

Macular Laser for DME

Nearly **DEAD**

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Points to Debate

1. Rationale on visual improvement :

1. Effect on VA
2. Reduction of Injection numbers

2. When and how :

Includes: Focal leakage vs Diffuse leakage

3. Side effects and future advances:

includes : Micropulse Laser Use

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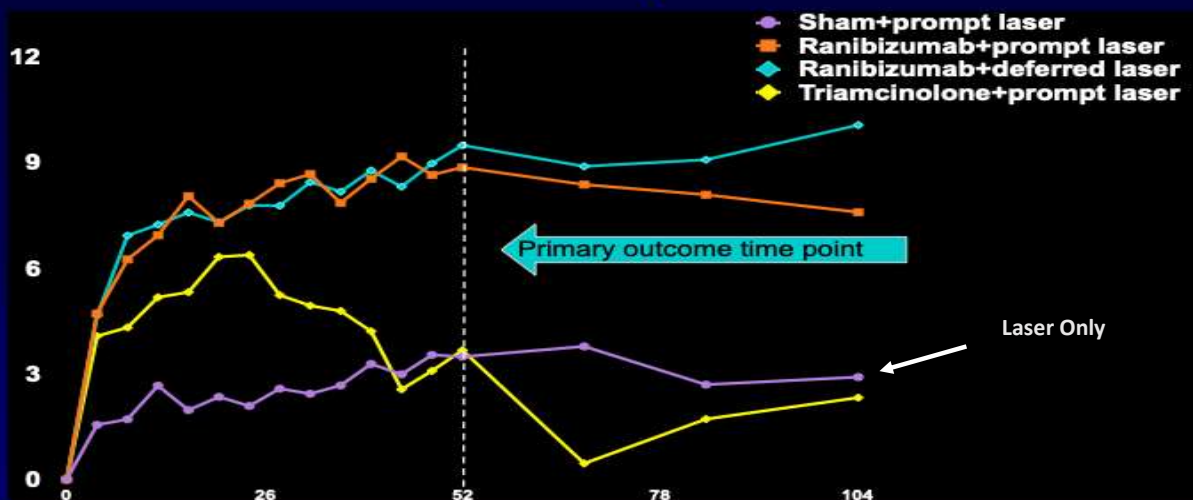
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Mean Change in Visual Acuity* at Follow-up Visits

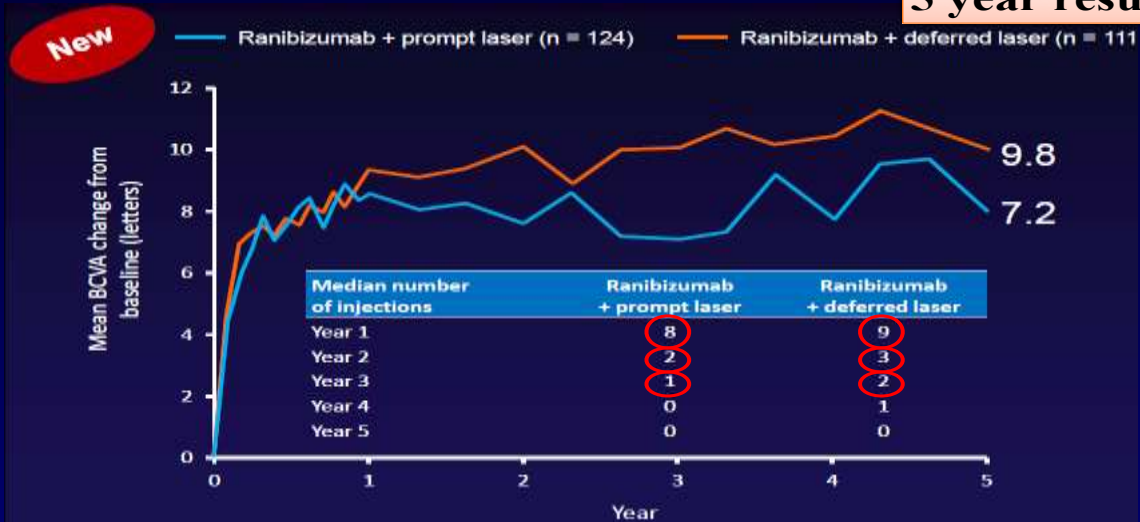


* Values that were ± 30 letters were assigned a value of 30
 P-values for difference in mean change in visual acuity from sham+prompt laser at the 52-week visit:
 ranibizumab+prompt laser <0.001; ranibizumab+deferred laser <0.001; and triamcinolone+prompt laser=0.31.

X

Change in VA from baseline

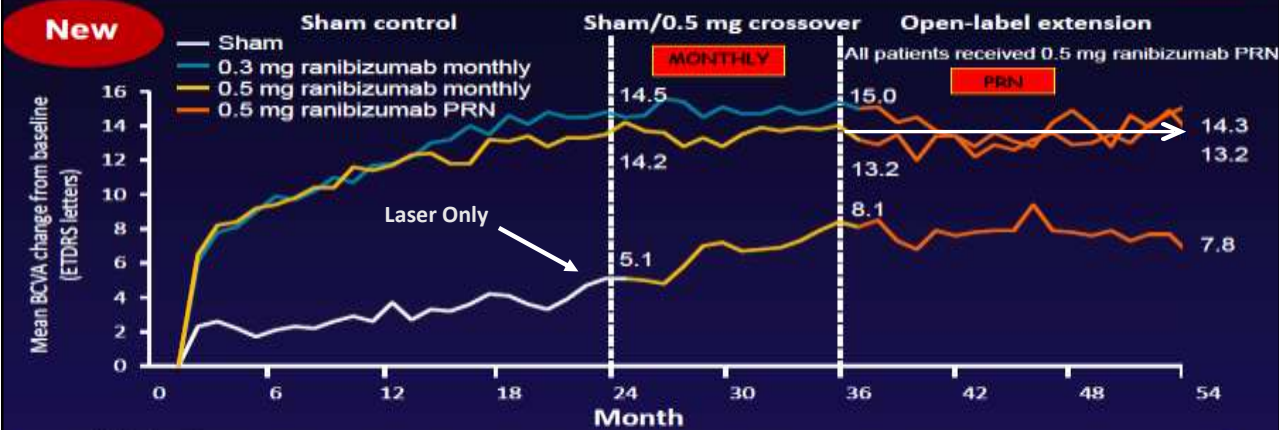
5 year results



5-year data demonstrate sustained response with ranibizumab PRN with marked reduction in injection requirements over time

RISE/RIDE extension: long-term data demonstrate need for early treatment to optimize VA gains

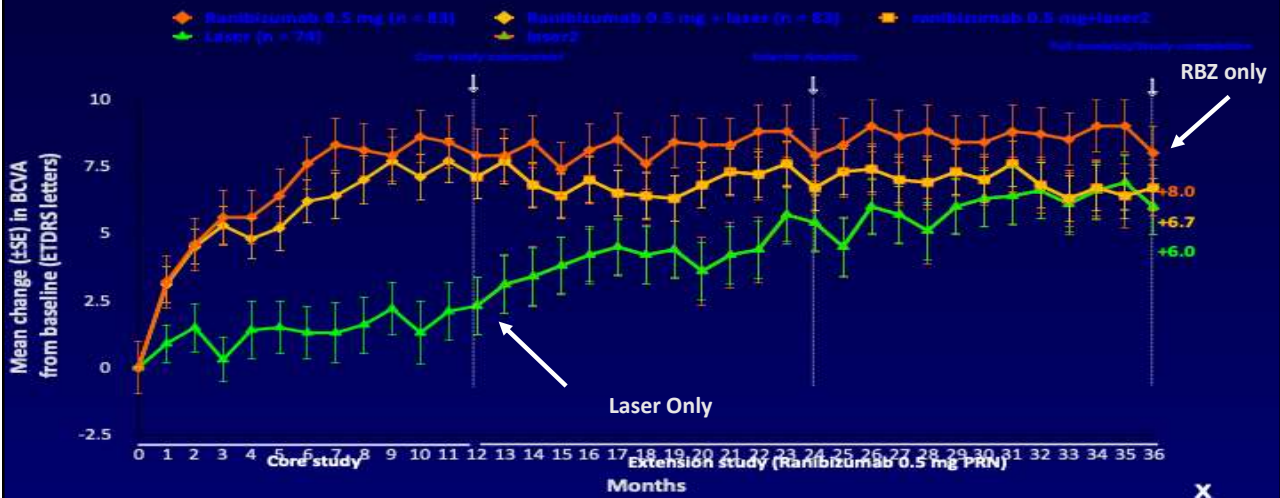
Open label RISE & RIDE



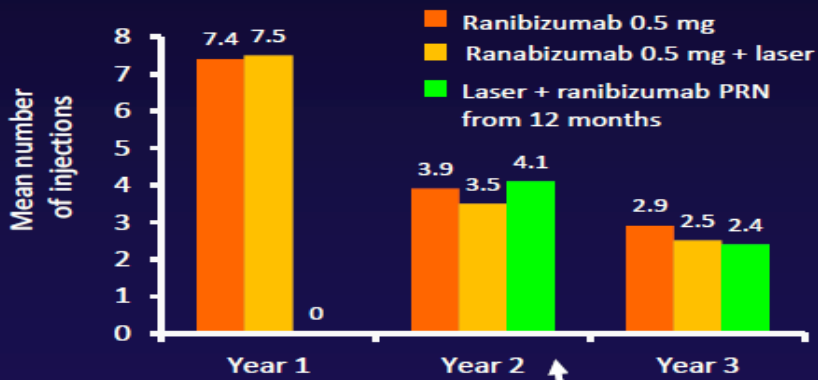
Mean BCVA achieved and maintained with ranibizumab PRN treatment up to 54 months with average 3.8 injections

Mean change in BCVA and CRT

3 year results



Reduced need for injections

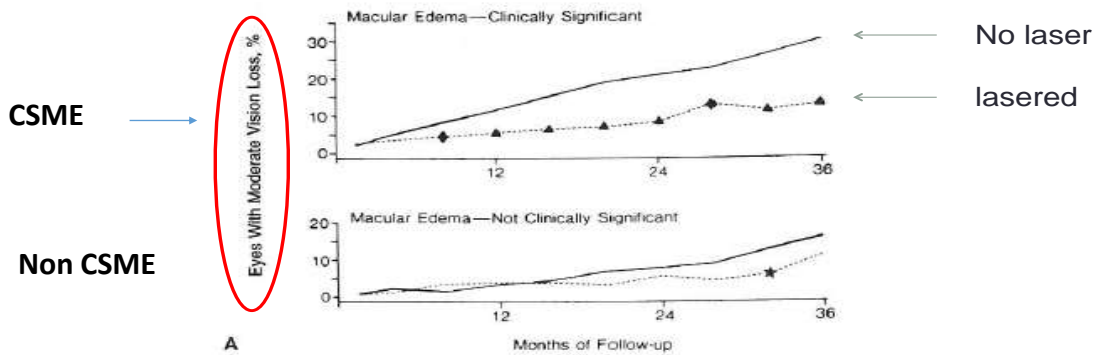


Laser at first then + ranibizumab PRN from 12 months

19% to 25% of patients did not require any ranibizumab injections during the extension study.

Effect on VA : Compared to **No** Treatment

- Laser is Better than **No** Treatment



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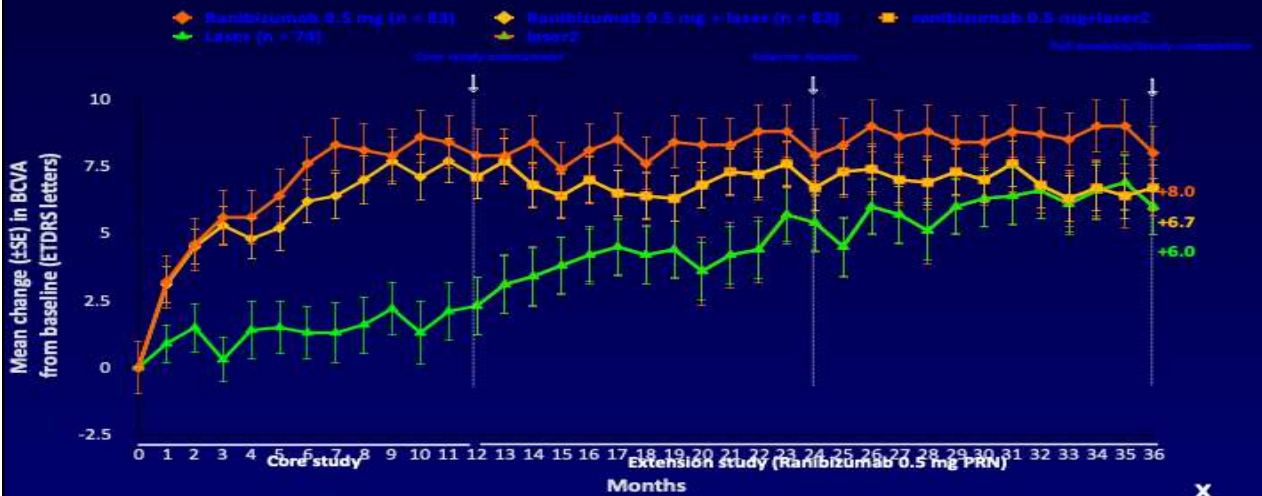
When ??

- **Not** Determined in All studies
- Left for investigator's **discretion** : At will
- In all Studies,
NOT to be Done if the patient is **improving** in Vision and Anatomy (during an injection protocol)

FOCAL vs DIFFUSE DME

Mean change in BCVA and CRT

3 year results

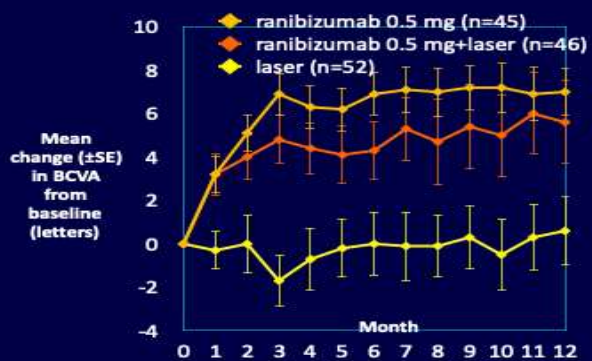
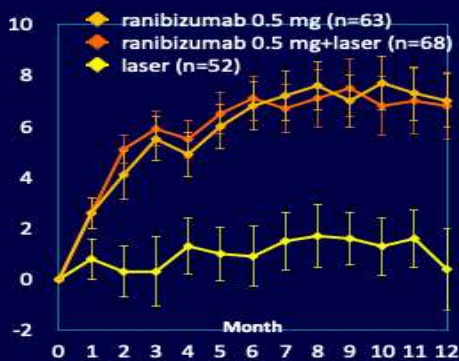


Mean change in BCVA from baseline to Month 12 by baseline DME type

RESTORE Extension

FOCAL

DIFFUSE

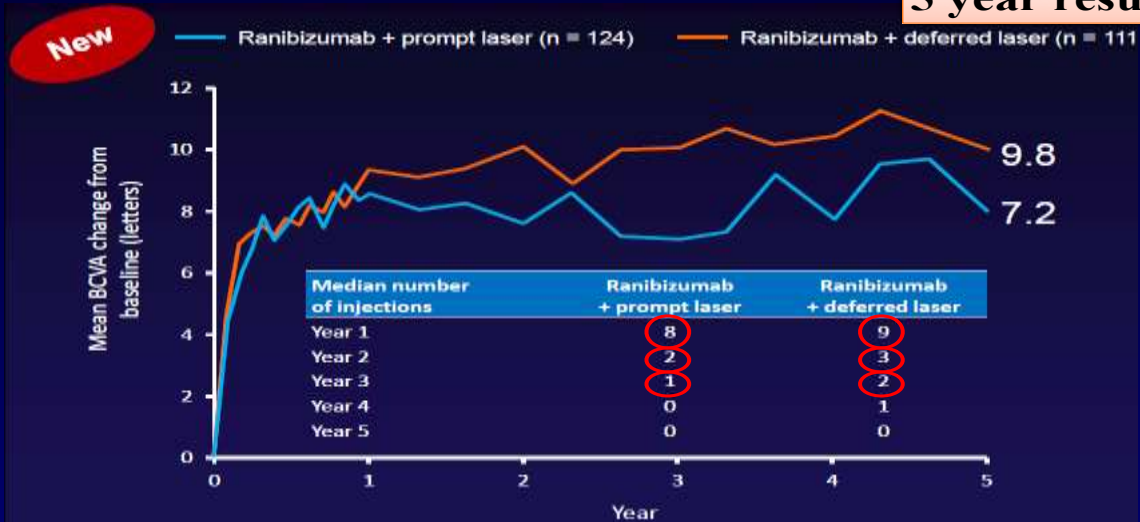


Full analysis set/LOCF
BCVA: best-corrected visual acuity; VA: visual acuity; LOCF: last observation carried forward

Mitchell P et al. Ophthalmology 2011;118:615-625

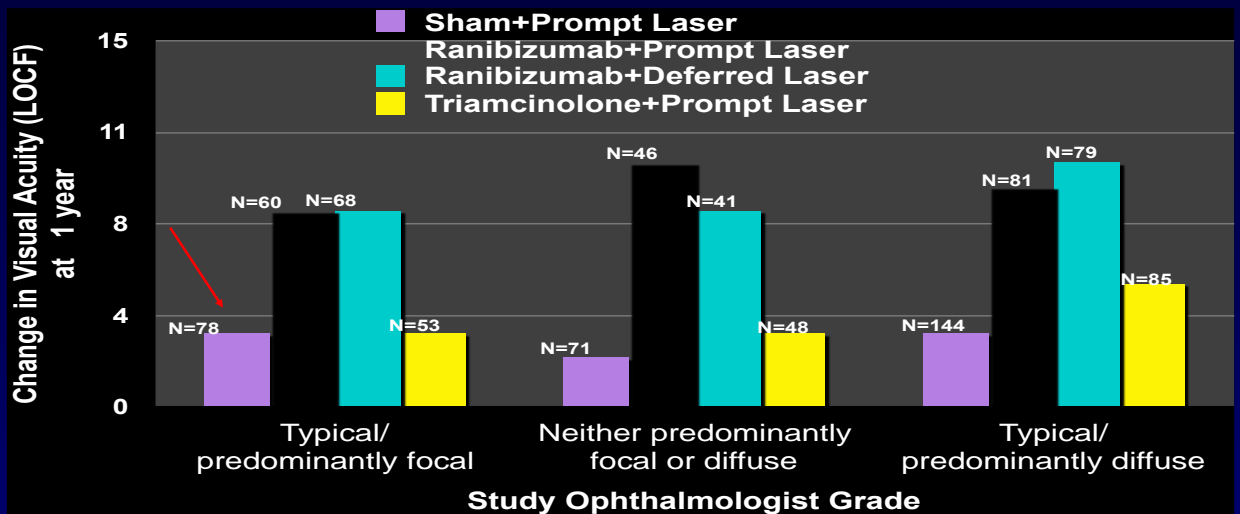
Change in VA from baseline

5 year results




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Change in Visual Acuity (LOCF) at 1 Year Stratified by Eyes with Diffuse vs. Focal Edema at Baseline as Graded by Study Ophthalmologist



Laser Treatments Prior to 1 Year

	Sham +Prompt Laser	Ranibizumab +Prompt Laser	Ranibizumab +Deferred Laser* (permitted starting at 24-week visit)	Triamcinolone +Prompt Laser
Median number of focal/grid laser treatments from baseline to (prior to) 1-year visit	3	2	0 	2

Which Patient ?

- Definitely **after** Treating with **Anti VEGF injections** (not First Line)
- Only when you are helpless:
 - No **Available** Anti VEGF
 - No **Response** to Anti VEGF
 - This is increasingly **less common** (new Drugs & pathways)

How ??

- This is why it is **Dying**
- Teaching Laser for the Macula is nearly **impossible**
- The possibility of **Damage** by laser burns is high in Beginners Hands
- No Standard way of Performing LASER
 - No **2 Retina specialists** can do the **same** macular Laser (Site , Power)

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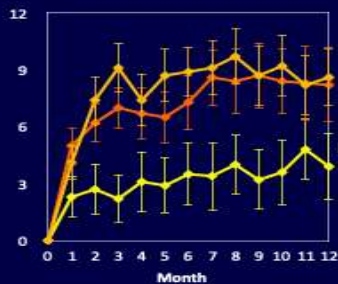
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RESTORE Extension Mean change in BCVA from baseline to Month 12 by baseline BCVA

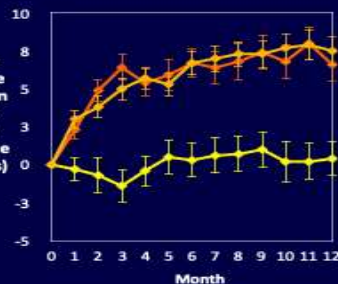
≤60 letters

- ◆ ranibizumab 0.5 mg (n=38)
- ◆ ranibizumab 0.5 mg+laser (n=44)
- ◆ laser (n=40)



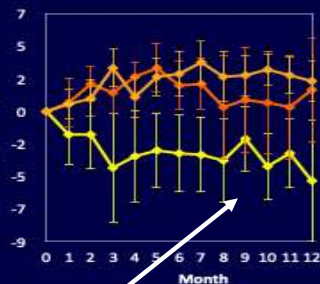
61-73 letters

- ◆ ranibizumab 0.5 mg (n=55)
- ◆ ranibizumab 0.5 mg+laser (n=55)
- ◆ laser (n=53)



>73 letters

- ◆ ranibizumab 0.5 mg (n=22)
- ◆ ranibizumab 0.5 mg+laser (n=19)
- ◆ laser (n=17)

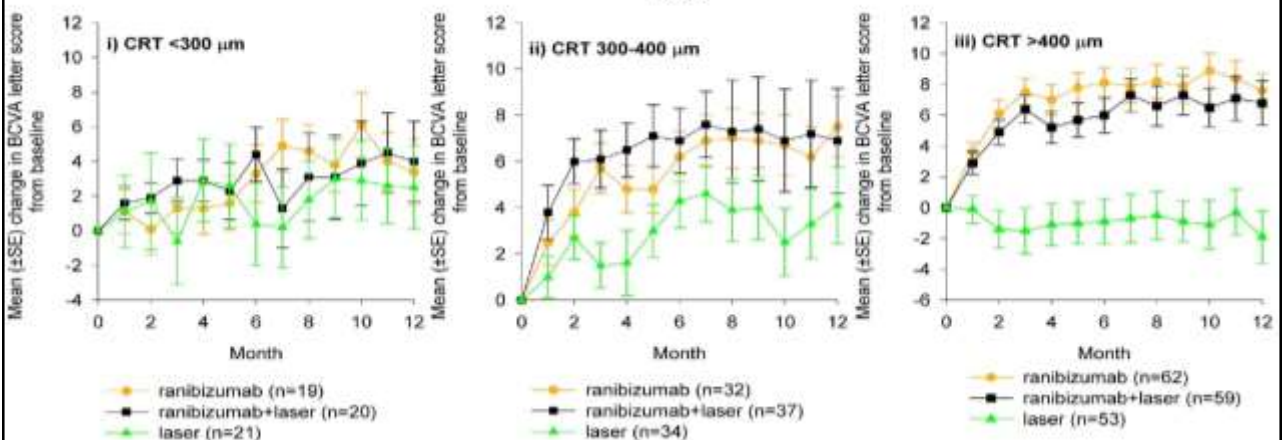


Laser Only

Full analysis set/LOCF
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RESTORE Extension Mean change in BCVA from baseline to Month 12 by baseline BCVA



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MicroPulse Laser

- Why Do we Think that **less** laser is better than more laser
 - Damage by Laser ? Proves that Argon Laser is damaging to Macula
- How do we do Laser when we can not see Effects on Retina
 - More difficult than difficult conventional Laser
 - How can we teach it to beginners (and Experts too)
 - No standard treatment

MicroPulse Laser

- **No study** is proving it will be better than **injections**
 - We should prove first that it is **better** than **conventional** laser (barely)
- If it was **Expensive** ,
 - nobody would have mentioned it now (after AntiVEGF proved results)
- It is the Last proof that conventional Laser is **Dead**
 - If you believe that you **need** micropulse Laser instead of it

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AOS 2019

See you in
AOS 2020
8-10 April

I Rest My Case

Macular Laser for DME

