

# MOTION PERIMETRY AND STANDARD STATIC PERIMETRY IN CASES OF OCULAR MEDIA DEFECTS

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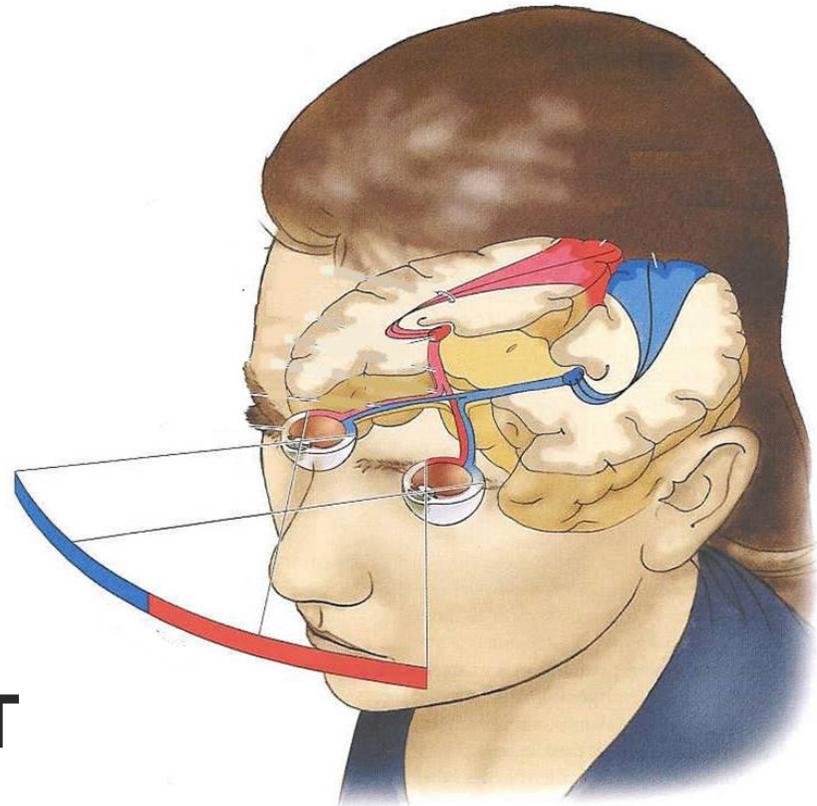
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# Visual field and ocular media defects

- Corneal edema
- Cataract
- Refractive errors

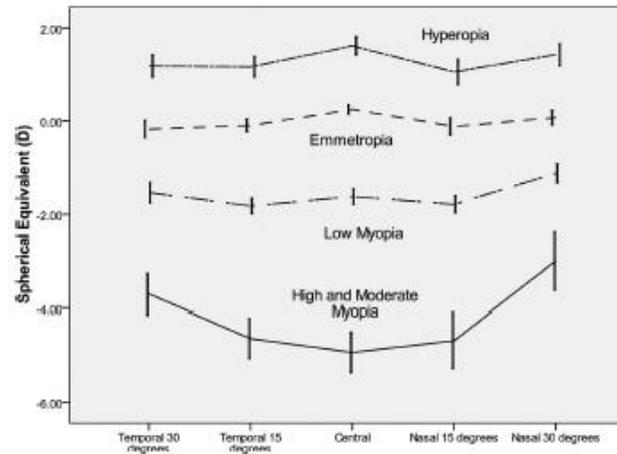
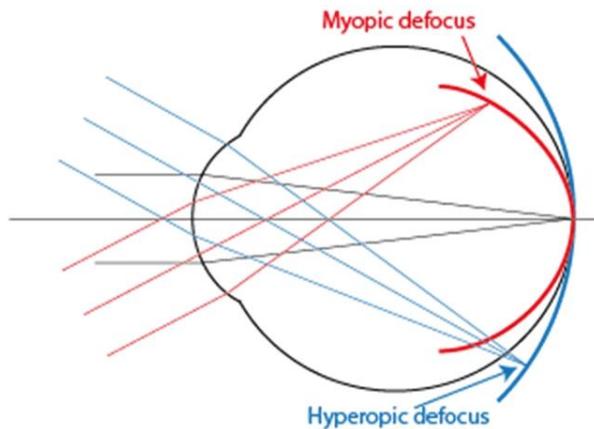


**HOW DO THEY AFFECT  
VISUAL FIELDS ?**

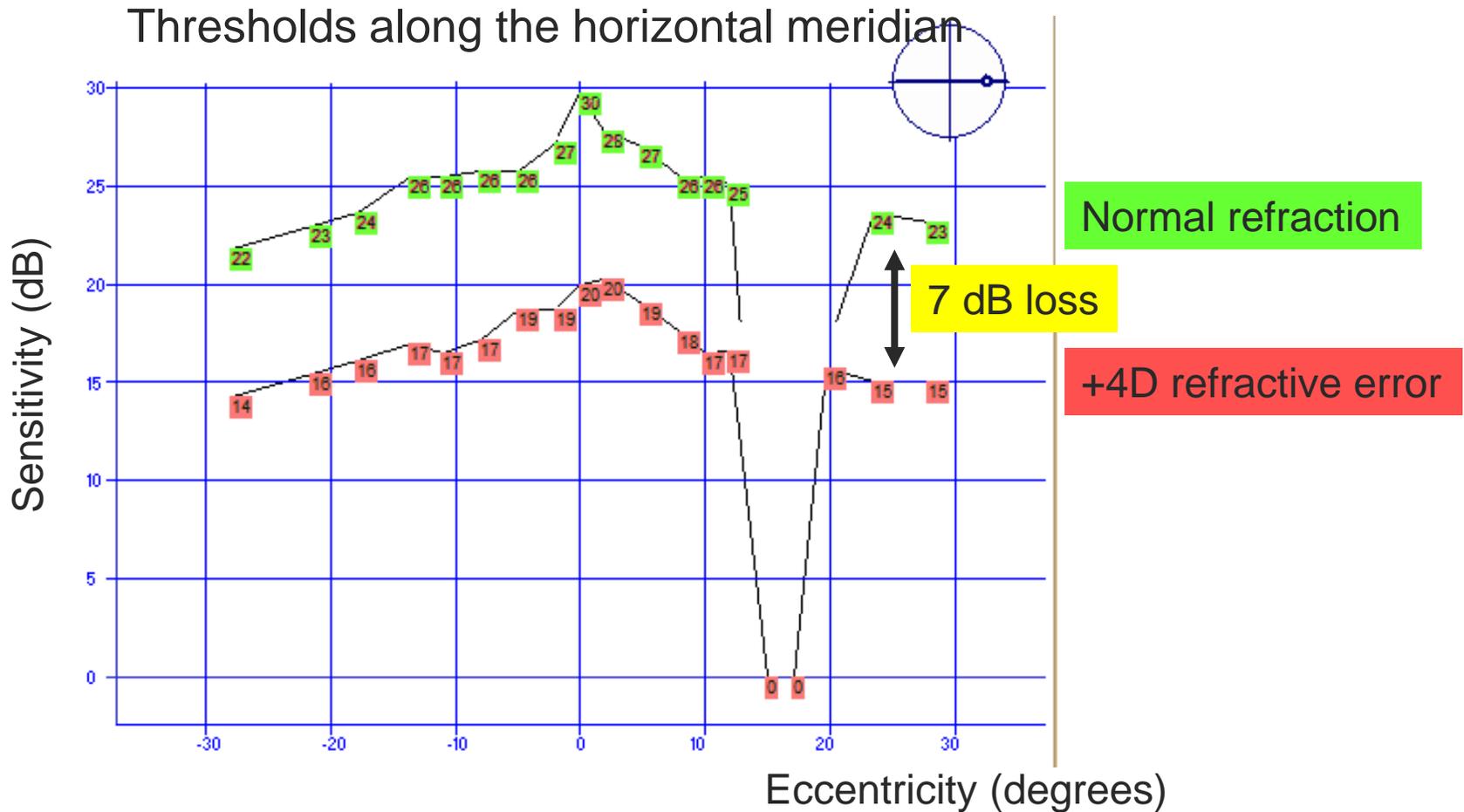


# Causes of refractive error

- Busy practice (no time to measure refraction accurately)
- High astigmatism (difficult to correct)
- Multifocal IOL
- Peripheral refractive errors



# Influence of refractive error on standard perimetry



# Influence of refractive error on standard perimetry

- Depends on size of stimulus and eccentricity
- Important inter-subject variability

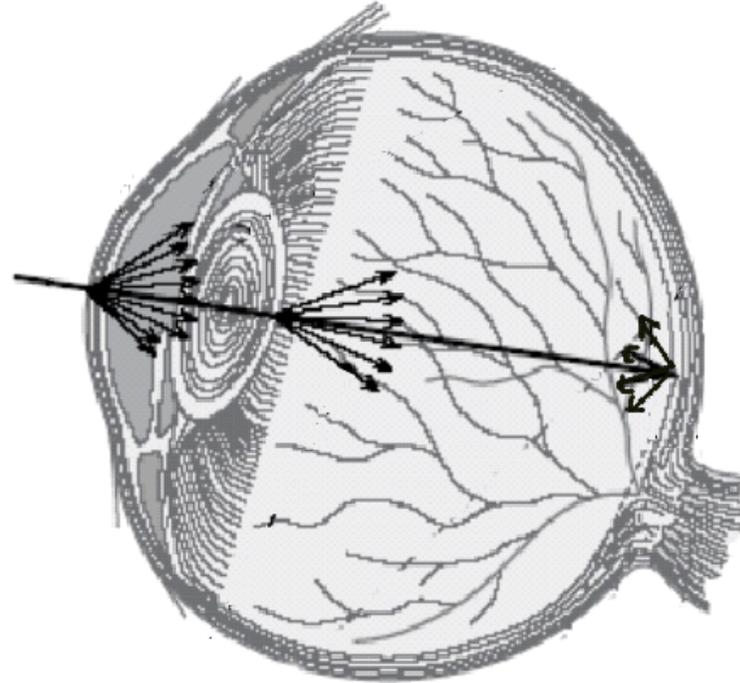
Loss of sensitivity resulting from **5D hypermetropia**:

Stimulus size	0 degrees	30 degrees
I	12 dB	8 dB
III	<b>6 dB</b>	<b>4 dB</b>
V	3 dB	3 dB

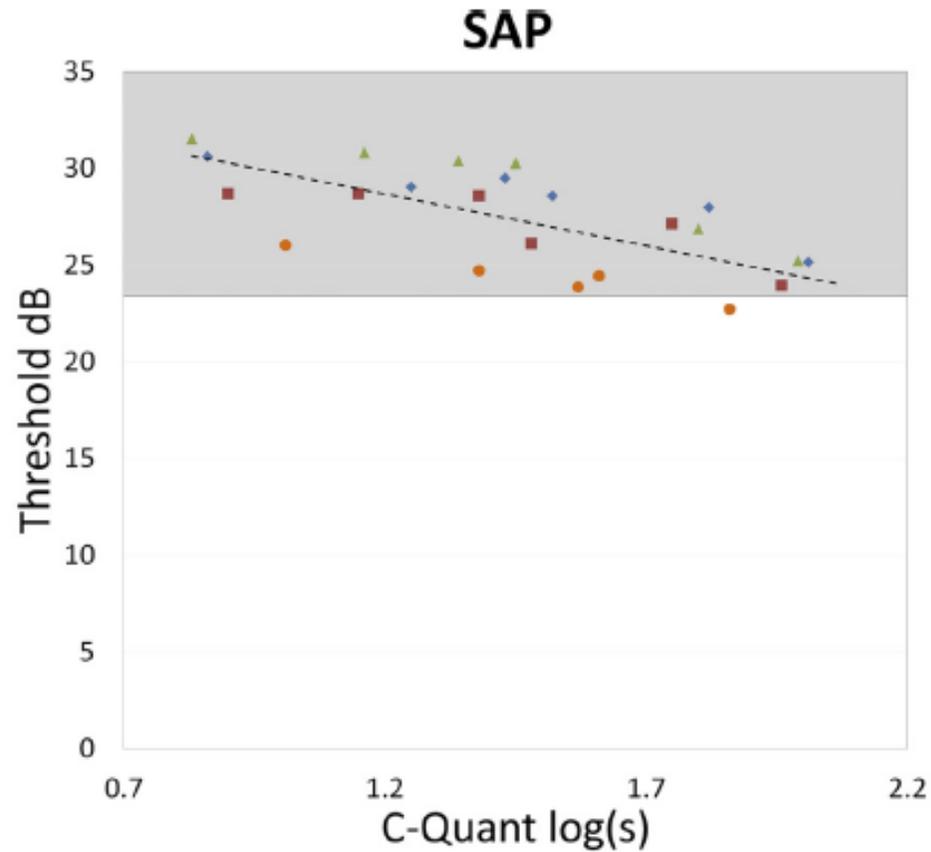
Source: Atchison, 1987

# Causes of light scatter

- Cornea edema
- Lens opacities



# Influence of light scatter in standard perimetry

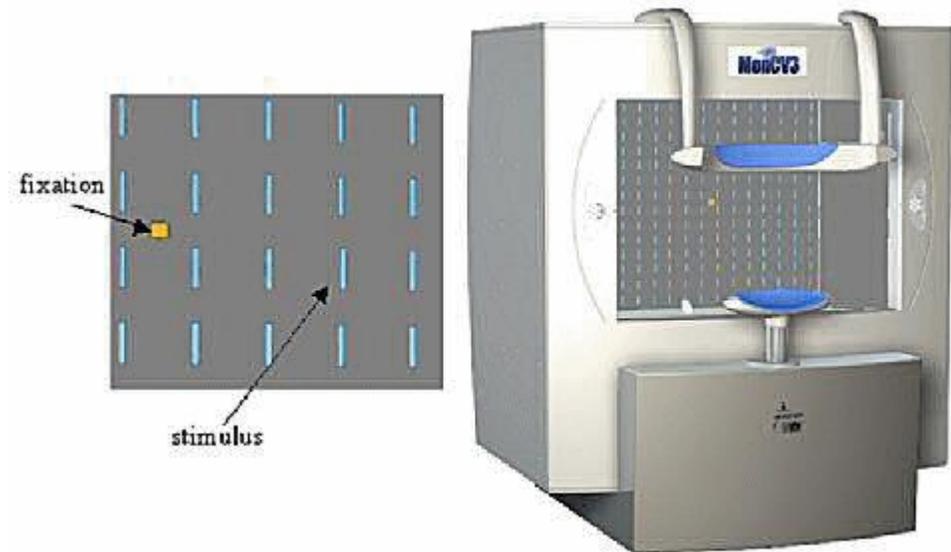


Source: Oleszczuk IOVS 2012

# Motion perimetry

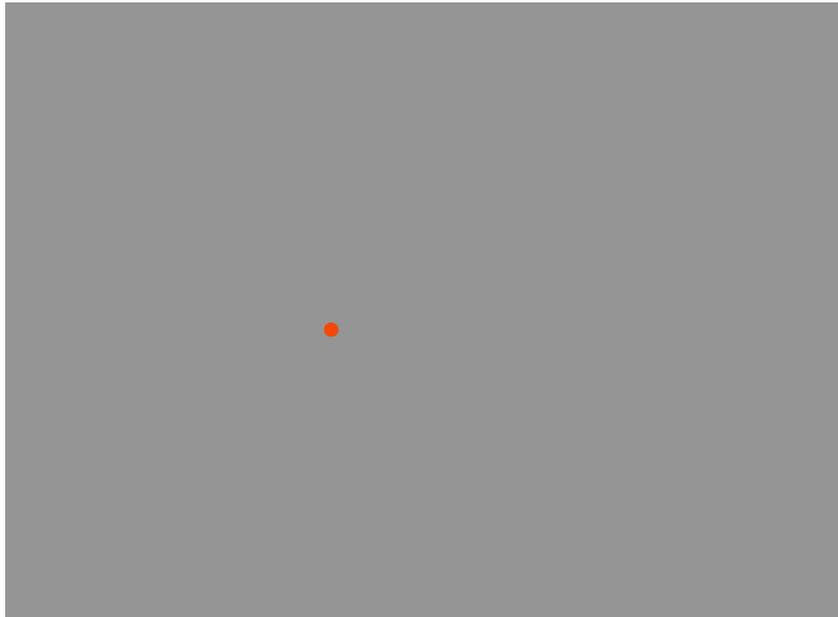
The stimulus is the displacement of a small bar

Measurement of the minimum displacement detected by the subject.

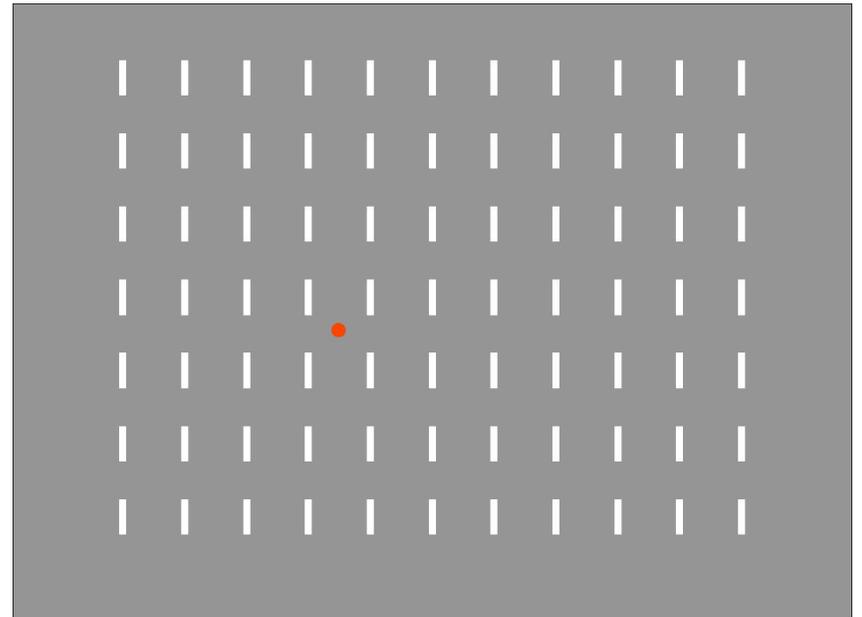


# Comparison of standard and motion perimetry

Standard perimetry:



Motion perimetry:

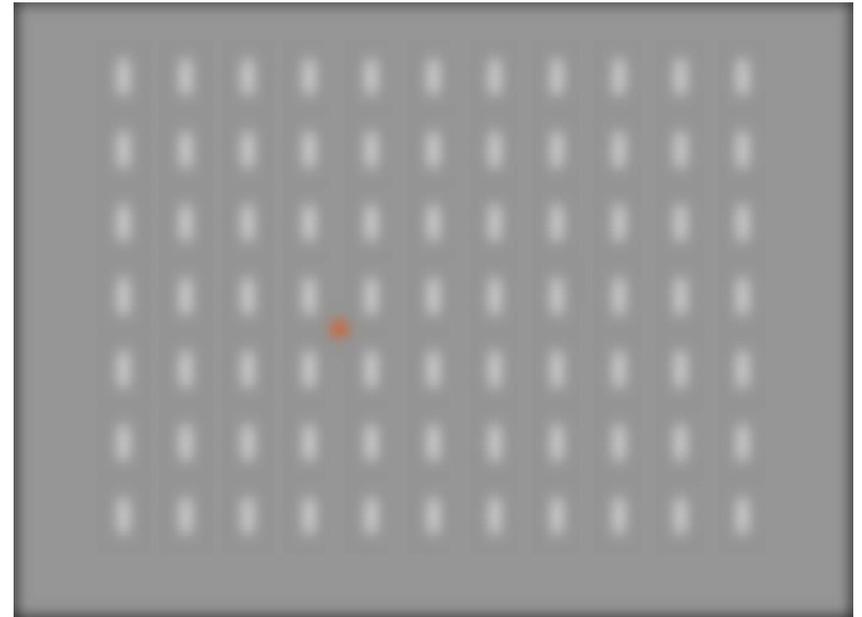


# Comparison of standard and motion perimetry simulation of a refractive error with +4D

Standard perimetry:  
the stimulus is no longer visible



Motion perimetry:  
the stimulus is still visible



# Comparison of standard and motion perimetry simulation of optical errors

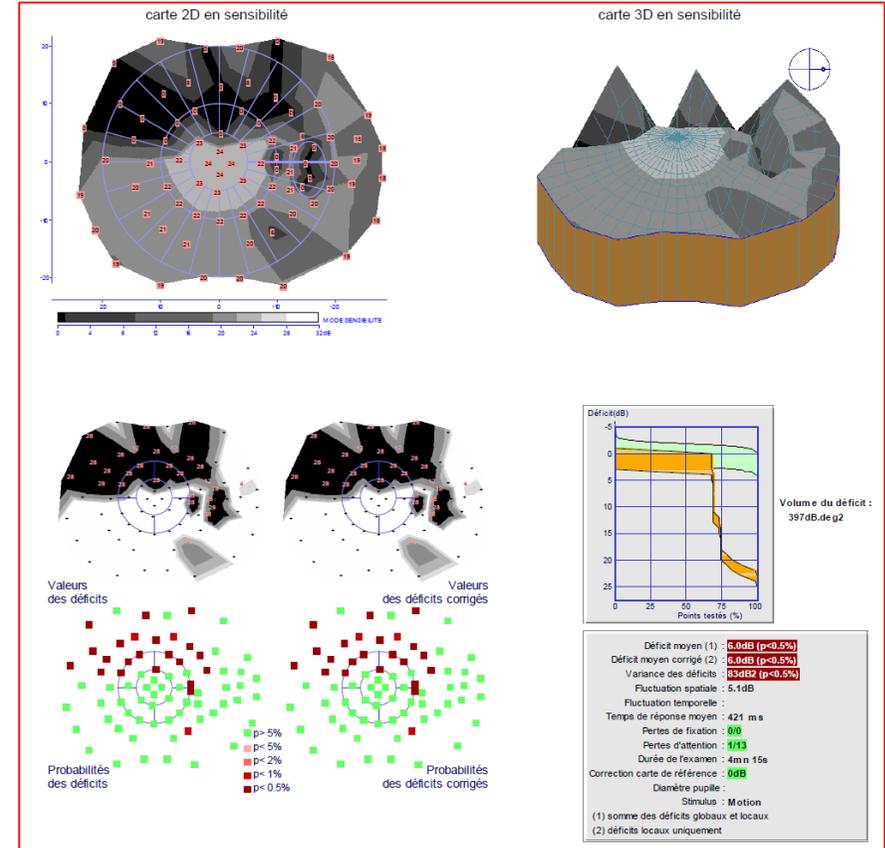
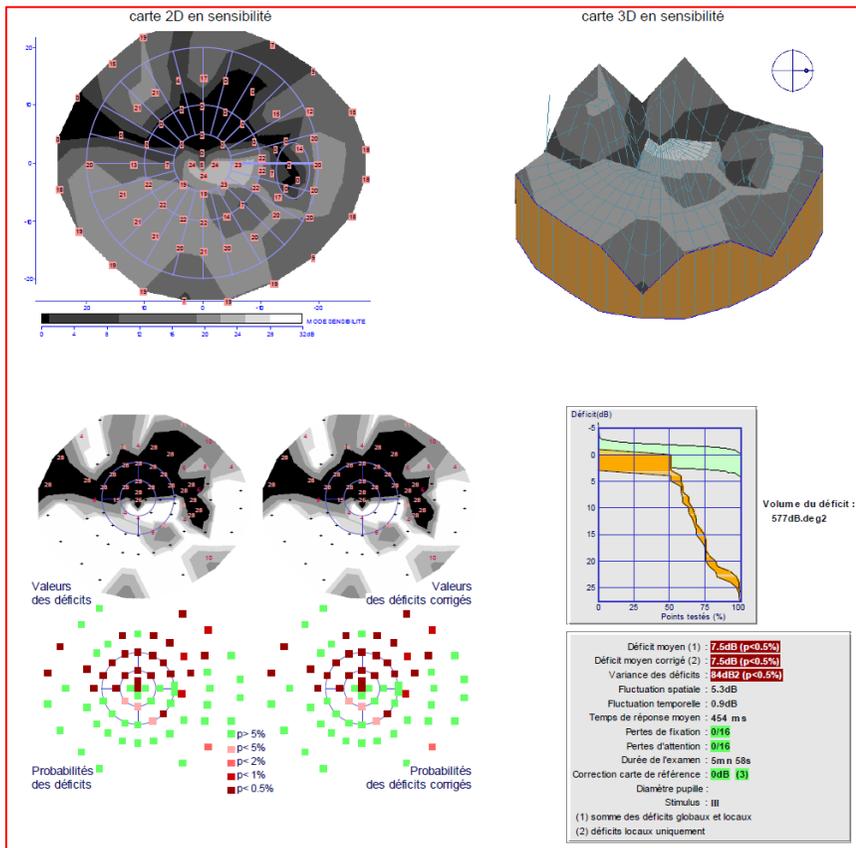
	Standard perimetry	Motion perimetry
refractive error +4D	6 dB	< 1 dB
Light scatter diffuser	10 dB	< 1 dB

# Comparison of standard and motion perimetry

## Patient with glaucoma

### Standard perimetry

### Motion perimetry

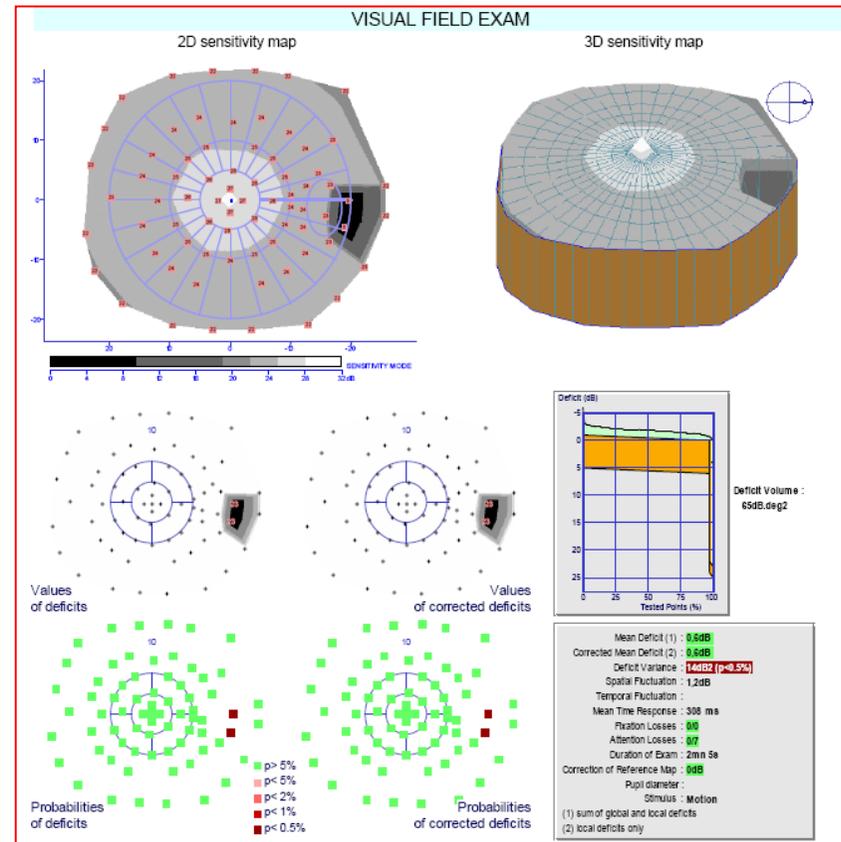
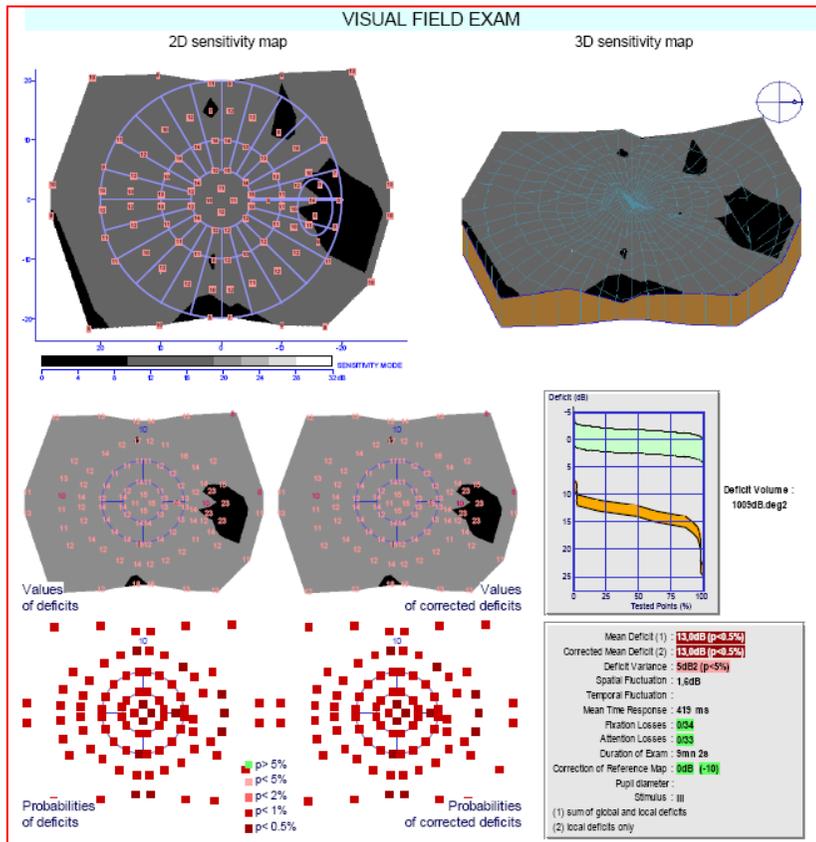


# Comparison of standard and motion perimetry

## Patient with cataract

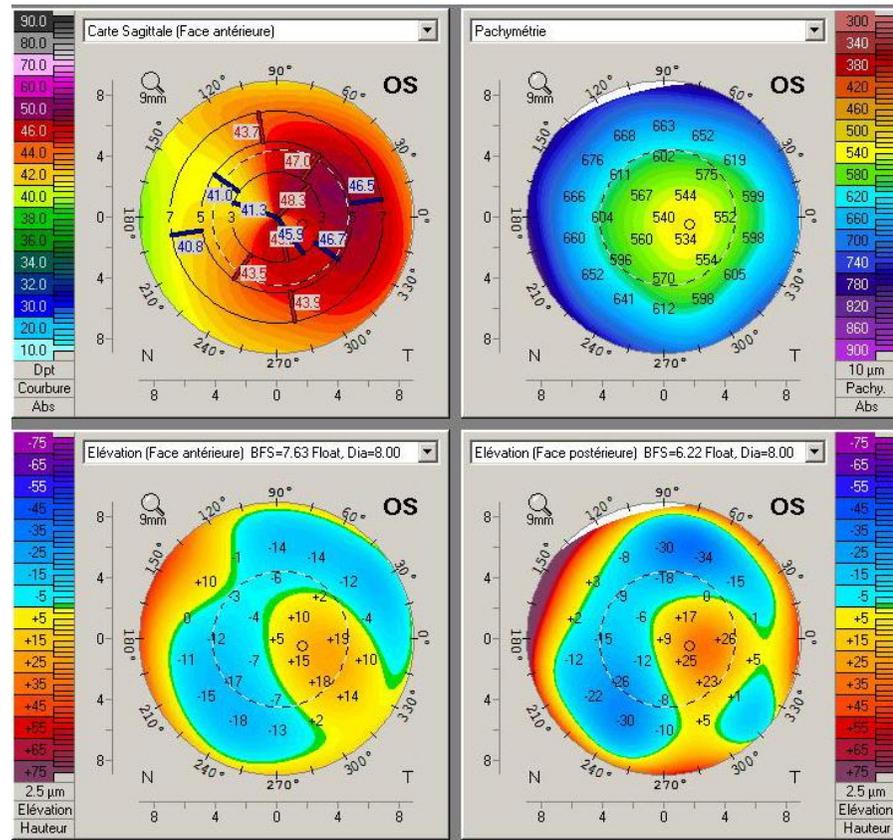
Standard perimetry:  
important loss of sensitivity

Motion perimetry:  
normal result



# Motion perimetry

Patient with keratoconus 23 years old



Glare test:

absence of response indicates important light scatter

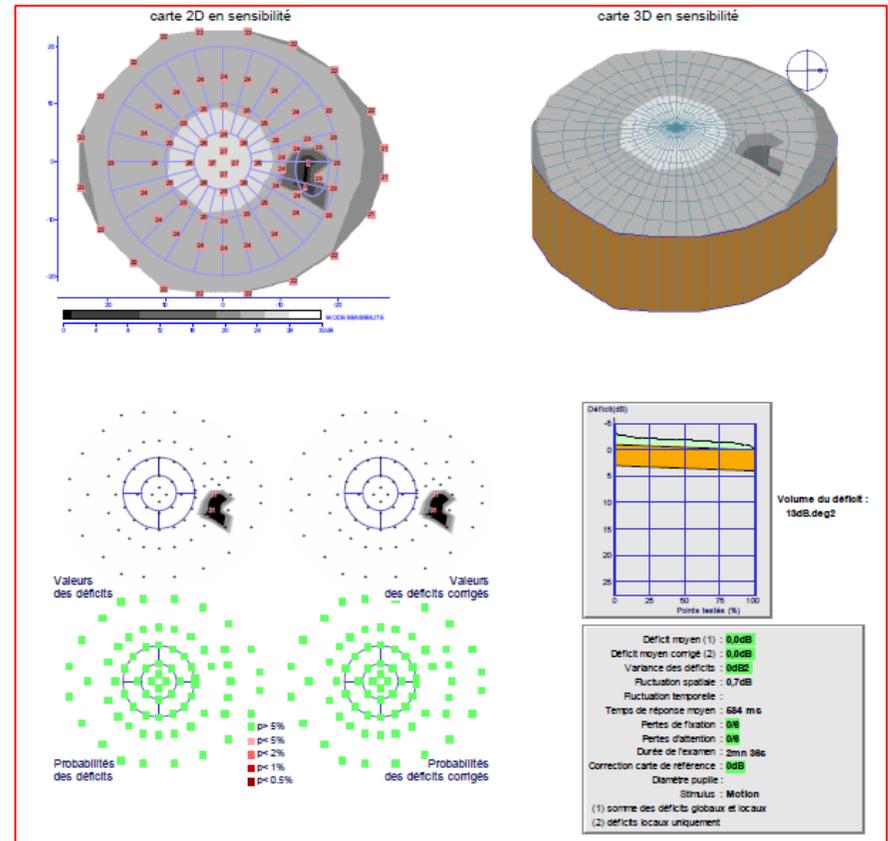
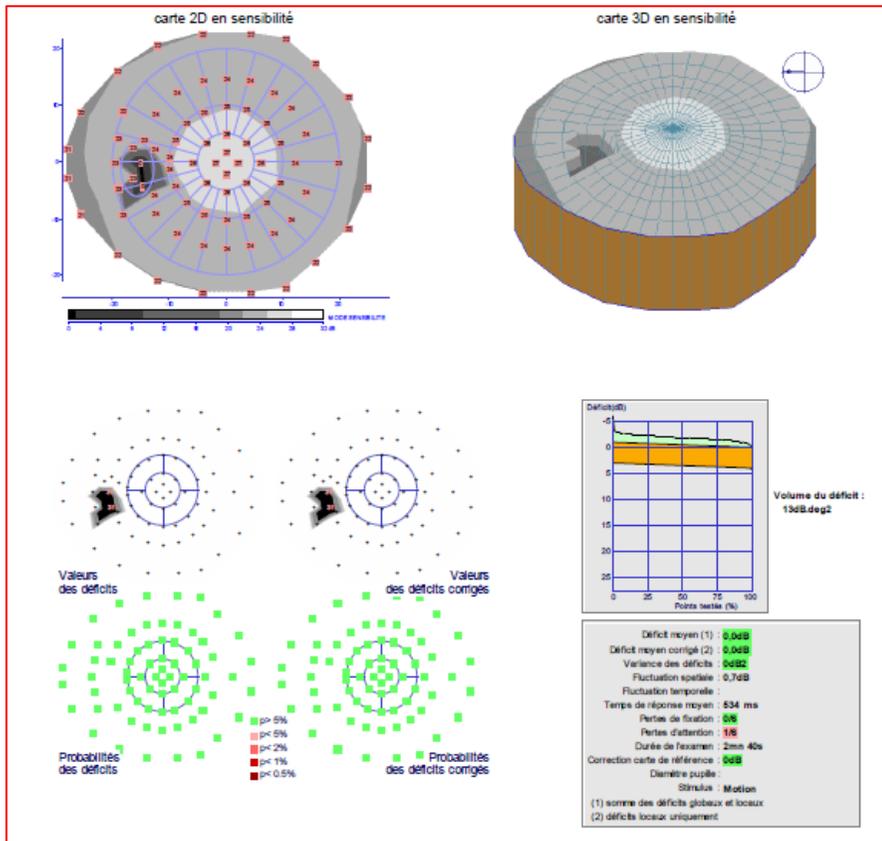


score = non défini 1 cd/m<sup>2</sup> 2.5 m

# Motion perimetry

Patient with keratoconus 23 years old

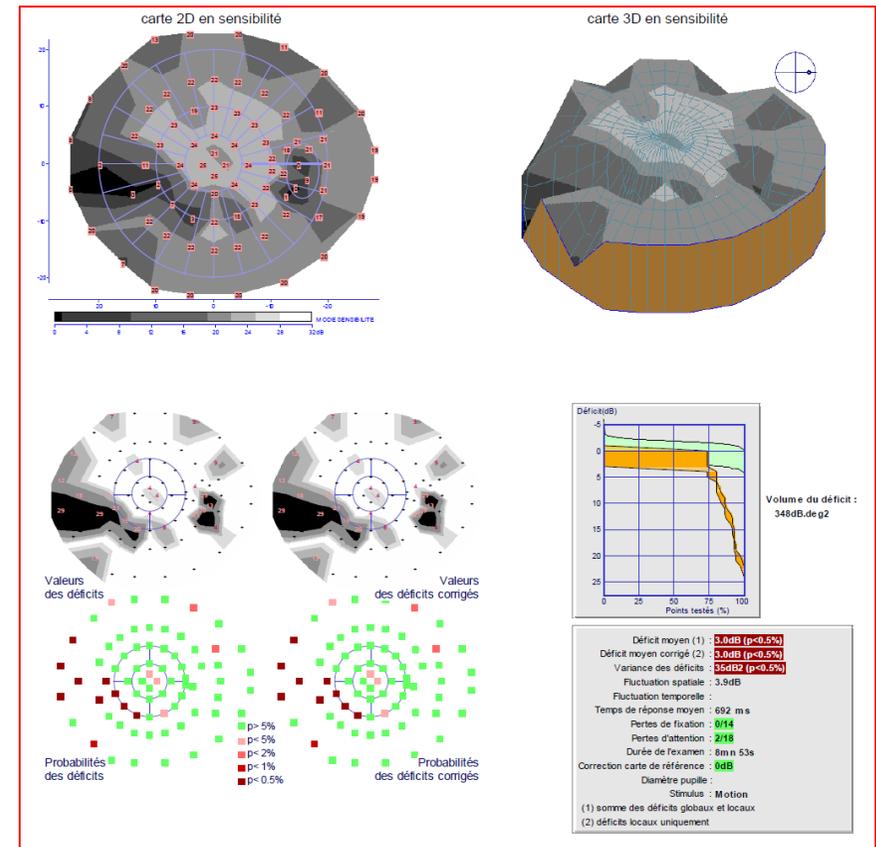
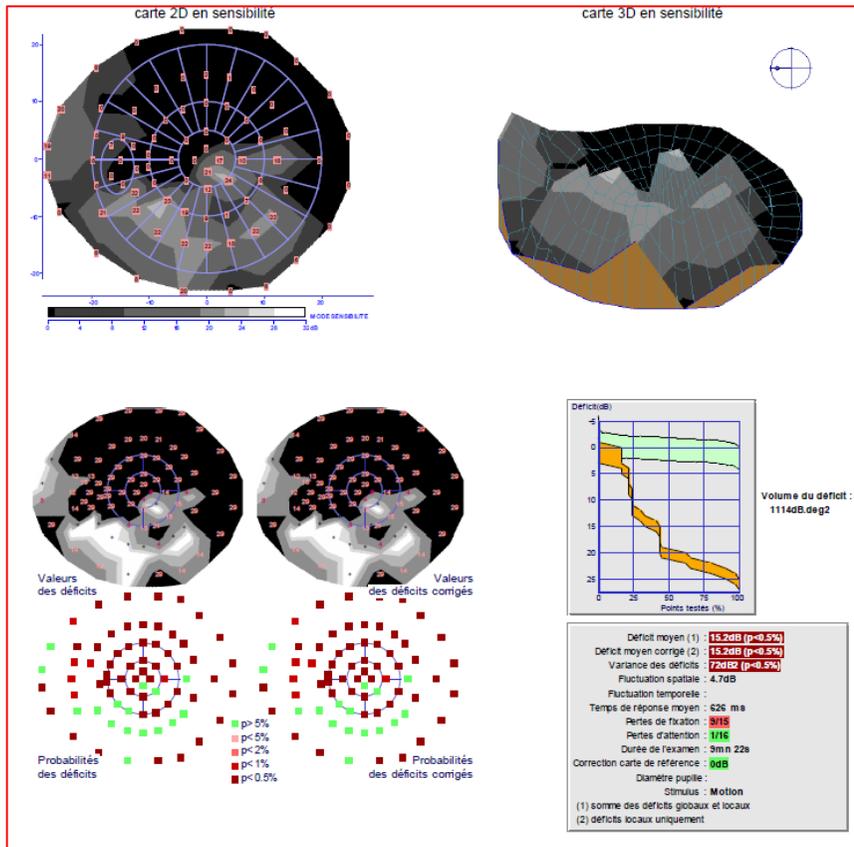
→ visual field is normal



# Motion perimetry

Patient with keratoconus and glaucoma

55 years old



# Conclusion

Motion perimetry comparison with standard perimetry

- it is less affected than by ocular media defects
- the patient's task is similar
- the interpretation of clinical results is similar

Thank you!

