



# Università degli Studi di Palermo Scuola di Medicina e Chirurgia

Dipartimento di Biomedicina Sperimentale  
e Neuroscienze Cliniche

Sezione di Oftalmologia

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## **Aflibercept vs Ranibizumab nella w-AMD** **Risultati dopo switching** ***Analisi morfofunzionale***

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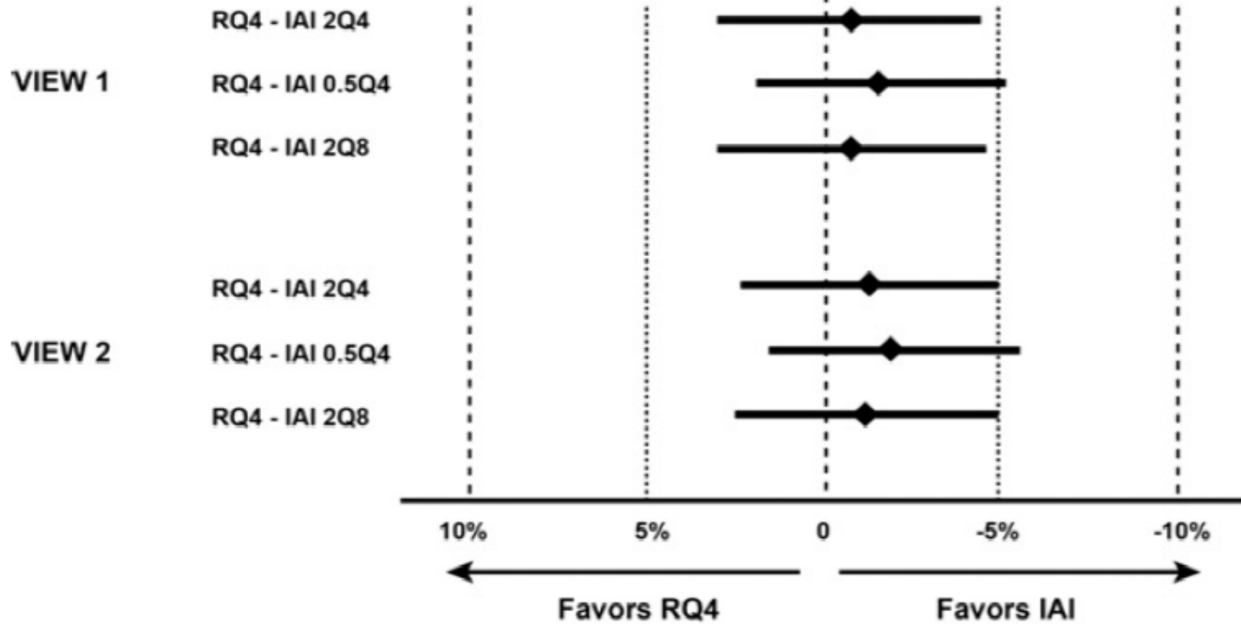
*V. Sunseri Trapani, S. Cillino*



# Intravitreal Aflibercept (VEGF Trap-Eye) in Wet Age-related Macular Degeneration

Jeffrey S. Heier, MD,<sup>1</sup> David M. Brown, MD,<sup>2</sup> Victor Chong, MD,<sup>3</sup> Jean-Francois Korobelnik, MD,<sup>4</sup> Peter K. Kaiser, MD,<sup>5</sup> Quan Dong Nguyen, MD,<sup>6</sup> Bernd Kirchhof, MD,<sup>7</sup> Allen Ho, MD,<sup>8</sup> Yuichiro Ogura, MD,<sup>9</sup> George D. Yancopoulos, MD, PhD,<sup>10</sup> Neil Stahl, MD,<sup>10</sup> Robert Vitti, MD,<sup>10</sup> Alyson J. Berliner, MD, PhD,<sup>10</sup> Yuhwen Soo, PhD,<sup>10</sup> Majid Anderesi, MD,<sup>11</sup> Georg Groetzlach, MD,<sup>11</sup> Bernd Sommerauer, PhD,<sup>11</sup> Rupert Sandbrink, MD, PhD,<sup>11,12</sup> Christian Simader, MD,<sup>13</sup> Ursula Schmidt-Erfurth, MD,<sup>13</sup> for the VIEW 1 and VIEW 2 Study Groups\*

*Ophthalmology* 2012;119:2537-2548



(VEGF Trap-Eye: Investigation of Efficacy and Safety in Wet AMD [VIEW 1, VIEW 2])

Eyes with recalcitrant exudative AMD are a substantial clinical burden, representing approximately a quarter to one-third of all *new* wet AMD eyes.

*Wykoff CC, et al. Br J Ophthalmol 2014*

# Efficacia di aflibercept nei non/sub responder

QUANDO lo switch farmacologico?



Ripetuti trattamenti con anti-VEGF

- riduzione efficacia
- scomparsa di efficacia

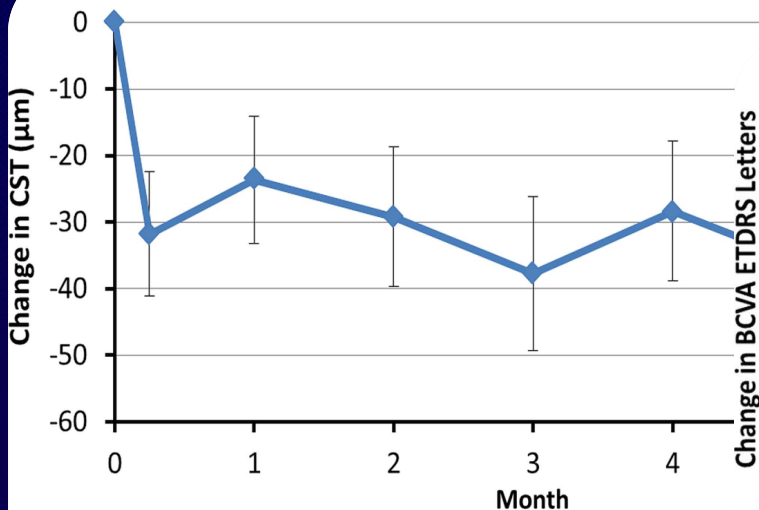
# Aflibercept treatment for patients with exudative age-related macular degeneration who were incomplete responders to multiple ranibizumab injections (TURF trial)

Charles C Wykoff, David M Brown, Maria E Maldonado, Daniel E Croft

Br J Ophthalmol 2014

Recalcitrant wet AMD treated with 2.0 mg ranibizumab

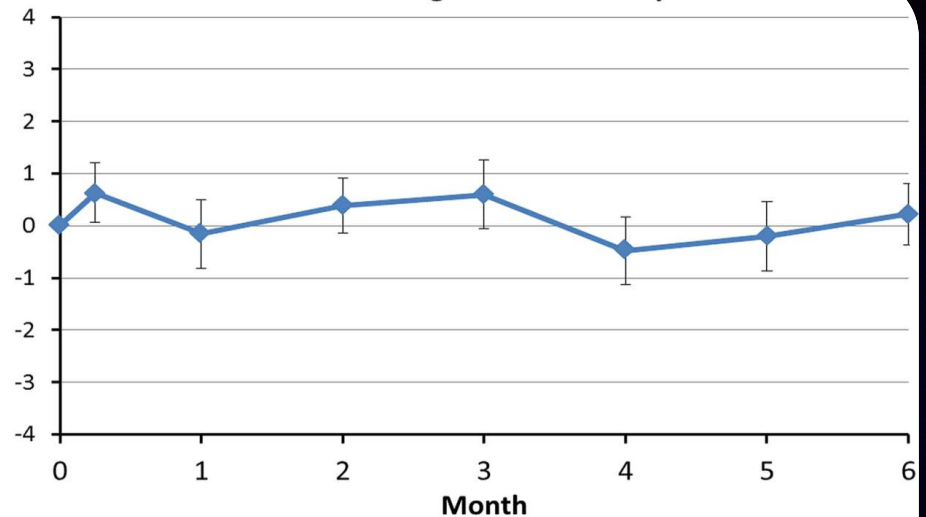
Mean Change in Central Subfield Thickness



Mean (±SE) Change in Central Subfield Thickness from Baseline

Month 1	Month 3	Month 6
-24 ± 10	-38 ± 12	-27 ± 11
n=46	n=45	n=45

Mean Change in Visual Acuity



Mean (±SE) Change in Best Corrected Visual Acuity from Baseline (no. ETDRS Letters)

Month 1	Month 3	Month 6
-0.15 ± 0.7	0.6 ± 0.7	0.2 ± 0.6
n=46	n=45	n=45



# Short-term outcomes of switching anti-VEGF agents in eyes with treatment-resistant wet AMD

Figen Batioglu, Sibel Demirel\*, Emin Özmert, Ahmet Abdullayev and Serdar Bilici

Batioglu *et al. BMC Ophthalmology* (2015)

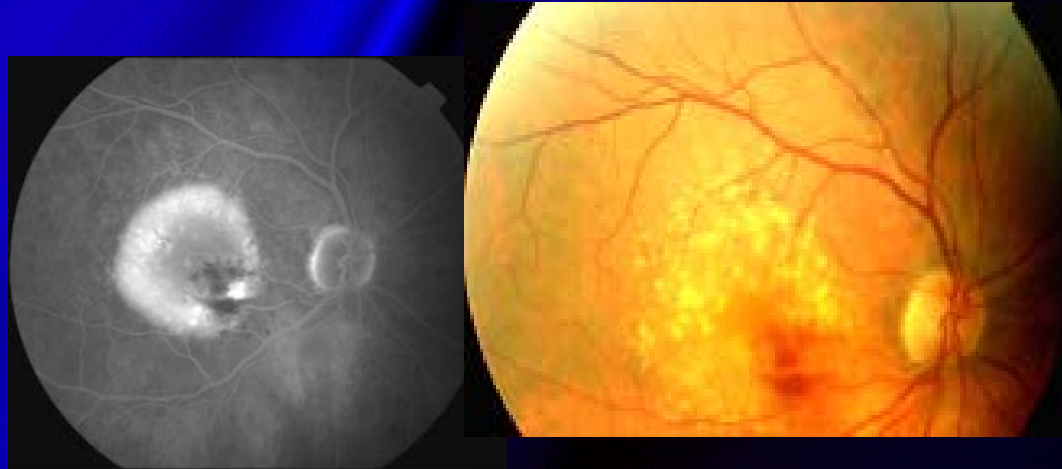
**Table 3 Summary of the similar studies on aflibercept treatment in resistant AMD cases**

Study group	No of eyes	Mean age	No of previous injections	No of Afl injections	Mean follow-up time (month)	Visual acuity (LogMAR)		CMT (micron)	
						Before Afl	After Afl	Before Afl	After Afl
Cho et al. <sup>1</sup>	28	80,68 (62-95)	20,2±7,6 (7-37)	4,4 (3-6)	171 (134-192) days	0,52	0,57	295	274
Bakall et al. <sup>2</sup>	36	79 (60-88)	25,6±(6-74)	5,2 (4-6)	6	0,45	0,50	410 (174-1027)	296 (151-528)
Ho et al. <sup>3</sup>	96	79 (62-91)	17 (1-60)	2,6 (2-4)	114 (90-133) days	20/50 (snellen)	0,02 (LogMAR)	276 (130-559)	258 (198-242)
Yonekawa et al. <sup>4</sup>	102	79,6 (57-93)	20,4 (3-65)	3,8 (1-8)	18,4 weeks	0,42	0,38	305,07	276,20
Kumar et al. <sup>5</sup>	34	79 (72-84)	28,6 (10-47)	5,3 (5-6)	6,5 (6-6,6)	0,57	0,47	416±217	348±171
Hall et al. <sup>6</sup>	30	80,4 (-)	14,9 (2-53)	6,27 (4-11)	10,4 (3-12)	0,533*	0,521*	264±12,5*	237±10,2*
Heussen et al. <sup>7</sup>	71	77 (43-95)	9 (3-43)	2,7 (1-4)	-	0,56 <sup>+</sup>	0,43 <sup>+</sup>	350.8±115 <sup>+</sup>	260.8±34 <sup>+</sup>

# Dati personali

## Studio retrospettivo su switching

- 24 pazienti affetti da w-AMD
- Durata media trattamento pre-switch 41 mesi
- Numero medio IVT ranibizumab 14,3
- Mesi di trattam. Aflibercept 5,17 mesi
- Numero medio IVT aflibercept 4,8

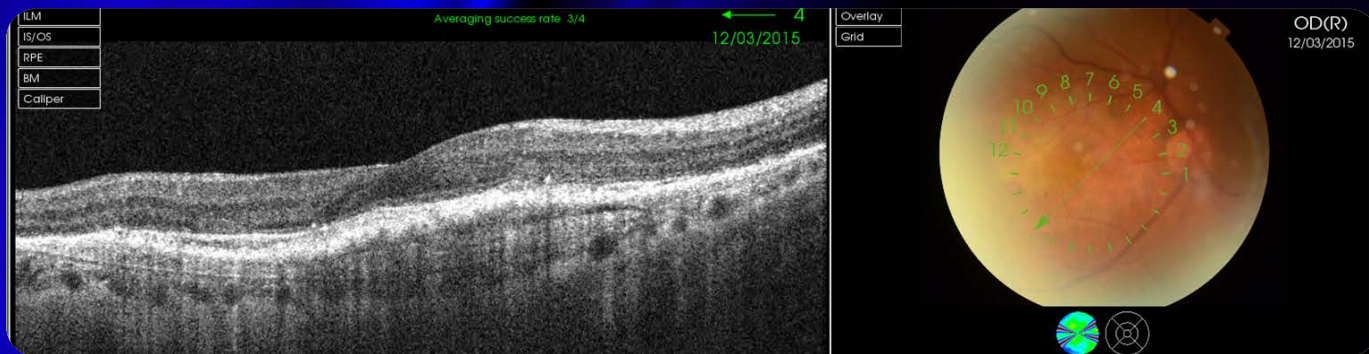


Donna 64 aa, 24 mesi pre-switching  
14 ranibizumab → 4 aflibercept

CDVA: 0.63  
CRT: 389 $\mu$



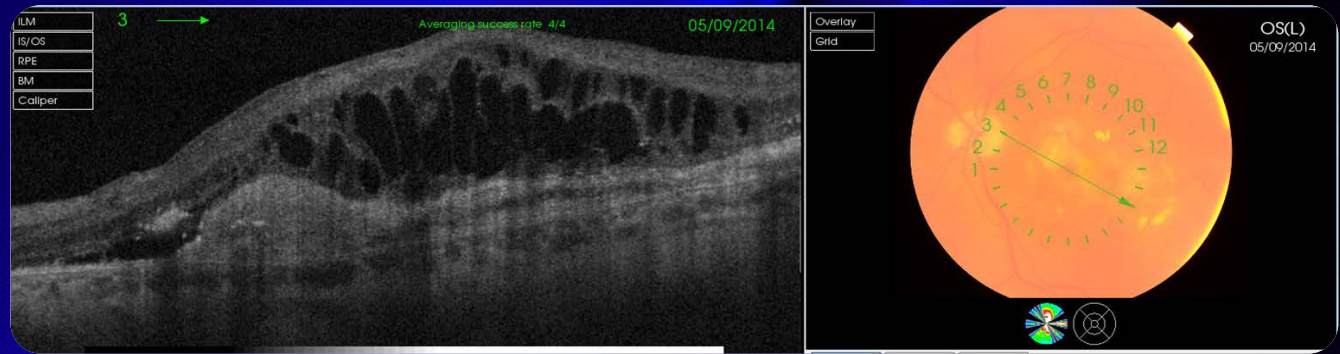
CDVA: 0.5  
CRT: 235 $\mu$





Uomo 78aa, 56 mesi pre-switch  
24 ranibizumab → 5 aflibercept

CDVA:  
0.02  
CRT: 348 $\mu$

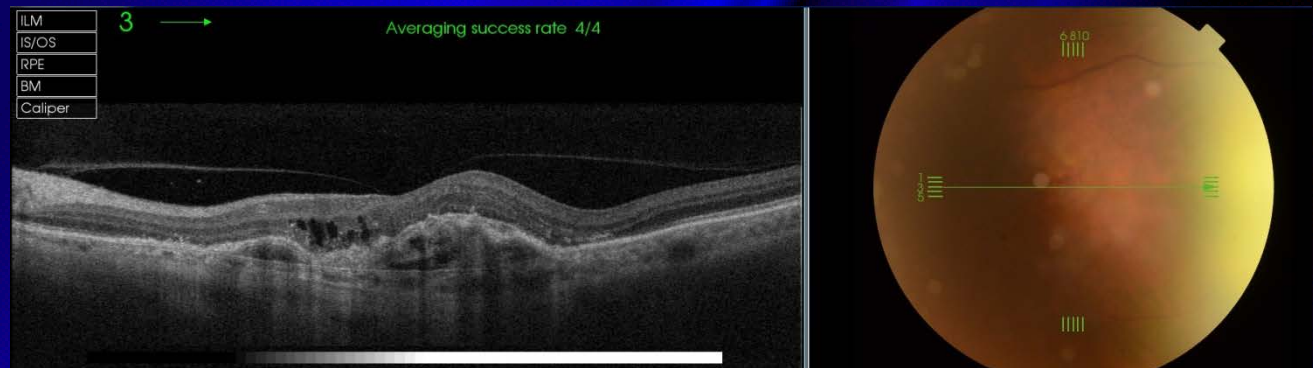


CDVA:  
0.16  
CRT: 100 $\mu$

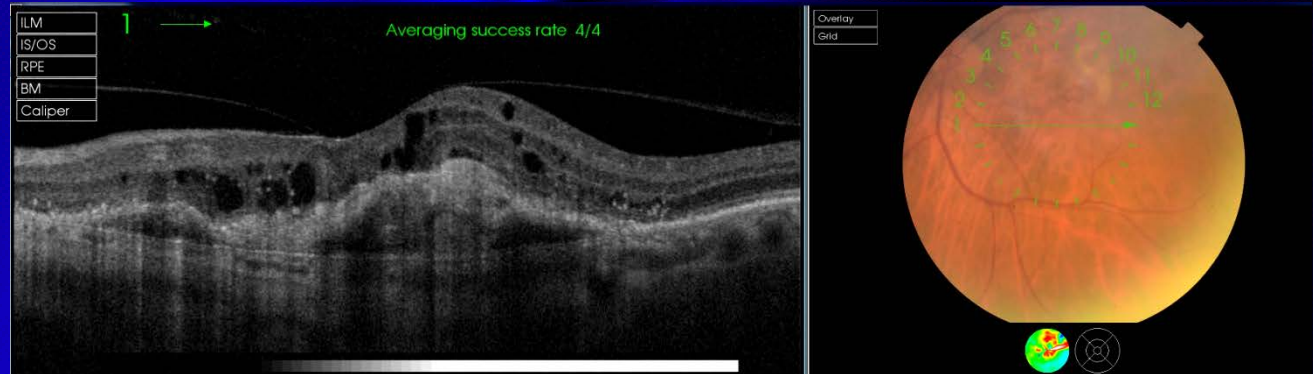


Uomo 65aa, 26 mesi pre-switch  
15 ranibizumab → 5 aflibercept

CDVA: 0.3  
CRT: 283 $\mu$



CDVA: 0.1  
CRT: 327 $\mu$

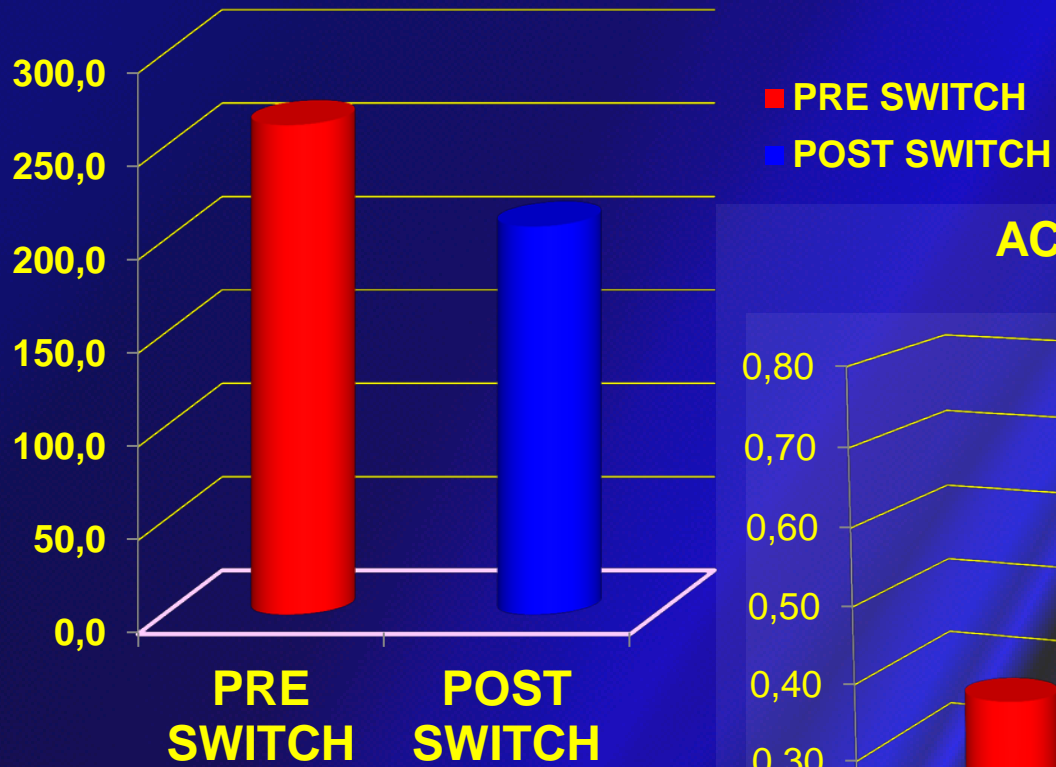


## Statistiche descrittive e risultati gruppo switching

	CST $\mu$ pre-switch	CST $\mu$ end point	CDVA* pre-switch	CDVA* end point
Media	262.00	207.75	0.37	0.39
D.S.	70,77	59.83	0.18	0.20

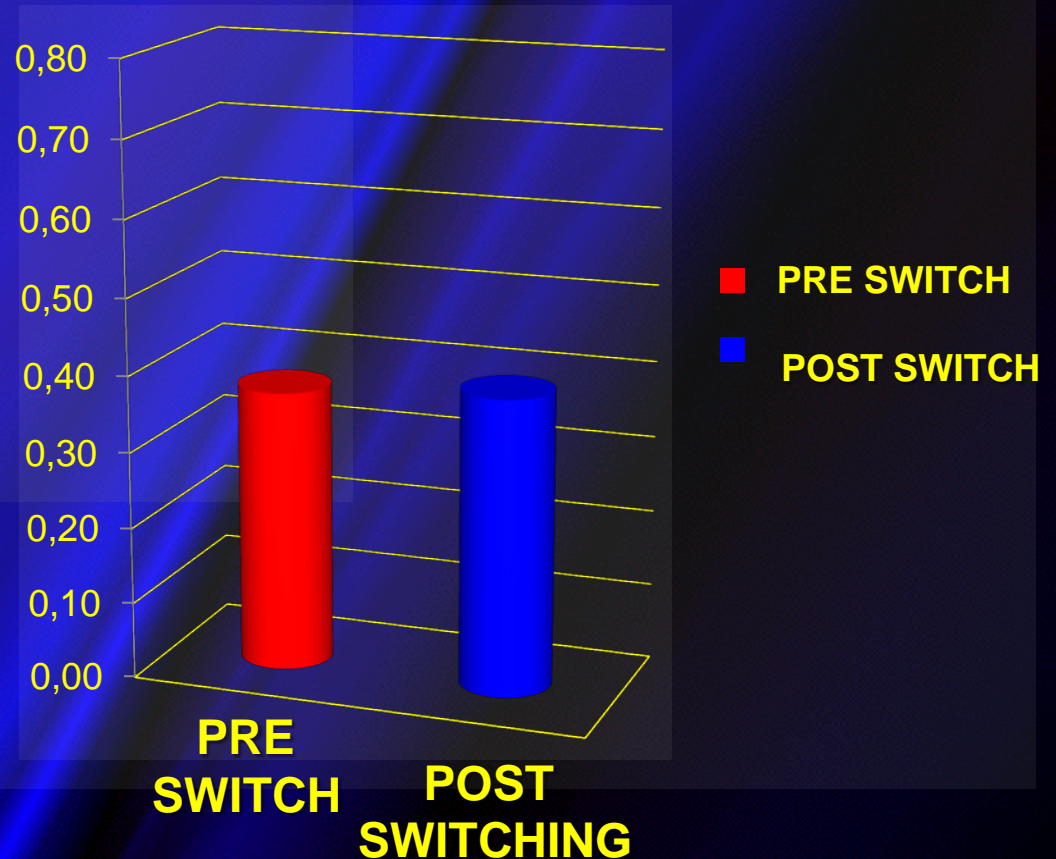
\*NB per semplificare CDVA trasformata in decimali

## SPESSORE CENTRALE (MEDIA)



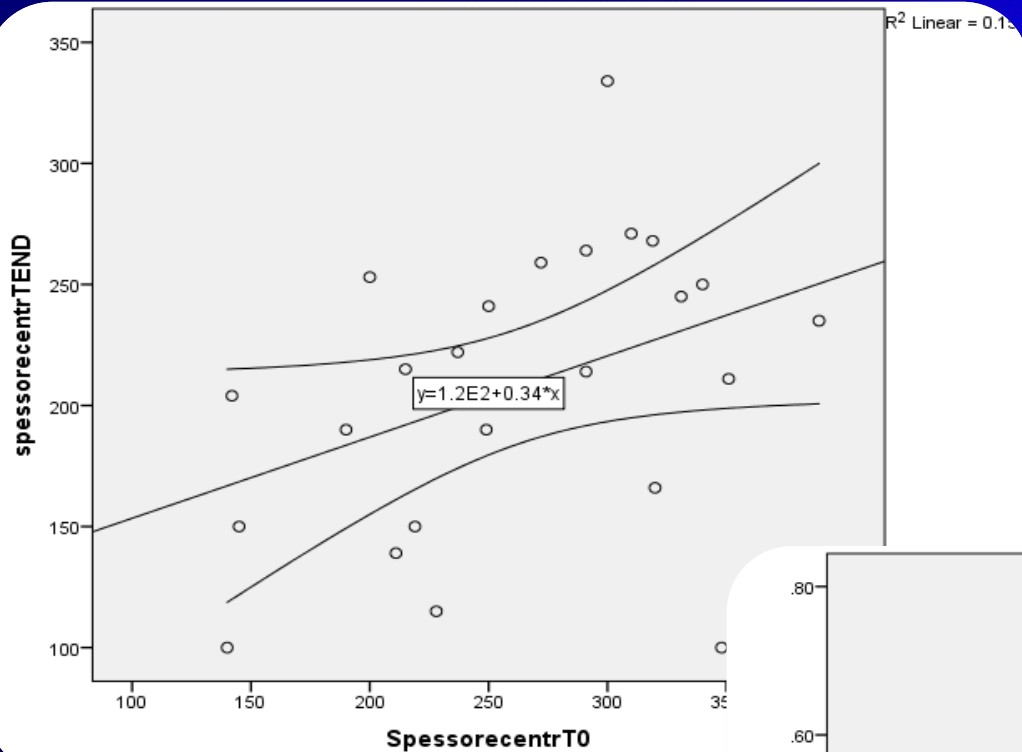
$P = 0,001$

## ACUITA' VISIVA MEDIA

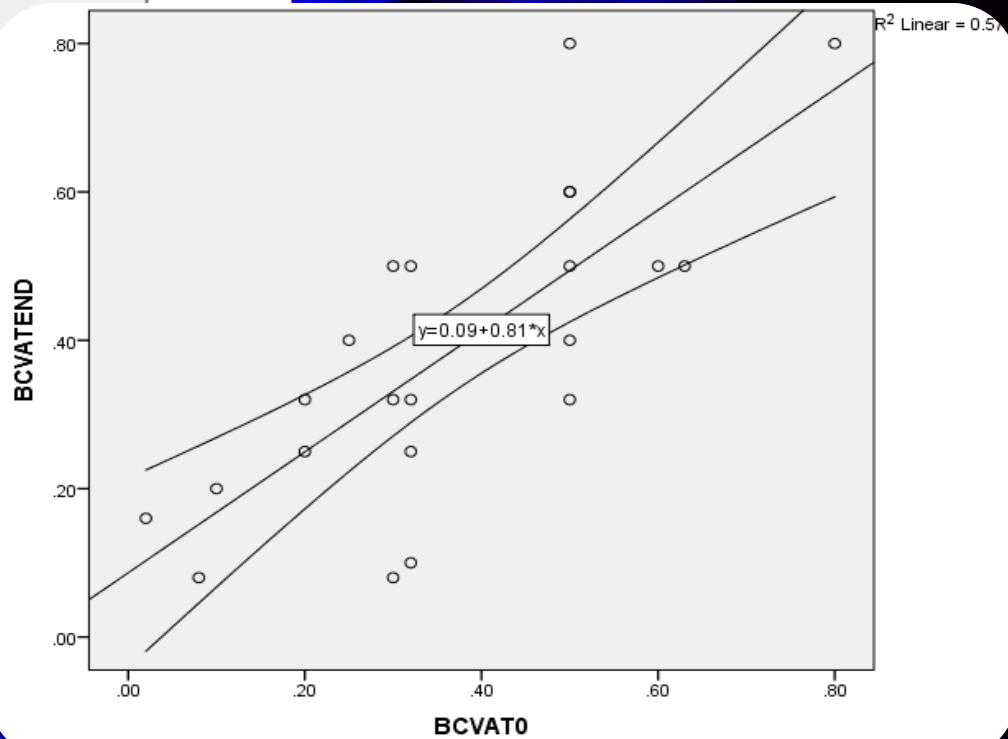


$P = 0,556$





ANALISI DI CORRELAZIONE  
TRA CST pre switch  
e CST end point



ANALISI DI CORRELAZIONE  
TRA CDVA pre switch  
e CDVA end point

# CONCLUSIONI

## *Efficacia Aflibercept dopo Switching*

Anche L'Analisi di Regressione Lineare Multipla aggiustata per:

- N° di IVT precedenti di Ranibizumab,
- T pre-switching, N° di IVT di Aflibercept,
- e T di trattamento post-switching conferma sia il **valore predittivo** di CDVA che **l'assenza di valore predittivo** di CST.



*GRAZIE*