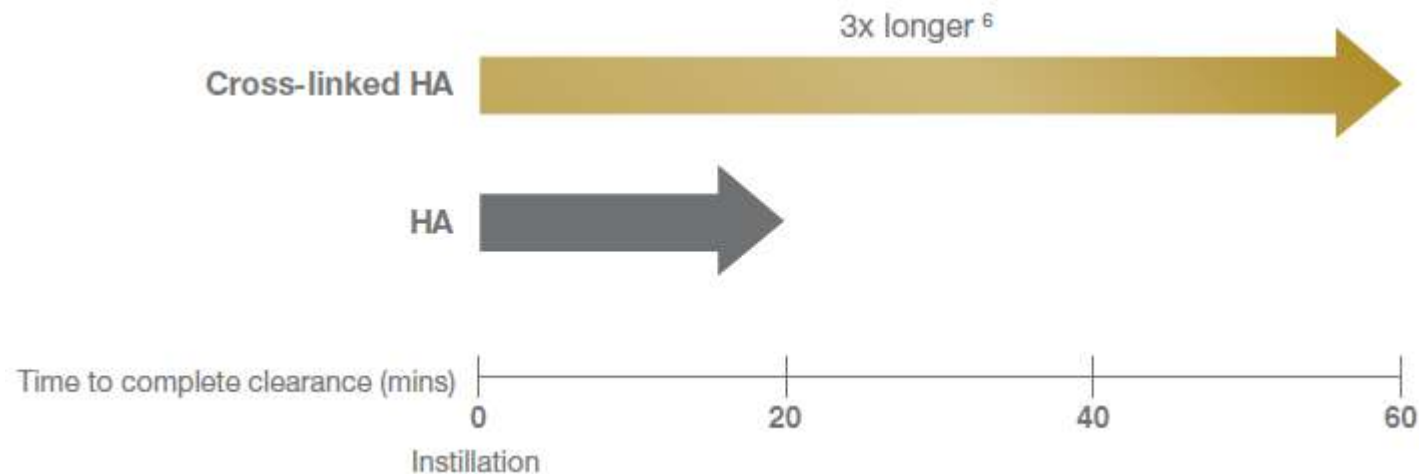


Easy to use....

2 Drops

## Why does Cross-linked HA matter?

- *Residence time on the ocular surface 3 x longer than linear HA.* †6



### Example of products containing a linear HA

- HyloForte
- HyloTear
- Hyabak
- Evolve HA
- Optive Fusion
- Xailin HA

- *Cross-linked HA provides lasting relief.*

***Dry eye relief from 2 drops per day***

Diagram adapted from Muzzi M & Mencucci R. Poster at AOPT 2017

VISU<sup>o</sup>farma B.V. - Confidential and privileged information

† in an animal model

# Choosing the appropriate product...



## Relieve

VisuXL patients feel better compared to treatment with HA alone <sup>1</sup>



## Restore

VisuXL supports the restoration of a healthy ocular surface <sup>1</sup>



## 2 Drops

VisuXL provides lasting relief from 2 drops a day <sup>6,7,9</sup>

## Price information to the NHS...

Help  
manage  
NHS  
budget

- *VisuXL bottle price is £10.30*
- *1 drop in both eyes 2 x day = 120 drops per month*
- *Each bottle of VisuXL will last 2 months*

## VisuXL is £5.15 per month

(based on recommended dosing of 1 drop in each eye twice daily)



## Also available in Unit Dose



**£10.30**

# Summary

***VisuXL represents an innovative option for your dry eye patients.***

- ✓ Uniquely contains CoQ10
- ✓ Contains a cross-linked HA
- ✓ Preservative free
- ✓ Contact lens friendly
- ✓ From 2 x drops per day, 2 month supply\*.
- ✓ 10ml bottle, sterile for 60 days
- ✓ NHS cost **£5.15** per month (£10.30 bottle cost)

\* (based on recommended dosing of 1 drop in each eye twice daily)



Relieve



Restore



2 Drops

# References

---

1. Uchino, MD. Dry Eye Disease: Impact on Quality of Life and Vision. Curr Ophthalmol Rep. 2013 June; 1(2) 51-57
2. Fogagnolo P, et al. The Effects of Topical Coenzyme Q 10 and Vitamin E D -  $\alpha$  -Tocopheryl Polyethylene Glycol 1000 Succinate after Cataract Surgery: A Clinical and in vivo Confocal Study. Ophthalmologica 2013; 229: 26-31.
3. Brancato R, et al. Prevention of corneal keratocyte apoptosis after argon fluoride excimer laser irradiation with the free radical scavenger ubiquinone Q10. Eur J Ophthalmol 2000; 10: 32-8.
4. Brancato R, et al. Concomitant Effect of Topical Ubiquinone Q10 and Vitamin E to Prevent Keratocyte Apoptosis After Excimer Laser Photoablation in Rabbits. J Refract Surg 2002; 18: 135-9.
5. Chen CC, et al. Coenzyme Q10 Reduces Ethanol-Induced Apoptosis in Corneal Fibroblasts. PLoS One 2011; 6: e19111.
6. Muzzi M, Mencucci R. Poster presented at the Association for Ocular Pharmacology and Therapeutics (AOPT) 13th Scientific Meeting, February 16-19, 2017. Florence, Italy.
7. VisuXL Instructions for Use(IFU), May 2018.
8. Postorino EI, et al. Efficacy of eye drops containing cross-linked hyaluronic acid and coenzyme Q10 in treating patients with mild to moderate dry eye. Eur J Ophthalmol 2018; 28(1): 25-31.
9. VisuXL UD Instructions for Use (IFU), Dec 2018.
10. Data on file: Dry eye market place HA cash 2019.
11. Ocular Surface Disease Index Questionnaire, Allergan, 1995
12. K Gummus , Eye and Contact lens 2017 ,Clinical images of dry eye
13. Manaviat M. R., Rashidi M., Afkhami-Ardekani M., Shoja M. R. Prevalence of dry eye syndrome and diabetic retinopathy in type 2 diabetic patients. *BMC Ophthalmology*. 2008;8, article 10 doi: 10.1186/1471-2415-8-10.