Future Trends in Age-Related Macular Degeneration Management

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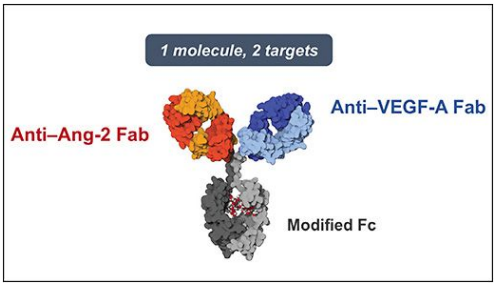
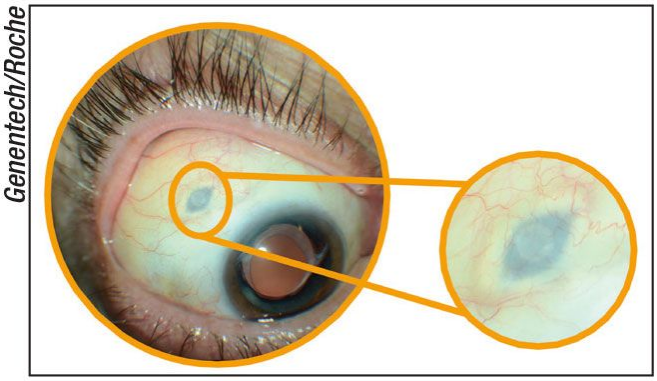


I. Emphasis on extended therapeutic delivery

A. Port Delivery System

1. continuously release ranibizumab over months
2. Archway Study (Phase 3)
   a) enrollment completed
   b) inserted in OR
   c) lasts about one year
   d) refilled about every 6 months
   e) equivalent to ranibizumab q months

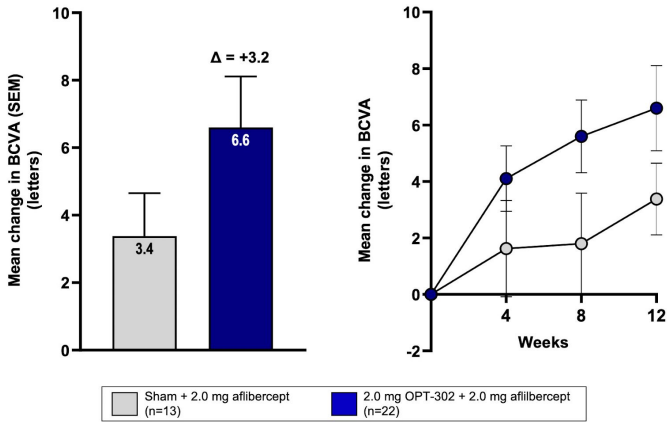


B. Faricimab

1. both AMD and DME potential
2. first to block both VEGF and Ang-2
3. Stairway study (Phase 2, June 2020)
   a) compared to ranibizumab q month for AMD
   b) 65% no activity week 24
   c) no difference between q 12 vs q 16 wk treatment
4. Tanaya and Lucerne (Phase 3 studies)
   a) currently underway
5. YOSEMITE and RHINE studies (Phase 3)
   a) compare aflibercept for DME

C. OPT-302

1. anti-VEGF C/D trap (Aflibercept: VEGF A,B; bevacizumab, ranibizumab VEGF A)



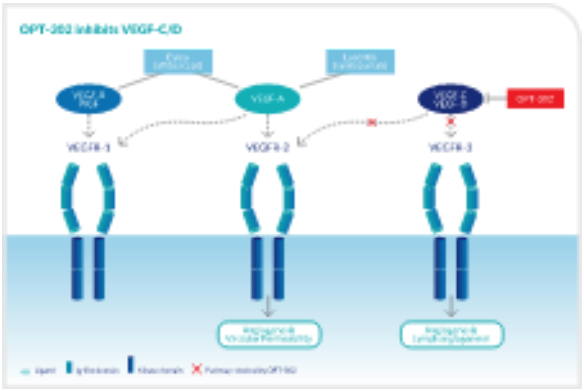
2. Phase 2a DME : combination with Aflibercept with Aflibercept alone

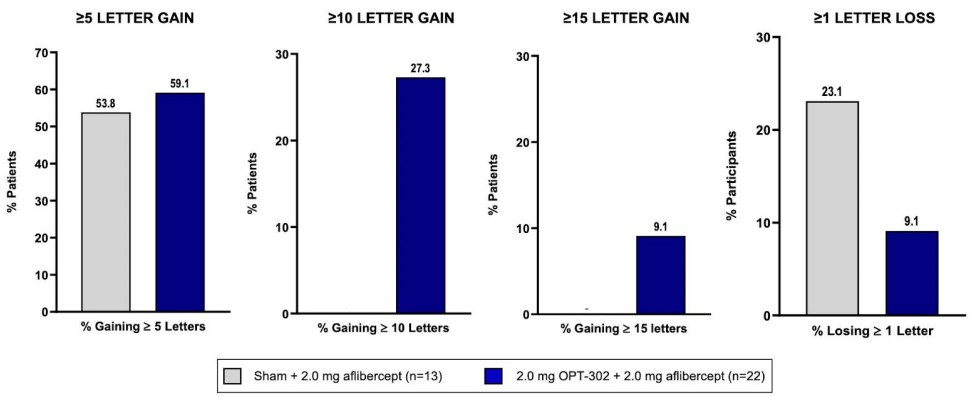
   a) mean change in BCVA at week 12:

      (1) 5.9 letters for OPT-302 combination therapy vs 6.1 letters Aflibercept

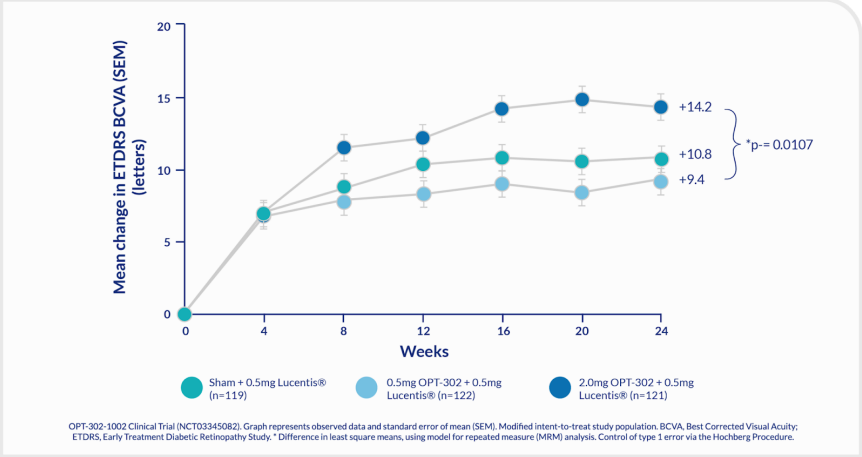
      (2) 52% OPT-302 combination vs 60% of patients in the Aflibercept control group gained ≥5 letters

      (3) a higher proportion of patients gained ≥10 (26.7% vs 22.5%) and ≥15 letters (12% vs 7.5%) following OPT-302 combination treatment compared to Aflibercept alone





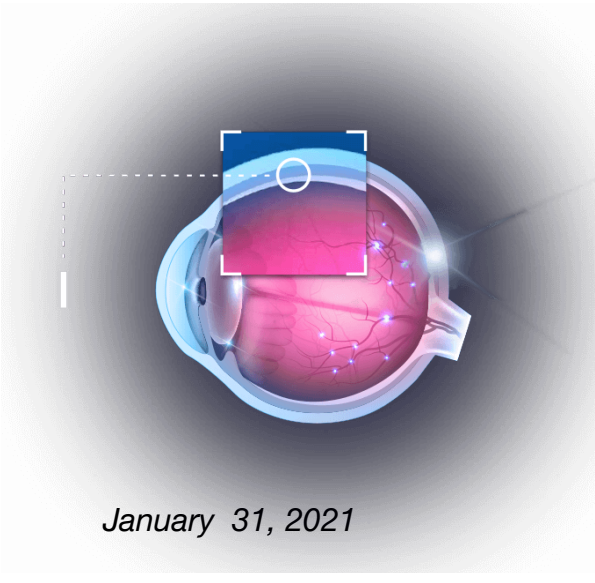
3. Phase 2b wet AMD: combination with ranibizumab vs ranibizumab alone



a) combination therapy increased visual acuity by a further +4.8 letters over ranibizumab monotherapy alone (p=0.0107)

D. RGX-314

1. one time subretinal/suprachoroidal injection with gene encoding for anti-VEGF
2. potential for DME, AMD, BRVO treatments
3. Phase II trial wet AMD: AAVIATE trial
   a) In office delivery using a suprachoroidal microscopic injector (Sept 2020)



(1) previously developed for steroid delivery

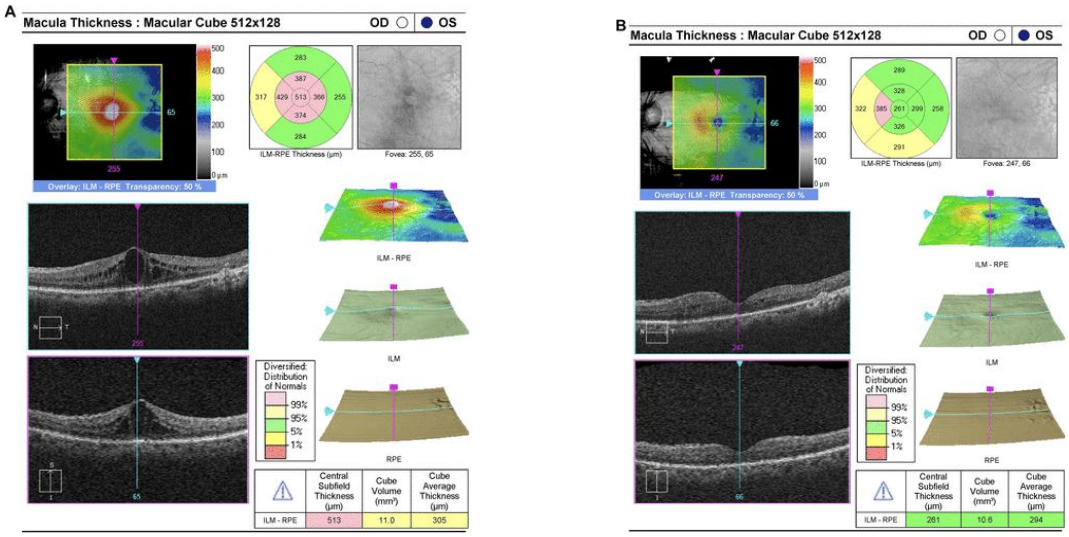
b) subretinal delivery study pending

A. ADVM-022

1. single intravitreal injection gene therapy (AAV.7m8-aflibercept) for exudative AMD and DME
2. ADVM-022 utilizes a propriety vector capsid, AAV.7m8, carrying an aflibercept coding sequence
3. OPTIC Phase 1: AMD
4. OPTIC Phase 2: DME

E. Centrifuge concentrated triamcinolone acetonide (triamcinolone acetonide)

1. long term steroid delivery at a low cost, approx $29/2 years therapy
2. 10.76 months/injection



a) Central foveal thickness as shown on decreased by 173.89µ (SD = 147.56µ), from 459.16µ (SD = 47.14µ) to 285.27µ (SD = 77.27µ; t = –25.31, P < .001).

b) Visual acuity improved from 20/100 (logMAR 0.70, SD = 0.33) to 20/74 (logMAR 0.57, SD = 0.31; SD = 0.21; t = –11.01, P < .001)

c) Fifteen of 31 phakic eyes (48.39%) underwent cataract extraction

d) 57 eyes (39.86%) developed a steroid response (> 10 mm Hg increase from baseline) 94.79 days (SD = 85.52 days), or 3.11 (SD = 2.81) months, following injection

II. What is Hybrid Tele Retina?

1. includes 2 visits:

a) in-office, undilated examination and testing with technician only

b) followed by virtual doctor (same day or within one week)

1. "Teletech" and "Telehealth" schedule

a) include "checkout" and "follow-up complete" column

b) 10-15 min apart

2. Doctor: use 2 monitors

(1) access to records and imaging

(2) EMR

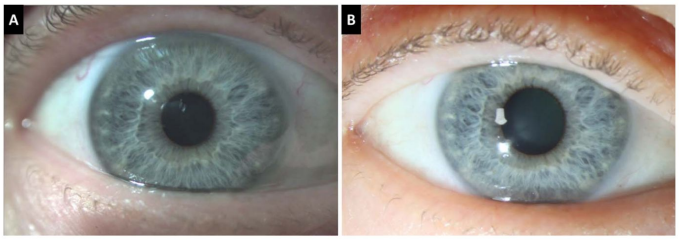
(3) Virtual Private Networks

(4) patient interaction

(a) staff member in-office acts as "go to" person for inevitable glitches

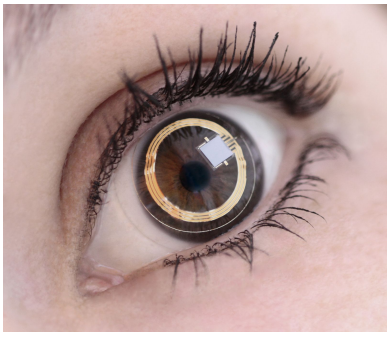
A. The Future

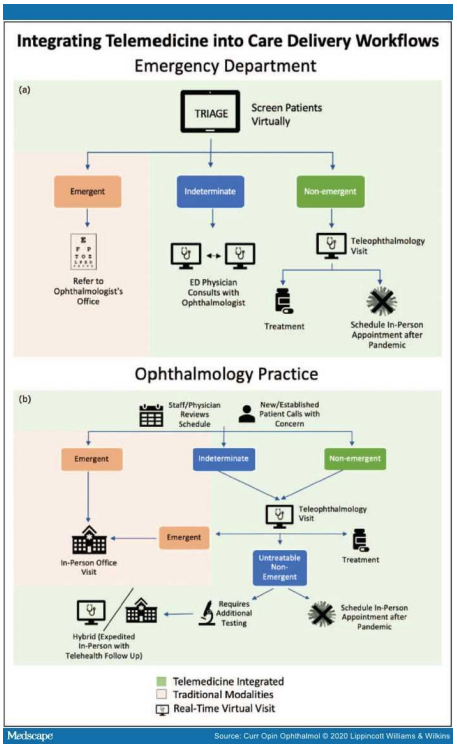
1. greater incorporation into ED evaluations



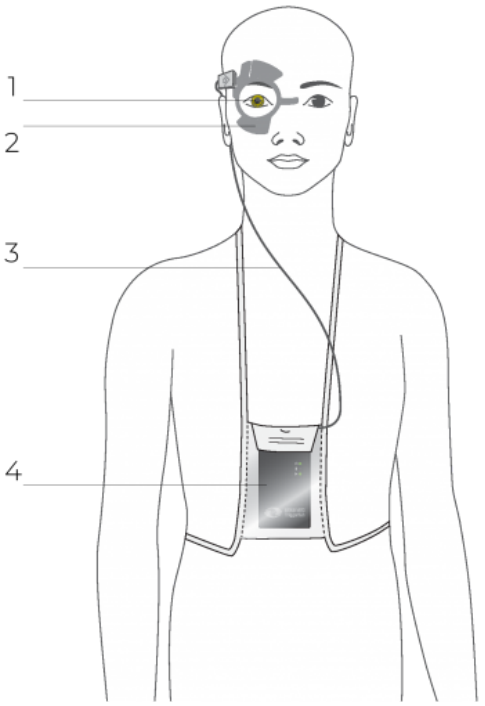
Images of the iris with the remote controlled stereo slit lamp (A) and with a commercial photo slit lamp (B).

2. virtual slit lamps





3. portable, at home, low cost devices are being developed:



   a) optical coherence tomography

   b) fundus photography

   c) scanning laser ophthalmoscopes

   d) continuous ocular monitoring systems

      (1) IOP monitoring via a contact lens embedded with a microsensor

   e) AMD monitoring:

      (1) Teleconnected home-based monitoring systems

      (2) At-home apps for monitoring eye disease

      (3) Continuous ocular monitoring systems

      (4) The future of at home analysis:

         (a) OCT Analyzers

         (b) Multiple reference OCTs