#### How do the pathological changes relate to the clinical manifestations?



*Lid retraction*, the most common ocular sign, may result from excessive sympathetic activity of Müller's muscle in the hyperthyroid state as well as retraction of the levator muscle due to inflammation and subsequent fibrosis.

*Proptosis* results from the forward push of the globus and correlates more with the volume of orbital fat than with the degree of muscle enlargement (Nishida Y, 2002) Restriction of the forward displacement of the globus may increase the intraorbital excess pressure and favor compression of the optic nerve with the risk of ischaemia and optic neuropathy.

*Chemosis and periorbital edema* are signs of inflammation or may result mainly from decreased venous drainage within the orbit due to increased volume of intraorbital tissues (Campi et al., 2016)

*Restriction in eye ductions* appears to strongly parallel the degree of muscle hypertrophy and, at late stages, results from the fibrotic changes that affect extraocular muscles

## Treatment decisions should take into account the impact of TED on the individual patient's daily life



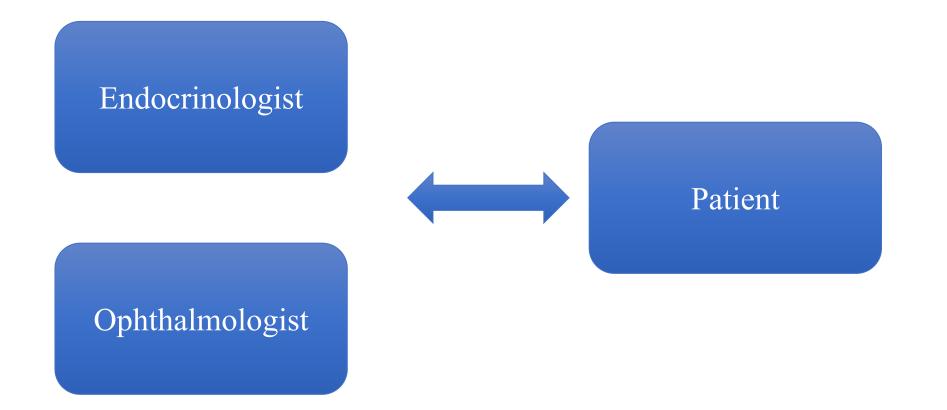
TV presenter desperately seeking treatment



Sheep farmer repeatedly declining treatment

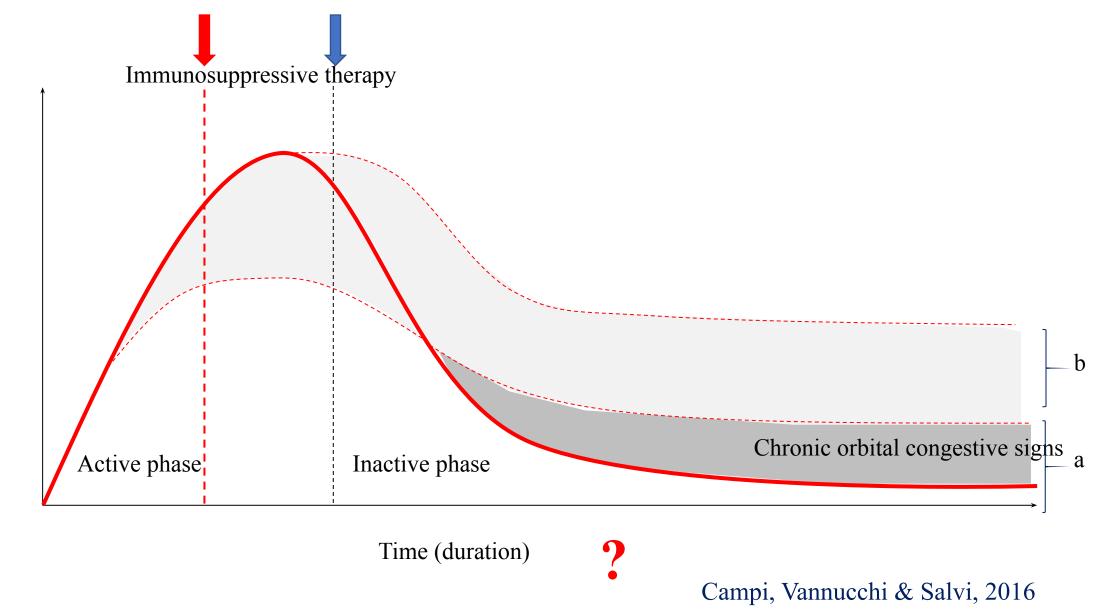
	following questions deal specifically with your thyroid se focus on the past week while answering these quest			
Dur	ing the past week, to what extent were you limited in our thyroid eye disease?		he following ac	tivities, because
Tick	the box that matches your answer. The boxes corres se tick only one box for each question.	pond with the	answers above	them.
	at and only one box for cach question.	Yes, seriously limited	Yes, a little limited	No not at all limited
1	Bicycling [never learned to ride a bike ]			
2	Driving [no driver's licence ]			
3	Moving around the house			
4	Walking outdoors			
5	Reading			
6	Watching TV			
7	Hobby or pastime, i.e			
		Yes, severely hindered	Yes a little hindered	No not at all hindered
5	During the past week, did you feel hindered from something that you wanted to do because of your thyroid eye disease?			
The	following questions deal with your thyroid eye disease	e <u>in general</u>		
		Yes, very much so	Yes, a little	No,not at all
1	Do you feel that your appearane has changed because of your thyroid eye disease?			
1	Do you feel that you are stared at in the streets because of your thyroid eye disease?			
(	Do you feel that people react unpleasantly because of your thyroid eye disease?			
	Do you feel that your thyroid eye diease has an influnce on your self-confidence?			
	Do you feel socially isolated because of your thyroid eye disease?			
	Do you feel that your thyroid eye disase has an influence on making friends?			
	Do you feel that you appear less often on photos than before you had thyroid eye disease?			
	Do you try to mask changes in appearance caused by your thyroid eye disease?			

# Shared decision-making



# It is now possible to <u>select and match the treatment</u> with the *MOST DOMINANT FEATURE* of the individual patient

### Therapy of TED: what affects efficacy?



Activity

Immunosuppressive therapy of moderate-severe TED: HEAT MAP

Drug (ref)	Composite outcome	Clinical activity score	Proptosis	Diplopia	Disease relapse (weeks)
<b>IVGC</b> (59, 60, 63, 102)	23-53%	45-83%	0-46%	0-19%	21-40% (week 12)
<b>MMF +</b> IVGC (60)	63%	80%	No change	No change	8% (week 12)-11% (week 24)
<b>RTX</b> (87)	8%	31%	No change	No change	15% (week 40)
<b>RTX</b> (59)	60%	100%	No change	No change	0% (week 40)
<b>TEP</b> (80)	74%	62%	77%	70%	29% (week 51)
<b>TCZ</b> (99)	73%	93%	27% <sup>b</sup>	7%	No data
<b>Placebo</b> (80, 87, 99)	10-22%	22-59%	No change	No change	0 (week 12)- 8% (week 51)

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### Neuropatia ottica



