Università degli Studi di Ferrara
Clinica Oculistica "Antonio Rossi"
Direttore: *Prof. Adolfo Sebastiani*

Diagnosi e Terapia del Melanoma dell'Uvea

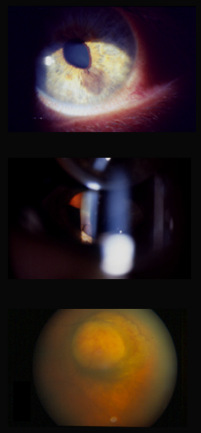
Paolo Perri



Melanoma dell'uvea

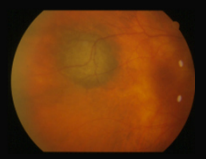
Il Melamoma Maligno dell'uvea è il tumore melanocitario più frequente dopo quello cutaneo; escluso infatti quest'ultimo, la localizzazione oculare rappresenta la quota maggiore e copre il 79% dei casi osservabili con una diversa frequenza nei tre segmenti uveali: 80% nella coroide, 12% nel corpo ciliare e 8% nell'iride. Si calcola nel mondo una incidenza annuale media di circa sei casi per milione di abitanti, ma esiste una notevole variabilità se vengono calcolate le diverse casistiche nazionali

- Iride (8%)
- Corpo Ciliare (12%)
- Coroide (80%)

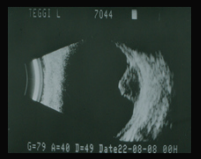


DIAGNOSI

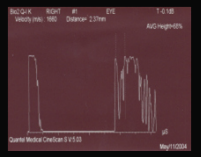
OFTALMOSCOPIA
(FOTOGRAFIA)



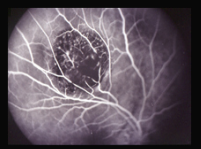
ECOGRAFIA → DIAGNOSI

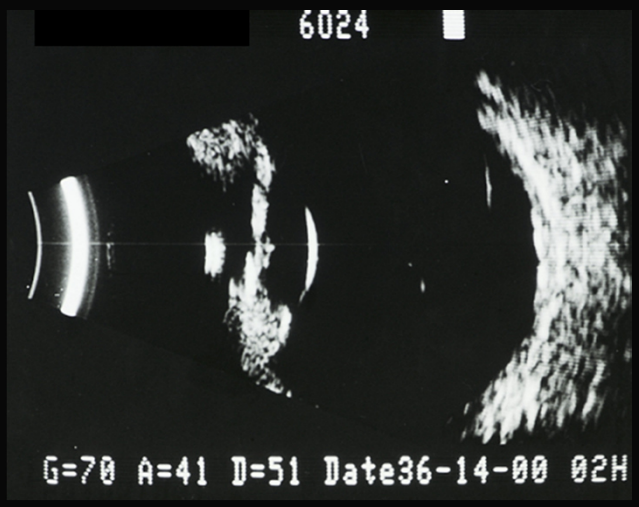


ECOGRAFIA → BIOMETRIA



FLUORANGIOGRAFIA

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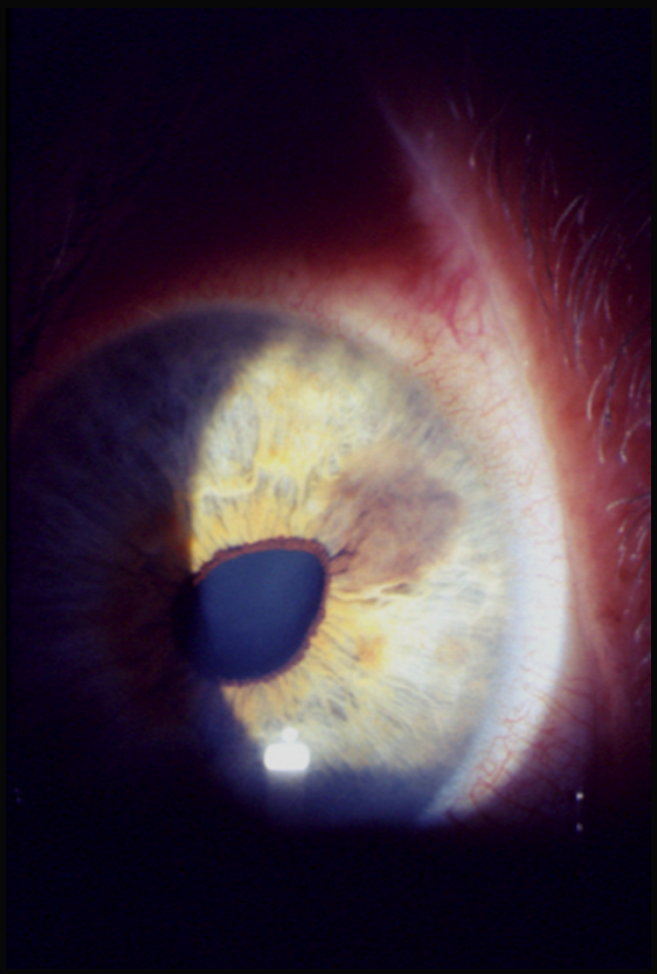

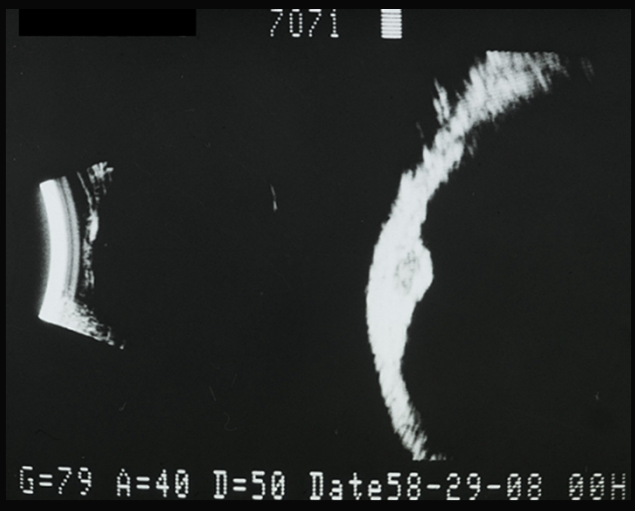
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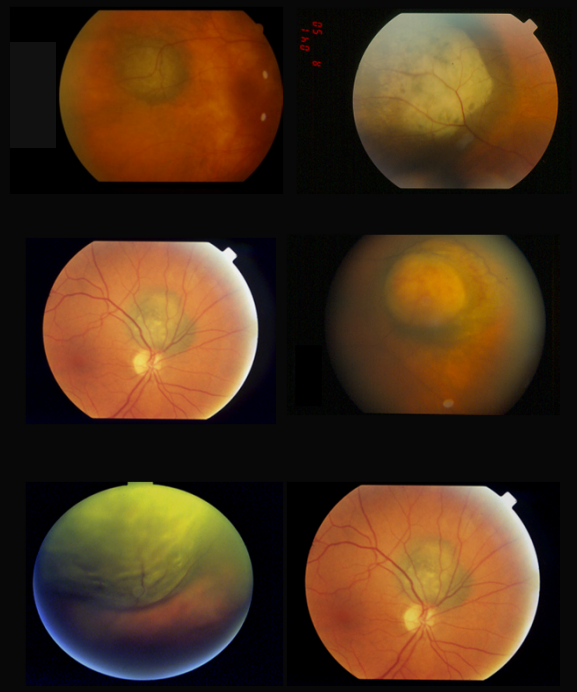
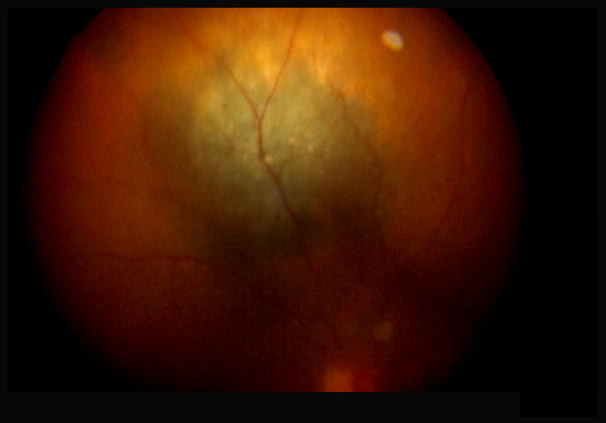
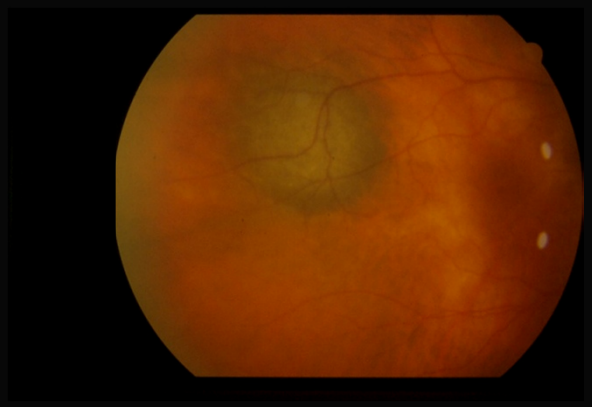
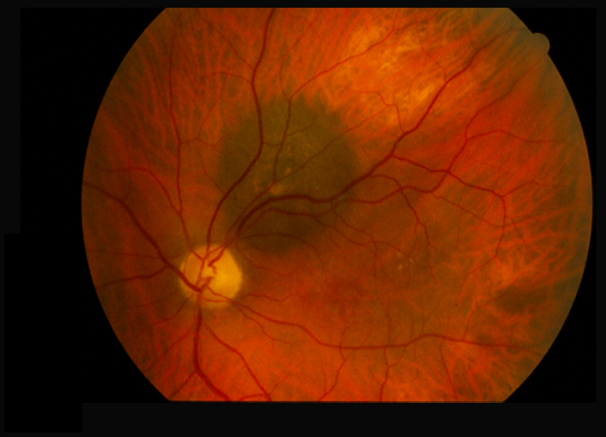
Oftalmoscopia

- Colore
- Forma
- Dimensioni



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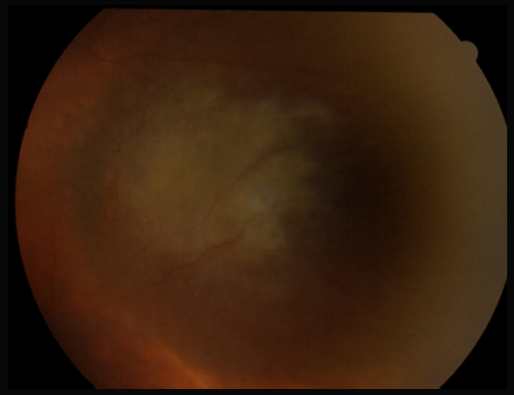
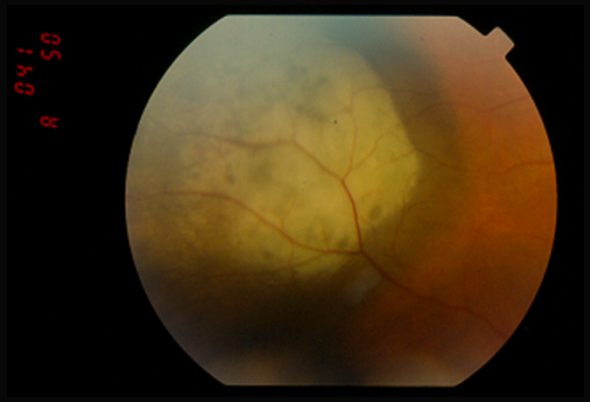
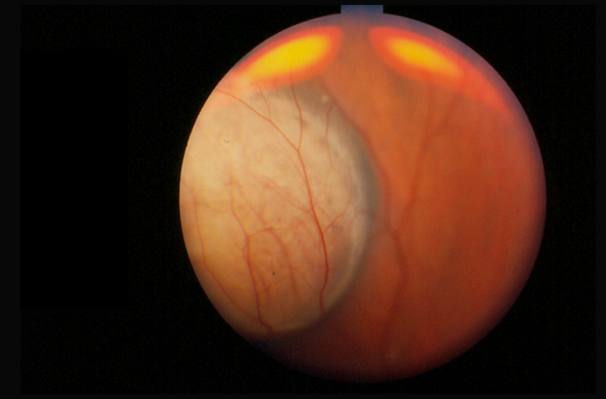
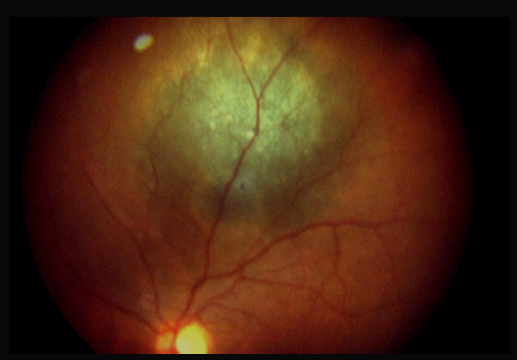
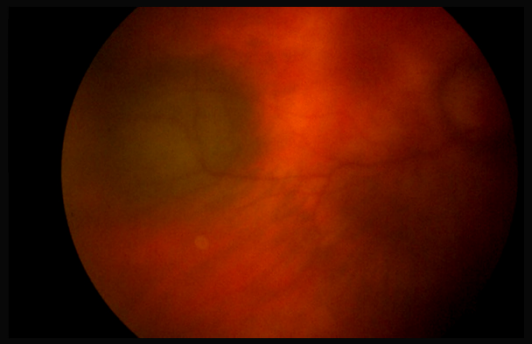
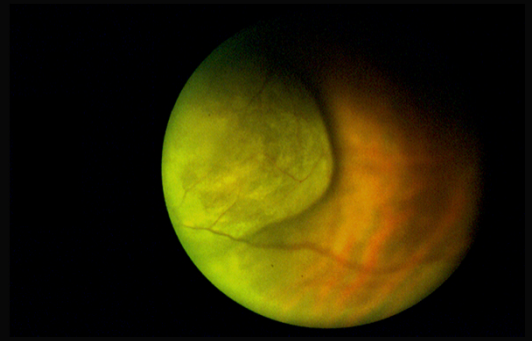
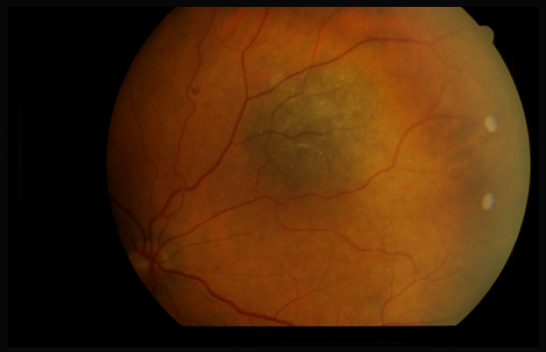
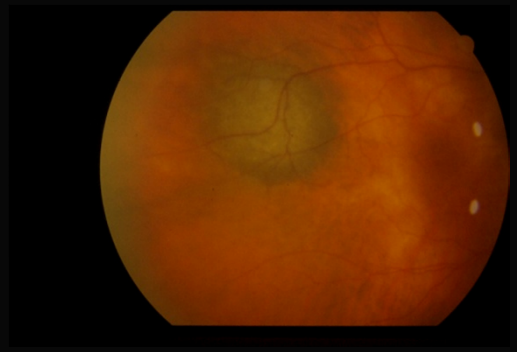
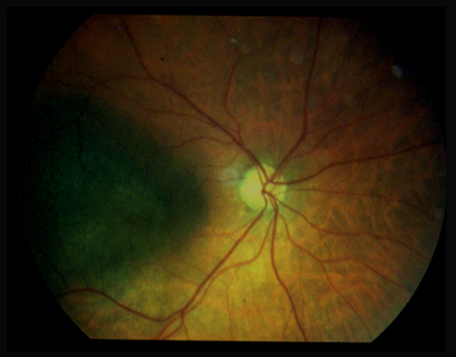
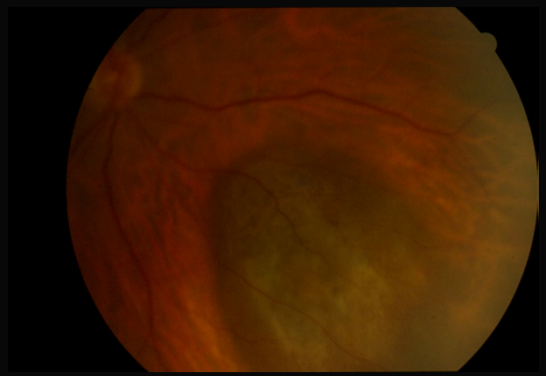
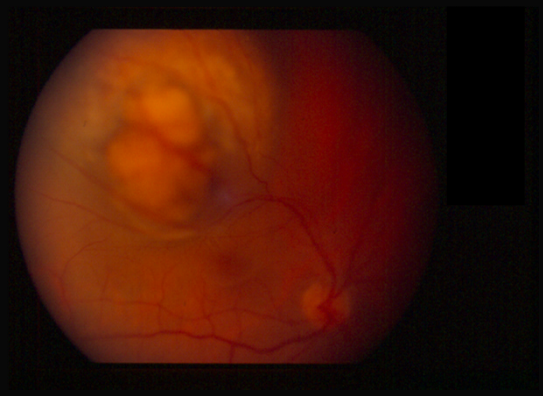
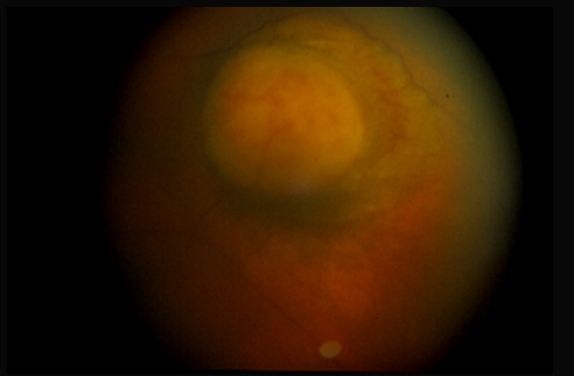
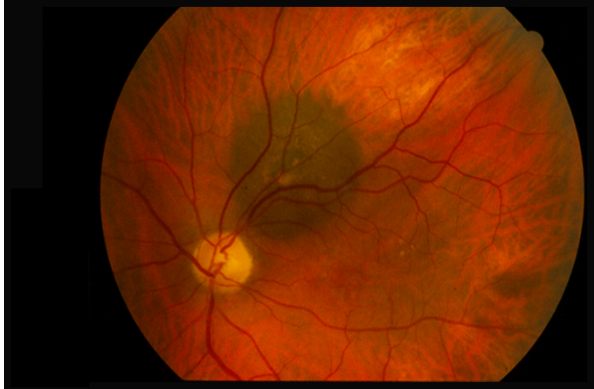
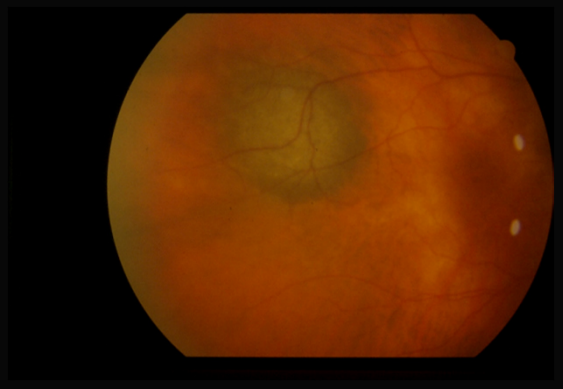
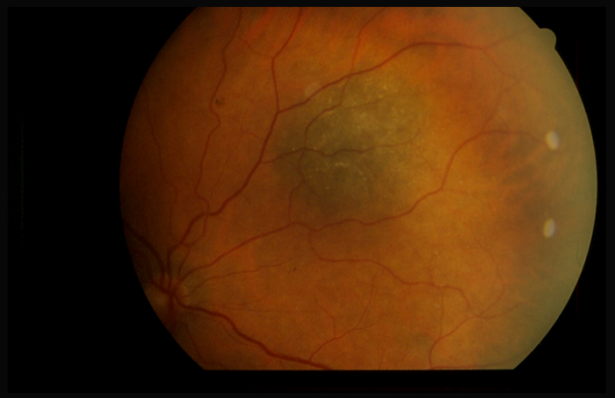
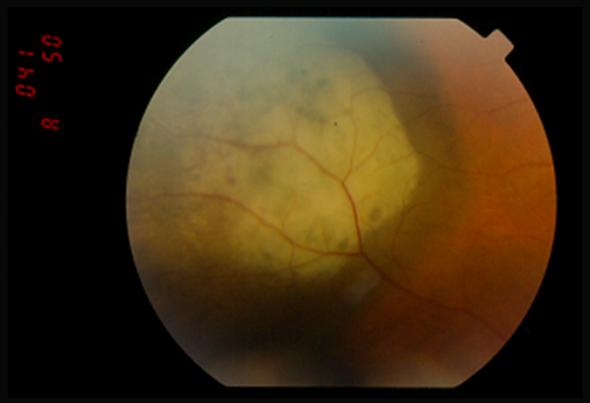
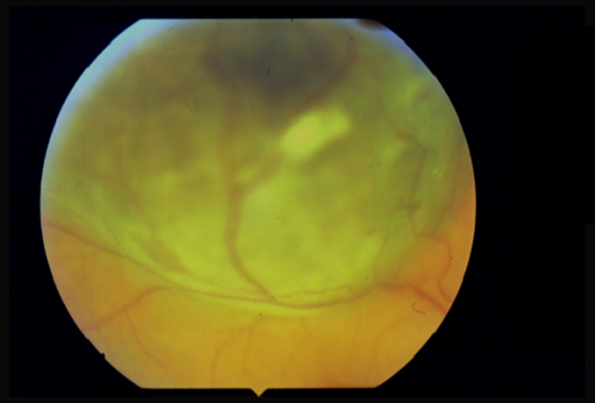
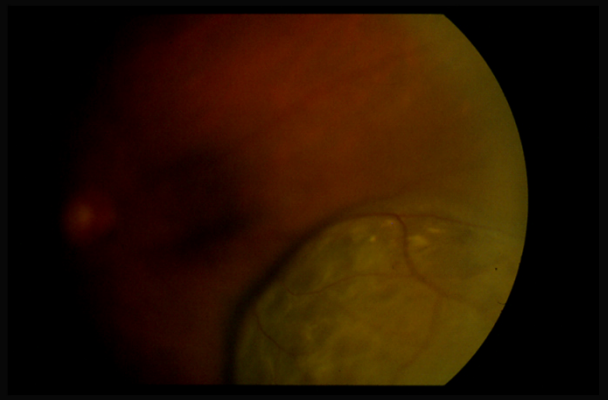




Forma

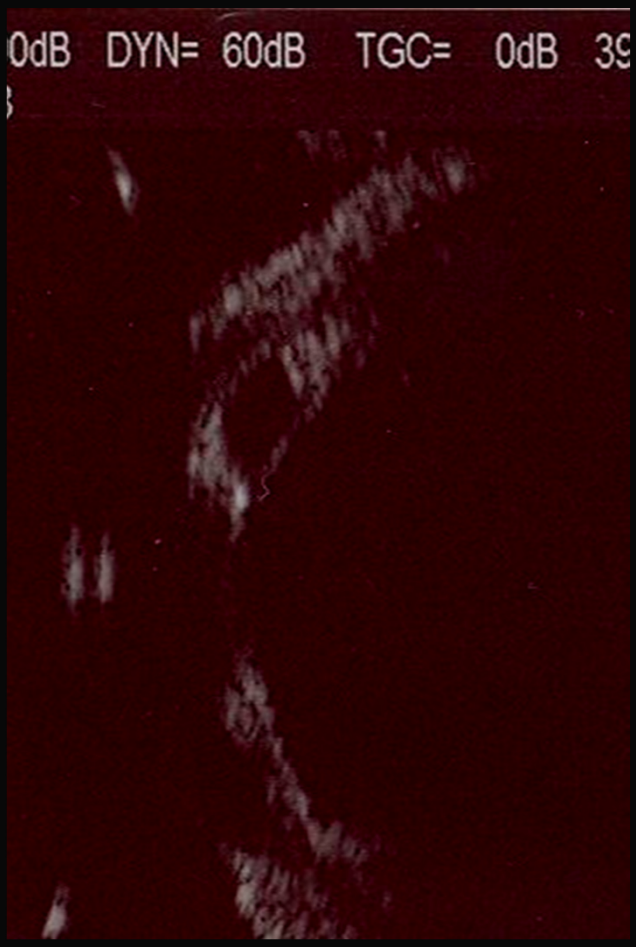
Dimensioni

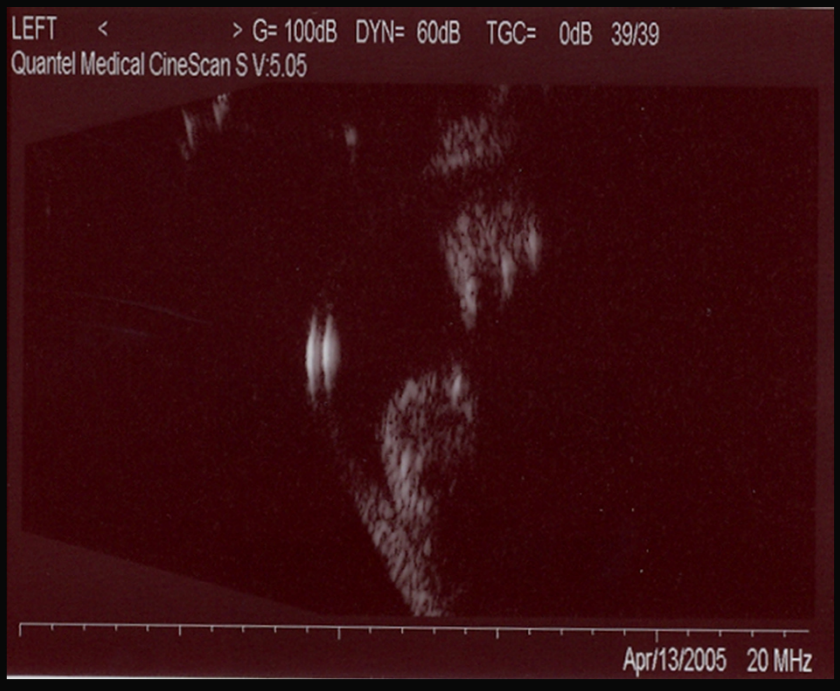




ECOGRAFIA

Spessore

Reflettività


0dB DYN= 60dB TGC= 0dB 39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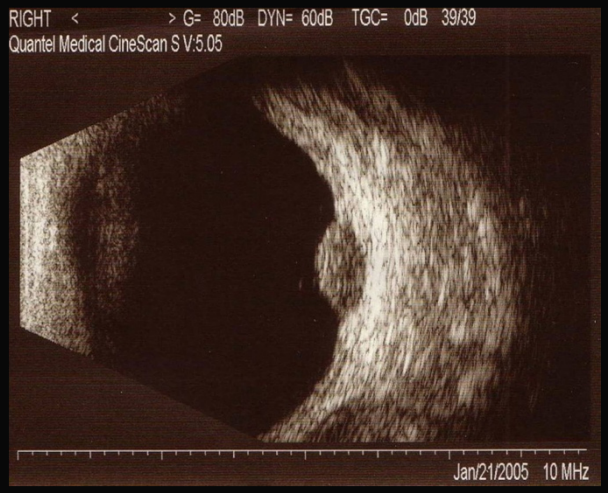
Apr/13/2005 20 MHz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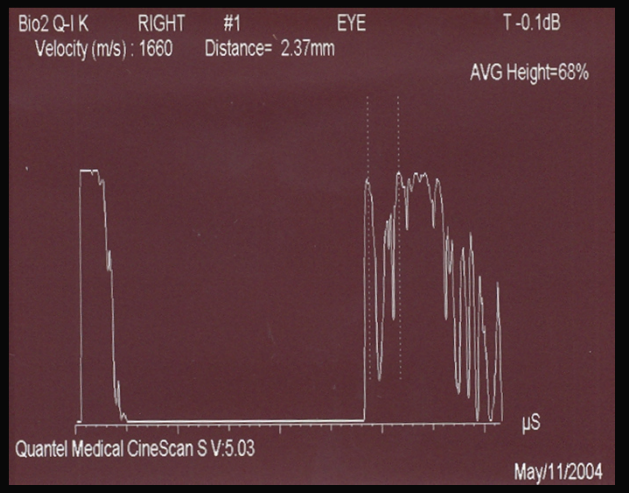
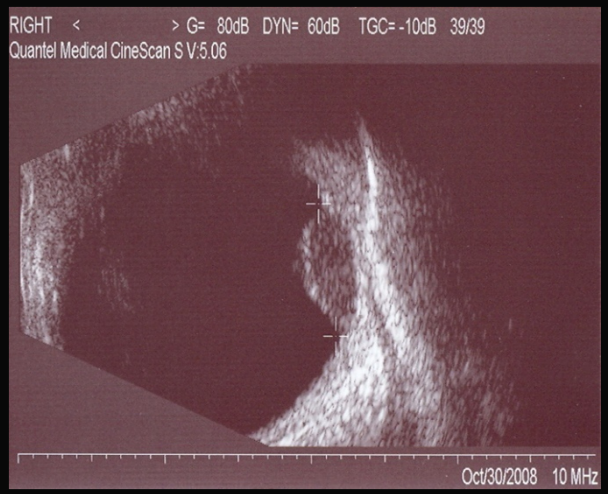
Quantel Medical CineScan S V:5.05
Jan/21/2005 10 MHz


Bio2 Q-I K RIGHT #1 EYE T -0.1dB
Velocity (m/s) : 1660 Distance= 2.37mm
AVG Height=68%
µS
Quantel Medical CineScan S V:5.03
May/11/2004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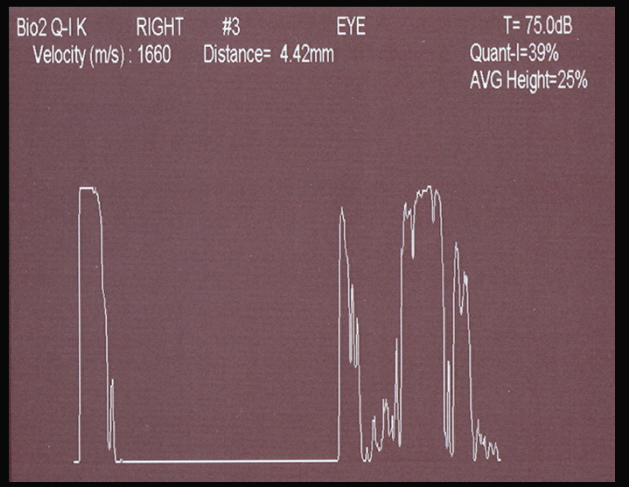
Oct/30/2008 10 MHz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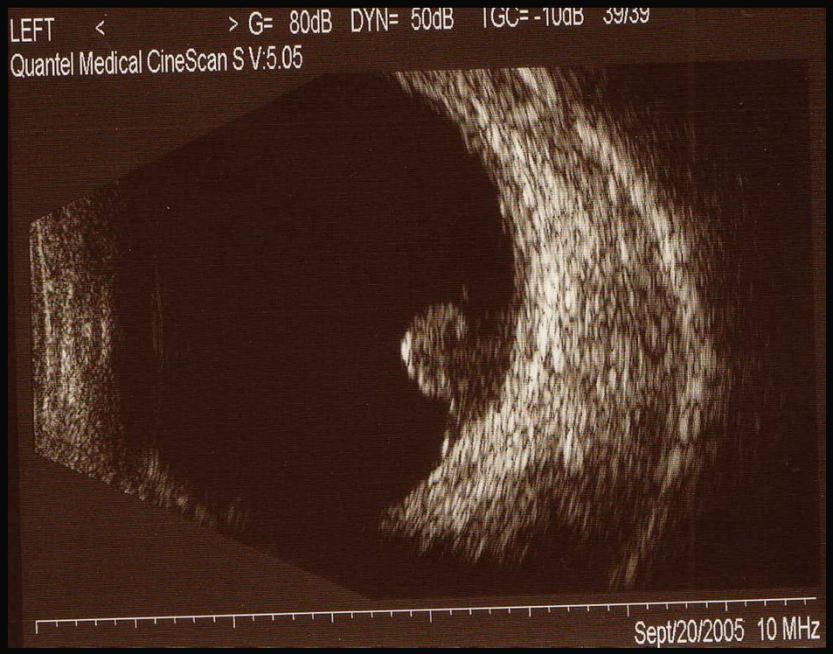
Quant-I=39%
AVG Height=25%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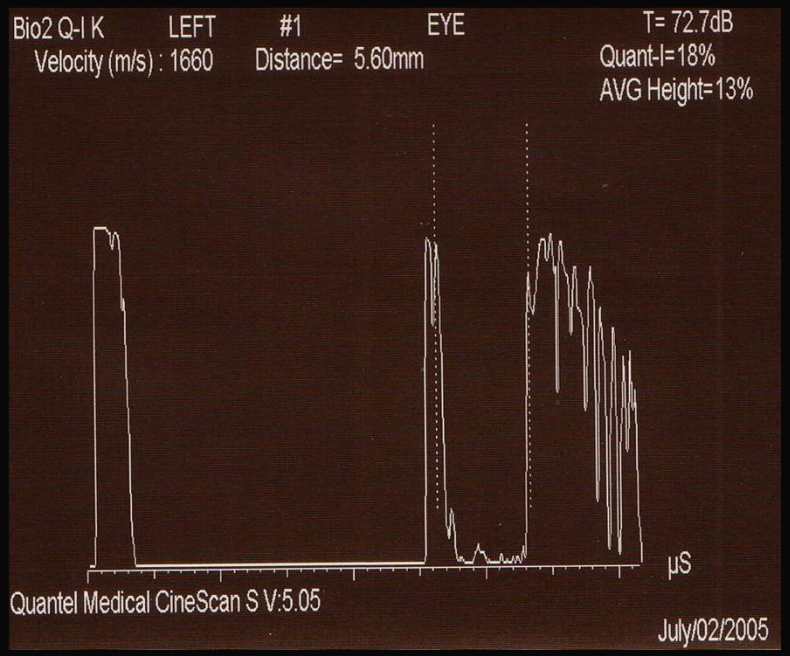
Sept/20/2005 10 MHz


Bio2 Q-I K LEFT #1 EYE T= 72.7dB
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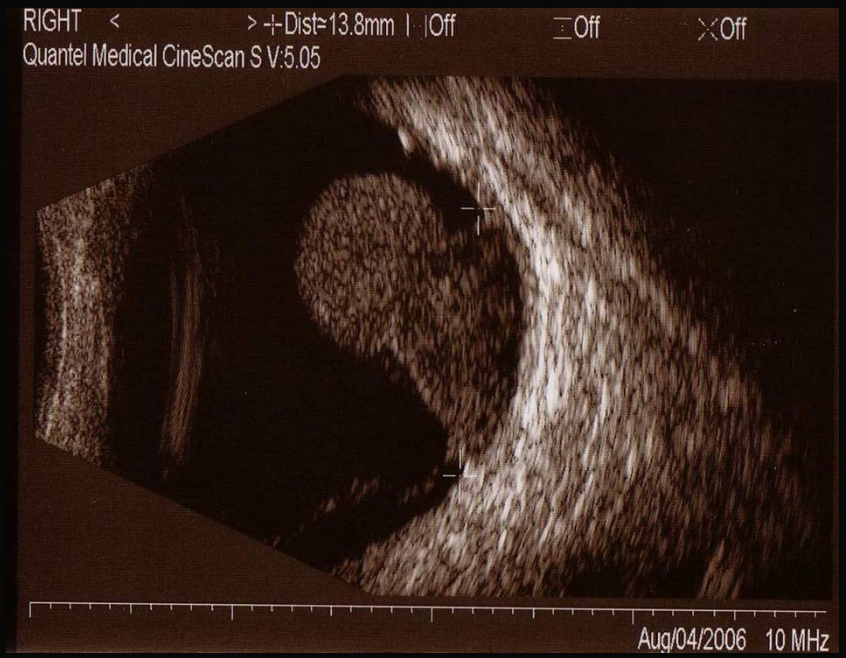
Quant-I=18%
AVG Height=13%
µS
Quantel Medical CineScan S V:5.05
July/02/2005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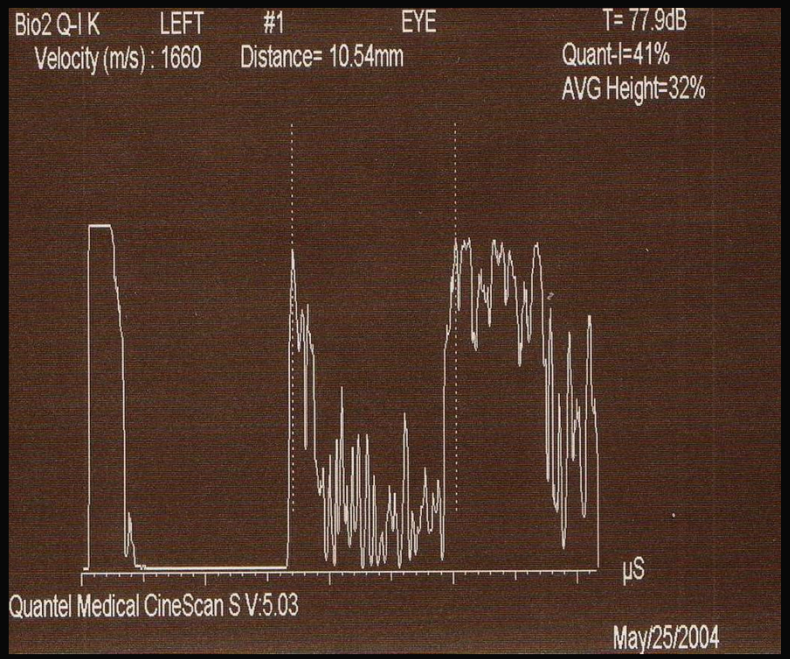
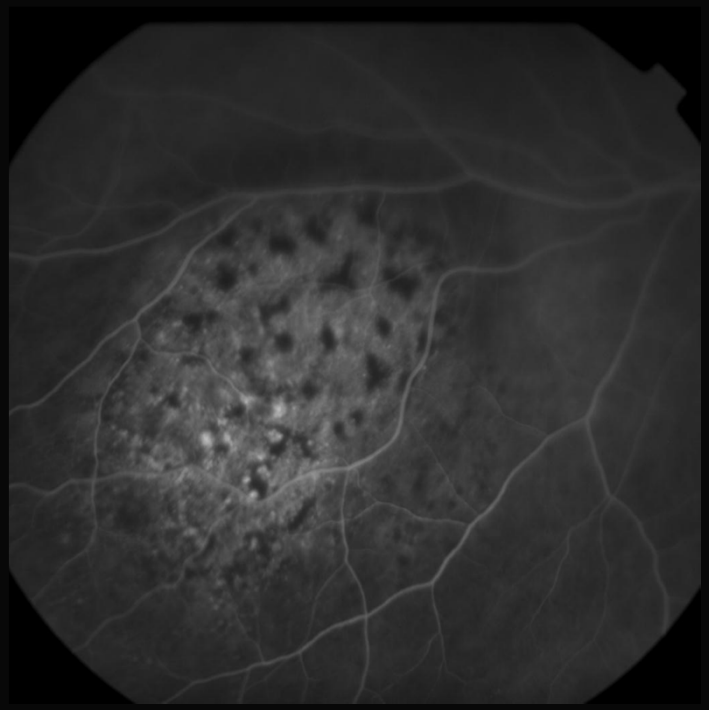
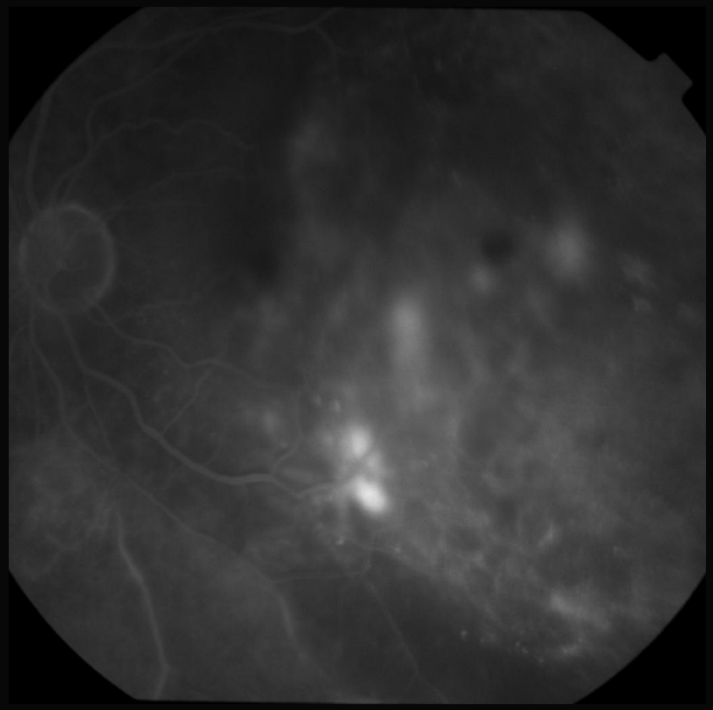
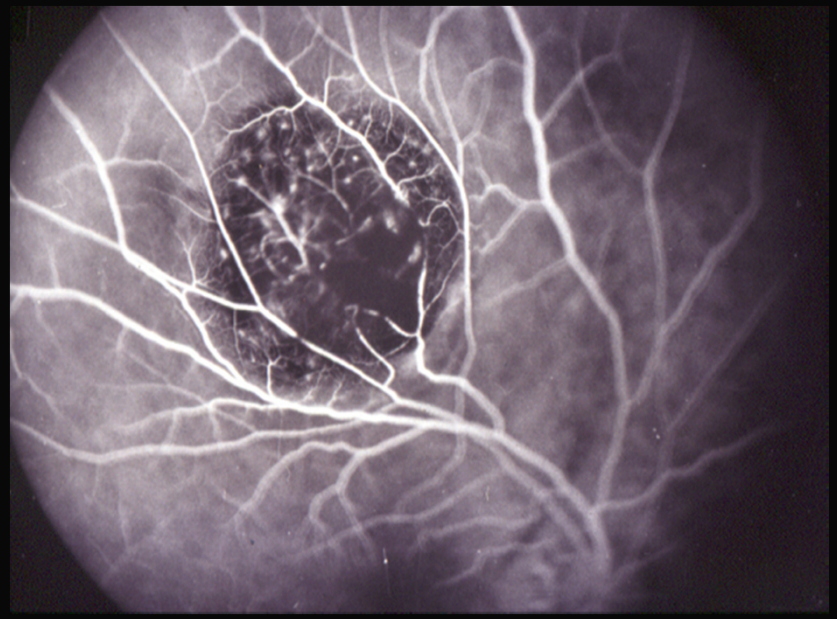
Aug/04/2006 10 MHz


Bio2 Q-I K LEFT #1 EYE T= 77.9dB
Velocity (m/s) : 1660 Distance= 10.54mm
Quant-I=41%
AVG Height=32%
µS
Quantel Medical CineScan S V:5.03
May/25/2004

Angiografia



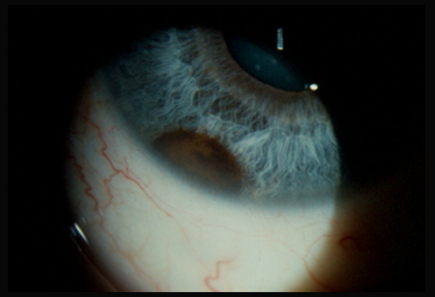


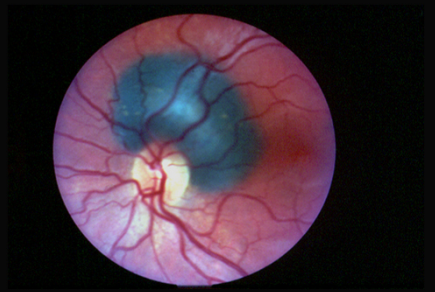


DIAGNOSI DIFFERENZIALE

Tumori

- Nevo
- Nevo sospetto
- Metastasi
- Angioma coroideale
- Osteoma
- Angioma retinico
- Melanocitoma
- Neurilemmoma
- Leiomioma
- Angioma cavernoso misto

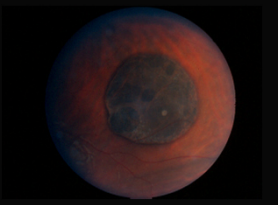




DIAGNOSI DIFFERENZIALE

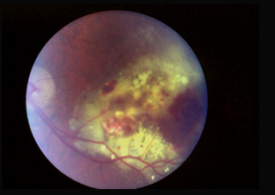
LESIONI dell'EPITELIO PIGMENTATO

Ipertrofia congenite
Iperplasia reattiva
Amartoma combinato



LESIONI VASCOLARI EMORRAGICHE

Degenerazione legata all'età (maculare/extramaculare
Distacco emorragico retina e/o EP



DIAGNOSI DIFFERENZIALE

LESIONI INFIAMMATORIE

Sclerite posteriore

LESIONI CISTICHE

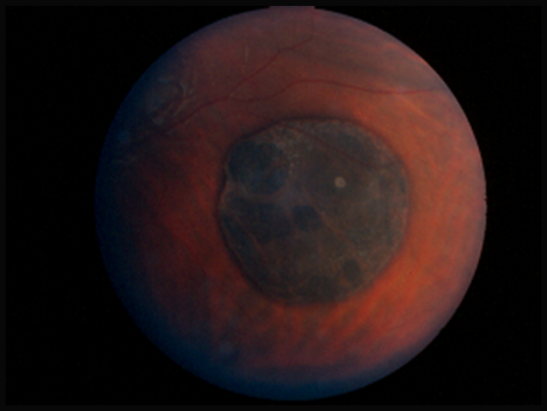
Retinoschisi
Cisti del corpo ciliare

DISTACCO DI RETINA

SINDROME DA
EFFUSIONE COROIDEALE

ALTRE

EPITELIO PIGMENTATO



Ipertrofia congenita

solitaria

multipla

Solitaria con iperpigmentazione

Lesione piatta o molto piatta, a margini netti, del diametro di 1-6 mm.

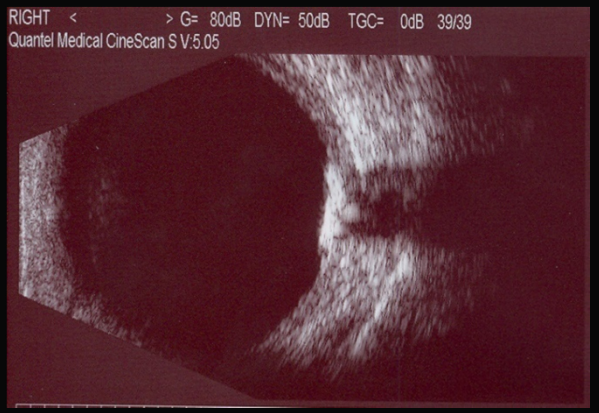
Area periferica senza iperpigmentazione

Aree di assenza di pigmento (i vasi retinici sono normali, effetto schetmo più o meno completo della coroide)

Nessuna o pochissima tendenza all'accrescimento

Forma multipla

Ad impronta d'orso (S. Di Gadner)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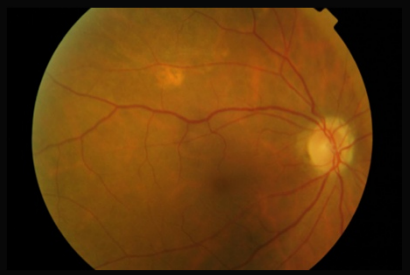
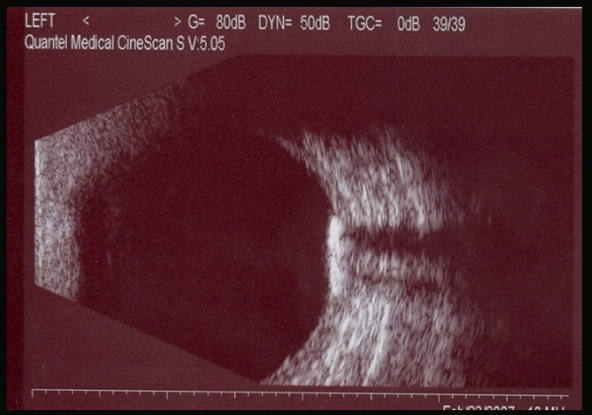
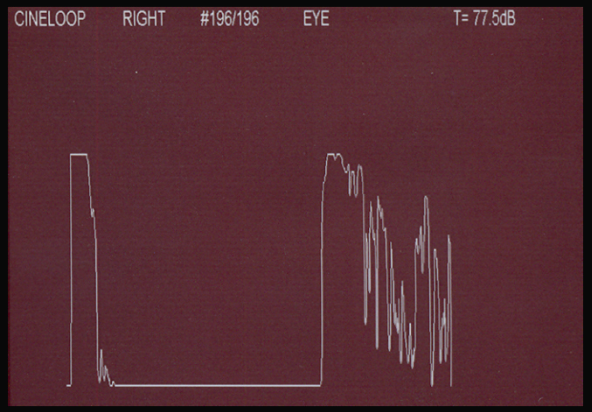
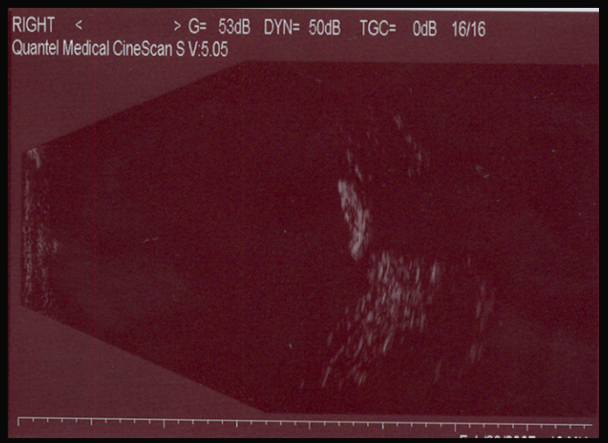
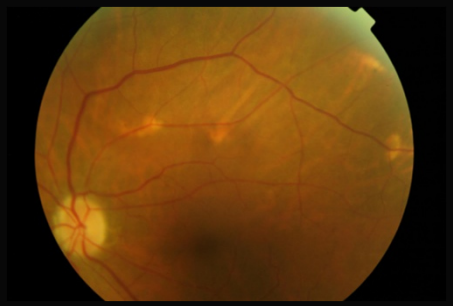
Quantel Medical CineScan S V:5.05

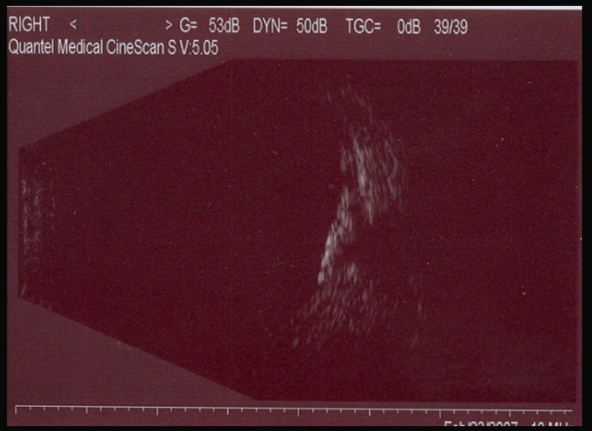



LEFT < > G= 80dB DYN= 50dB TGC= 0dB 39/39
Quantel Medical CineScan S V:5.05


CINELOOP RIGHT #196/196 EYE T= 77.5dB


RIGHT < > G= 53dB DYN= 50dB TGC= 0dB 16/16
Quantel Medical CineScan S V:5.05



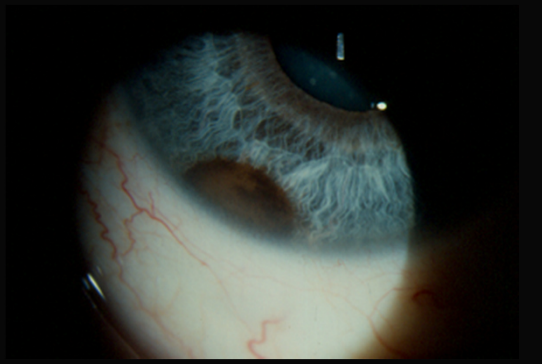

RIGHT < > G= 53dB DYN= 50dB TGC= 0dB 39/39
Quantel Medical CineScan S V:5.05

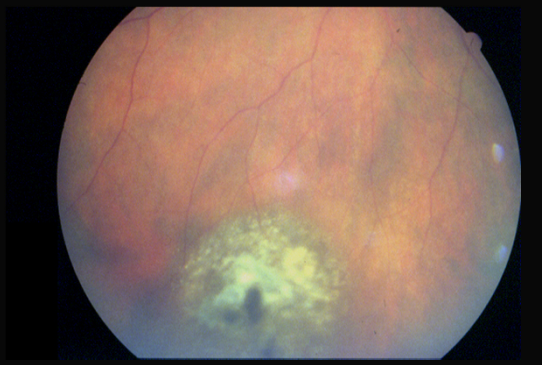
NEVO DELLA COROIDE

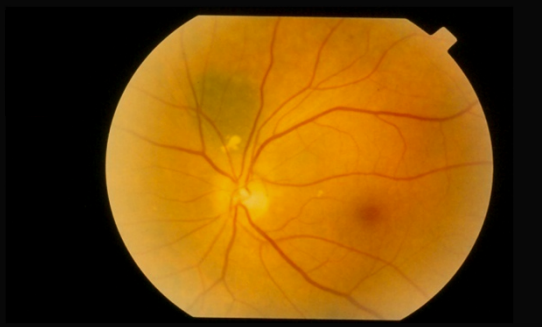
I nevi della coroide sono le neoformazioni di più frequente riscontro nella pratica clinica.

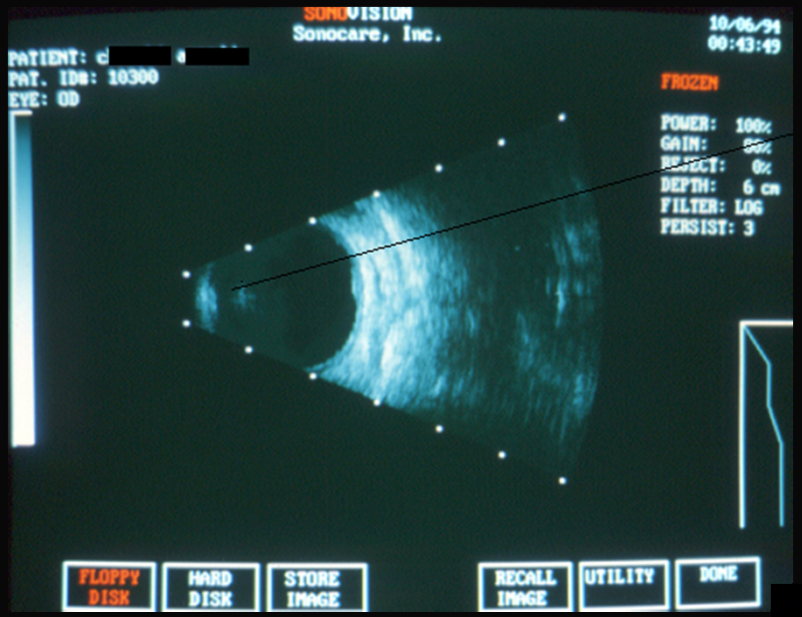
Di questi tumori benigni della coroide si conoscono molto bene le caratteristiche cliniche ed istologiche, tuttavia esistono ancora dubbi circa la patogenesi e la potenziale malignità.

Devono essere differenziati da tutte le altre lesioni pigmentate della coroide, in particolare dal melenoma maligno, dalle aree di ipertrofia dell'epitelio pigmentato e dalle efelidi coroideali.

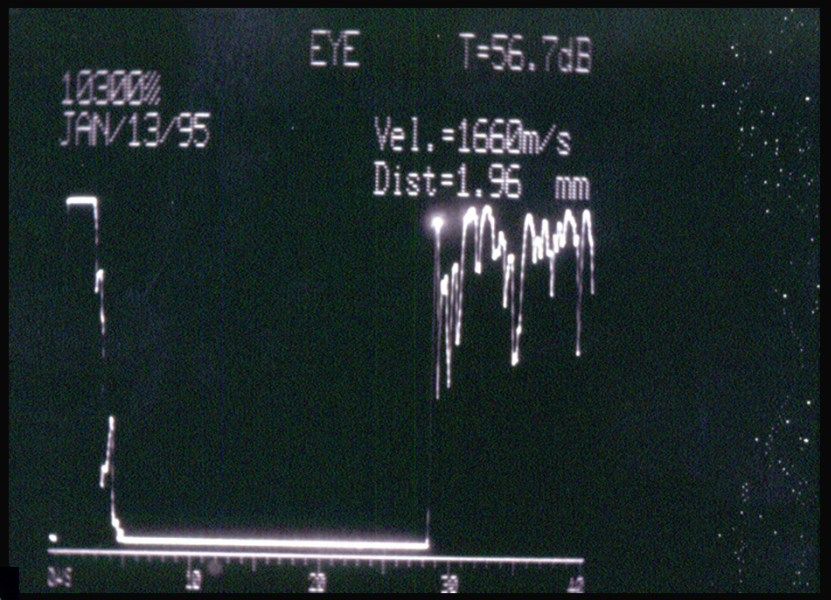


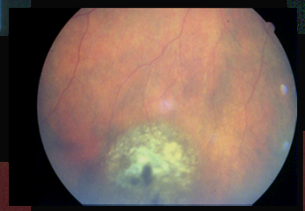


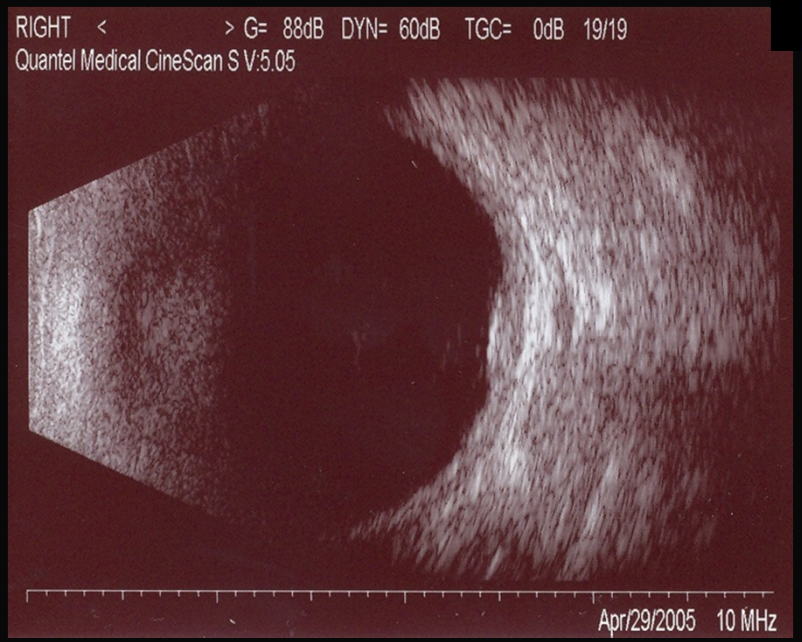




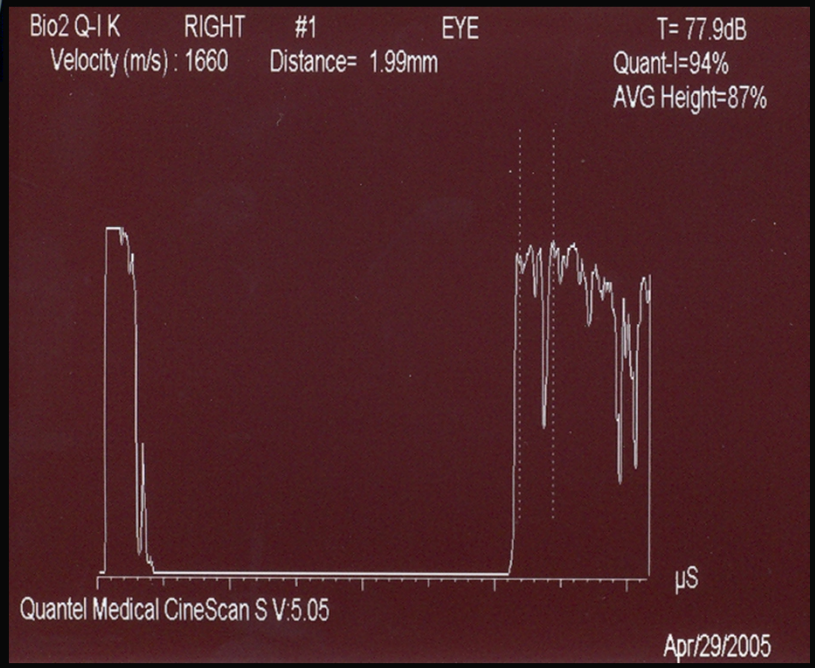
C. A. 1995

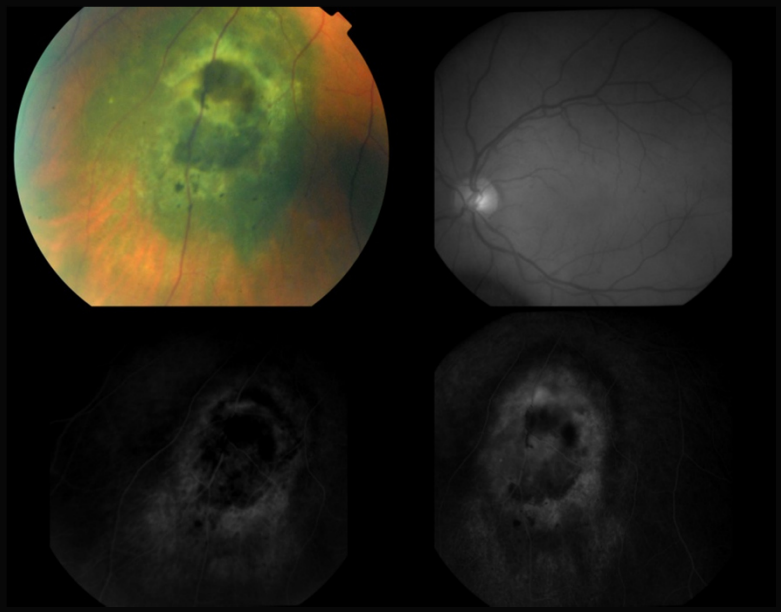


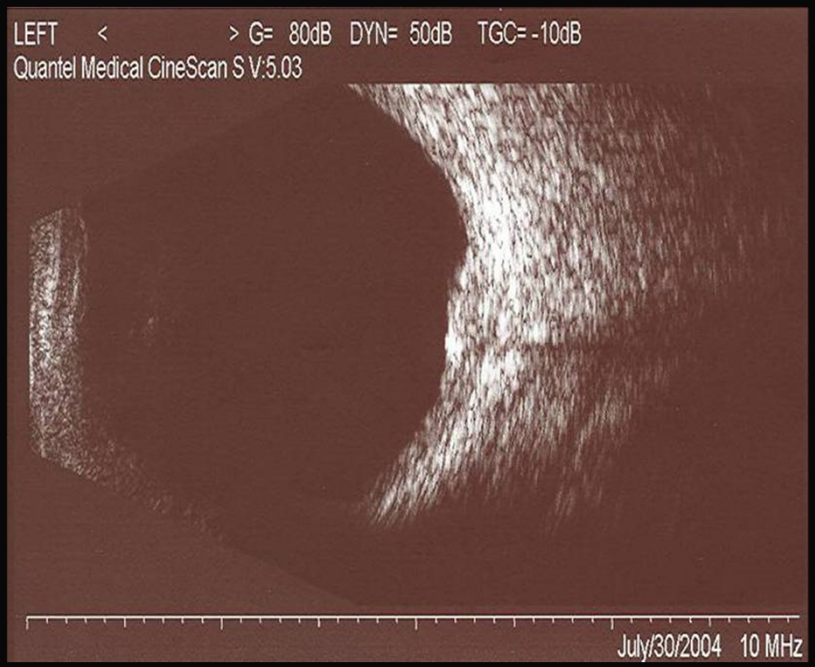


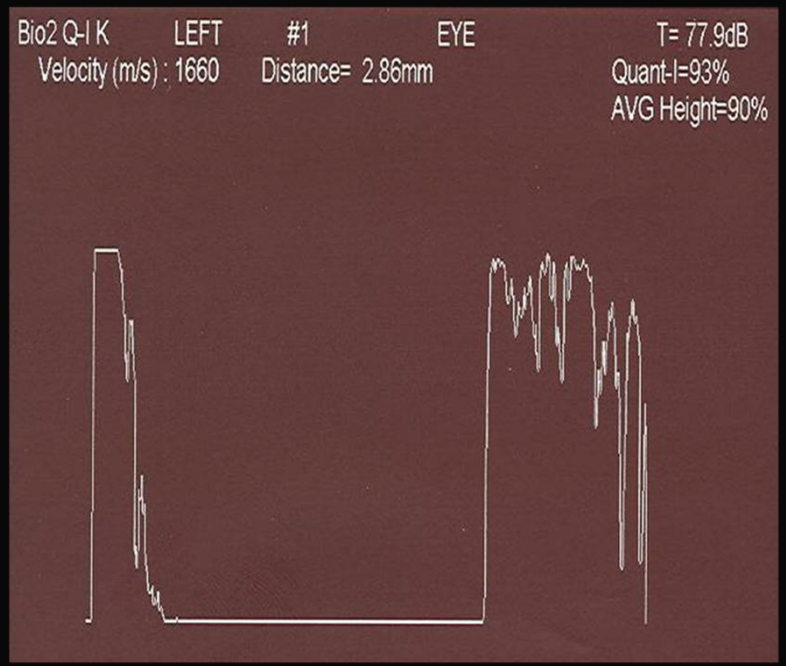


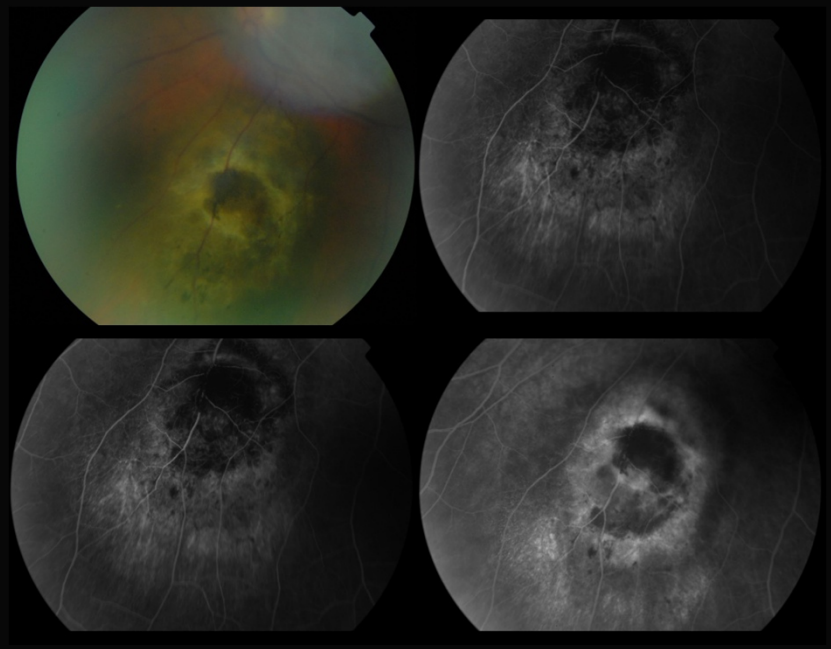
C.A 2005

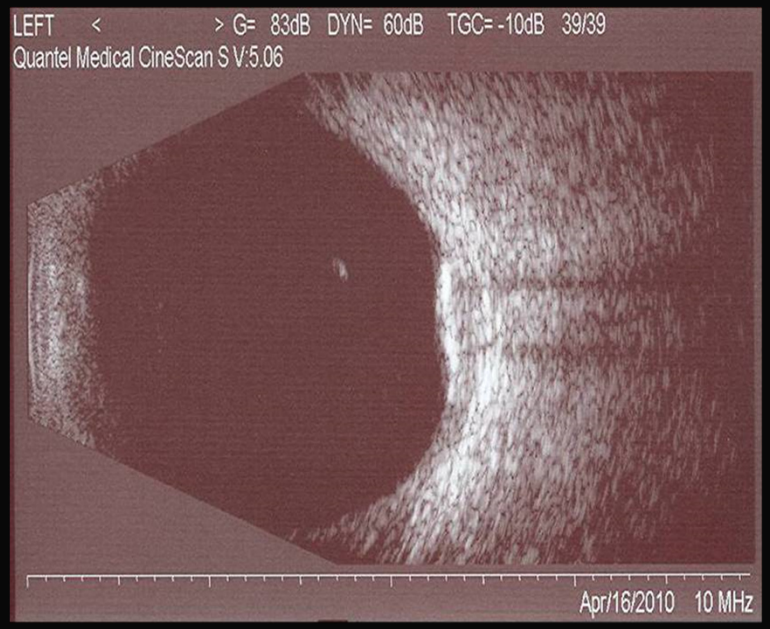


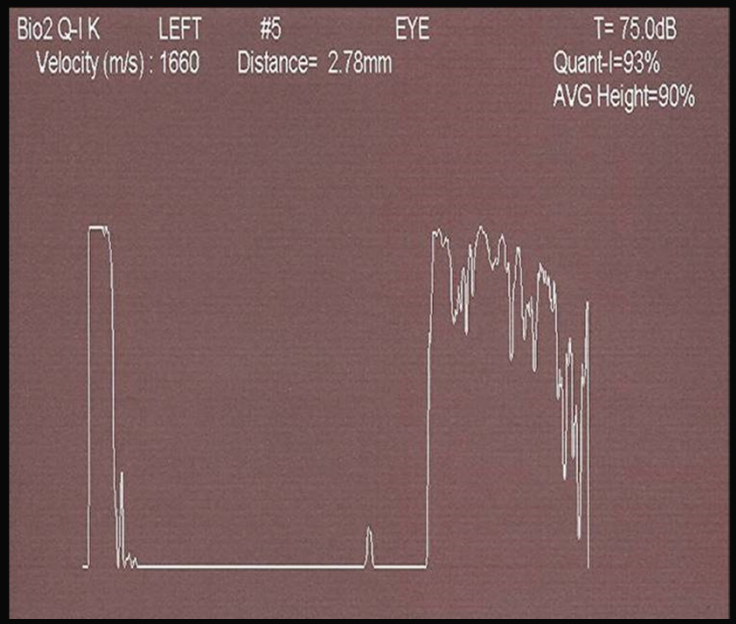



LEFT < > G= 80dB DYN= 50dB TGC= -10dB
Quantel Medical CineScan S V:5.03
July/30/2004 10 MHz


Bio2 Q-I K LEFT #1 EYE T= 77.9dB
Velocity (m/s) : 1660 Distance= 2.86mm
Quant-I=93%
AVG Height=90%

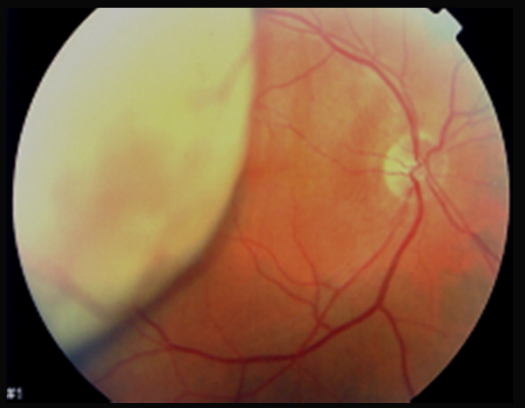



LEFT < > G= 83dB DYN= 60dB TGC= -10dB 39/39
Quantel Medical CineScan S V:5.06
Apr/16/2010 10 MHz

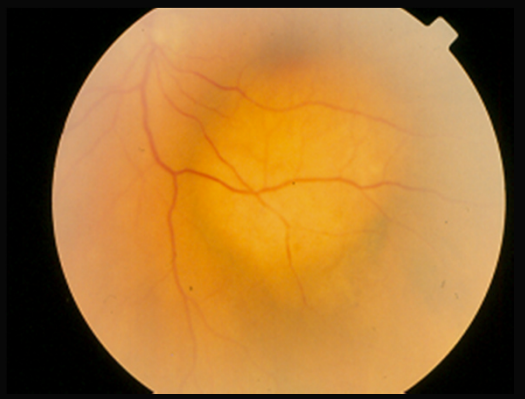

Bio2 Q-I K LEFT #5 EYE T= 75.0dB
Velocity (m/s) : 1660 Distance= 2.78mm Quant-I=93%
AVG Height=90%

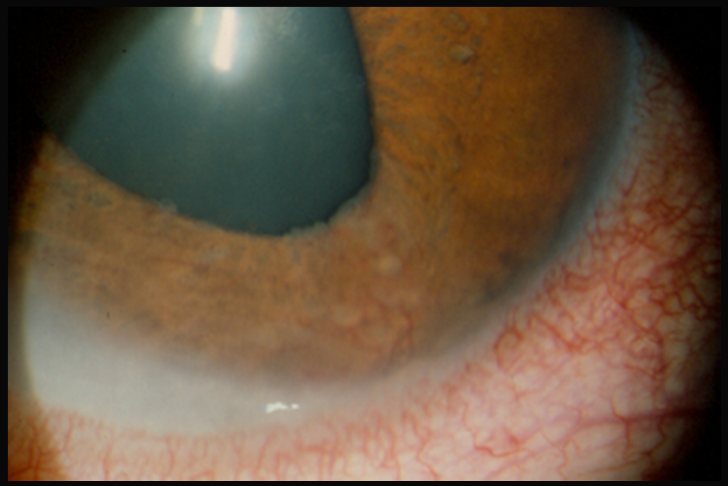
METASTASI COROIDEALI

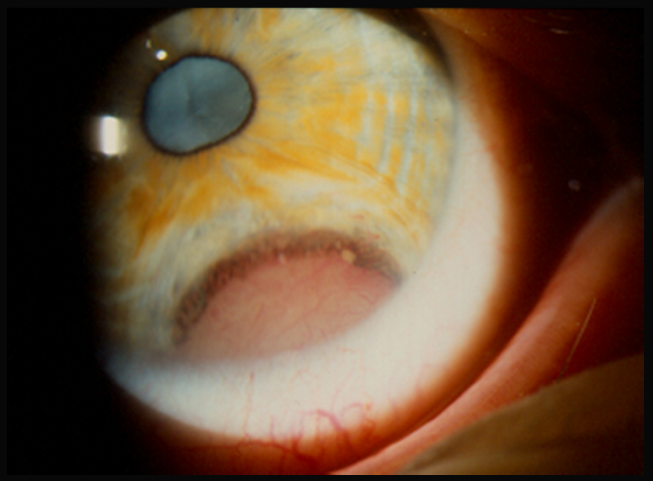
La morbilità e la mortalità dei pazienti affetti da neoplasie maligne sono la diretta conseguenza della capacità di diffusione e metastatizzazione dei tumori.

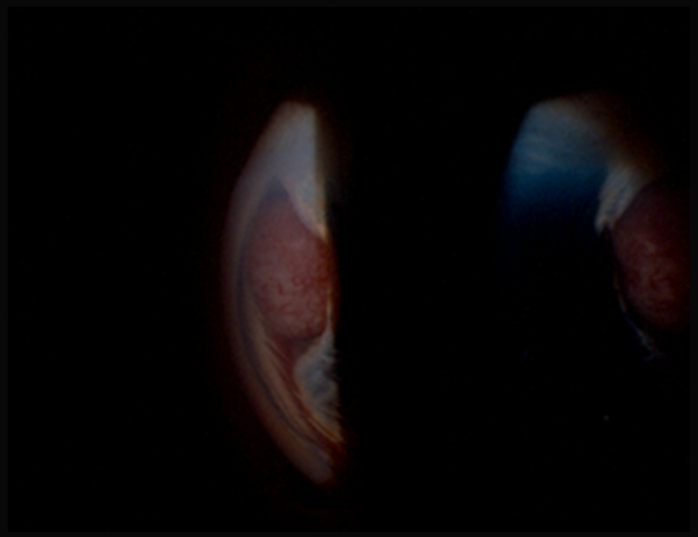


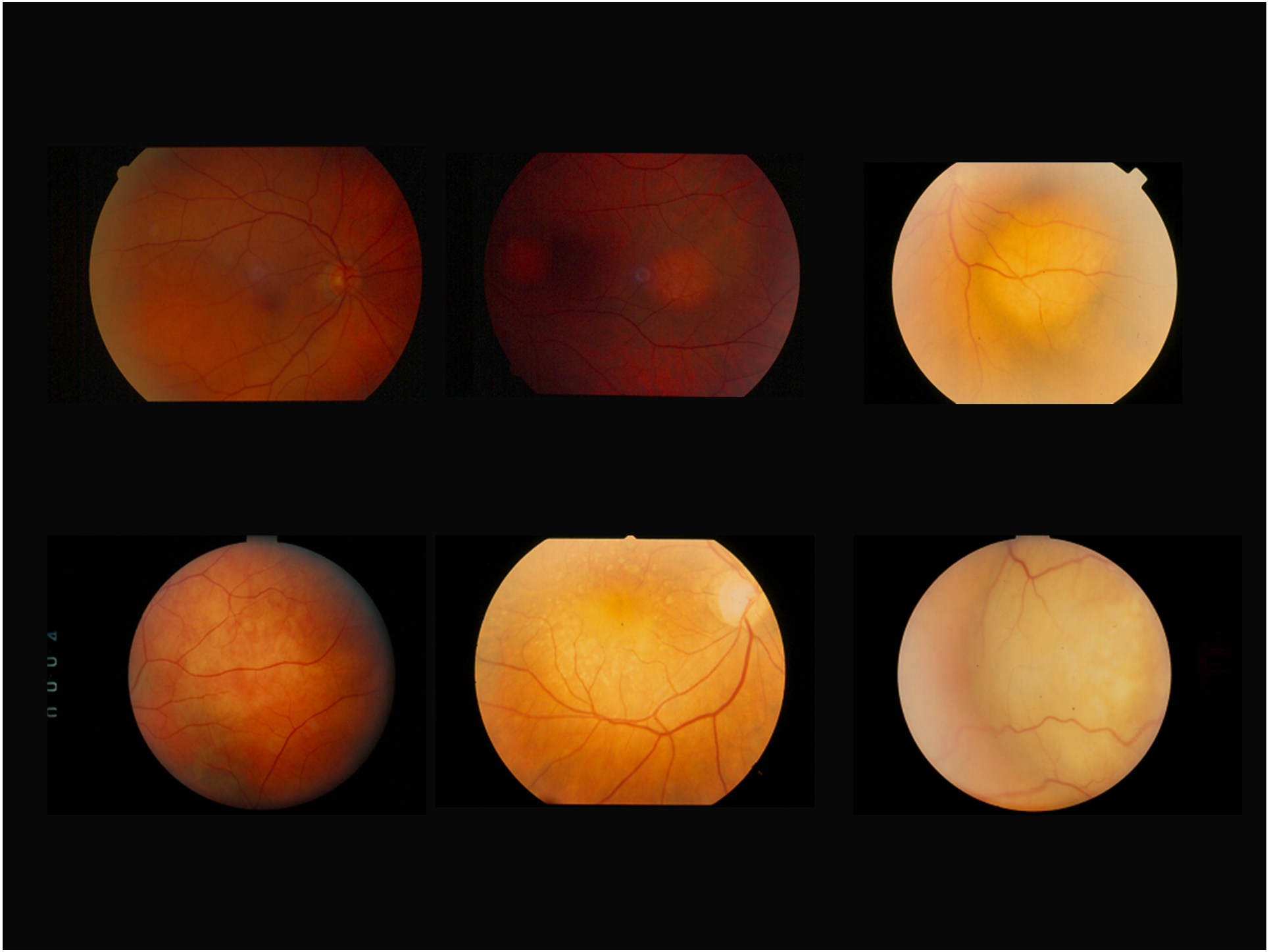
Nonostante le metastasi a livello oculare e degli annessi risultino più rare rispetto ad altre localizzazioni secondarie, costituiscono la forma più comune di neoplasia a carico dell'occhio.

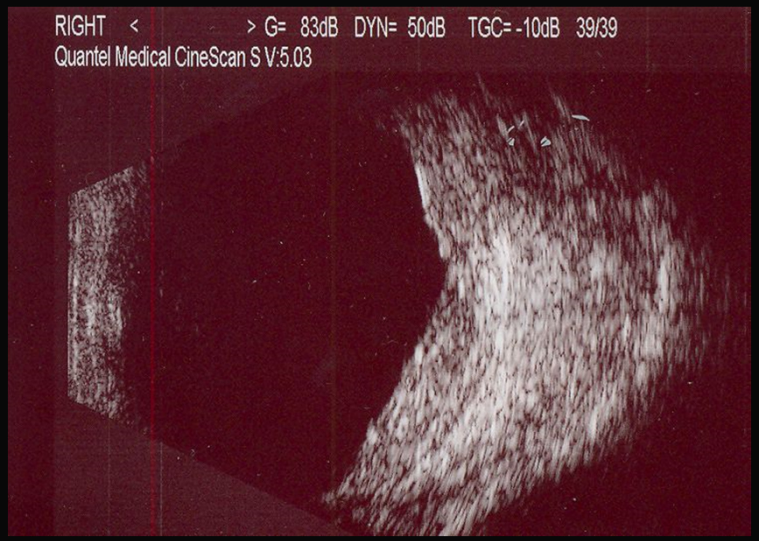


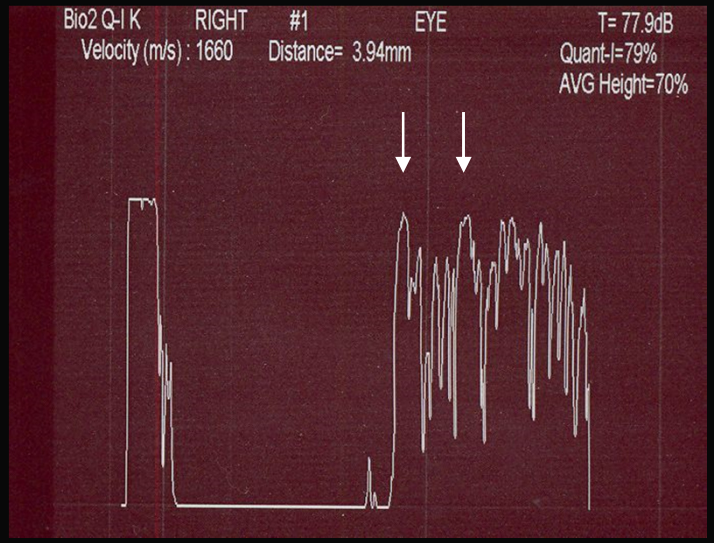


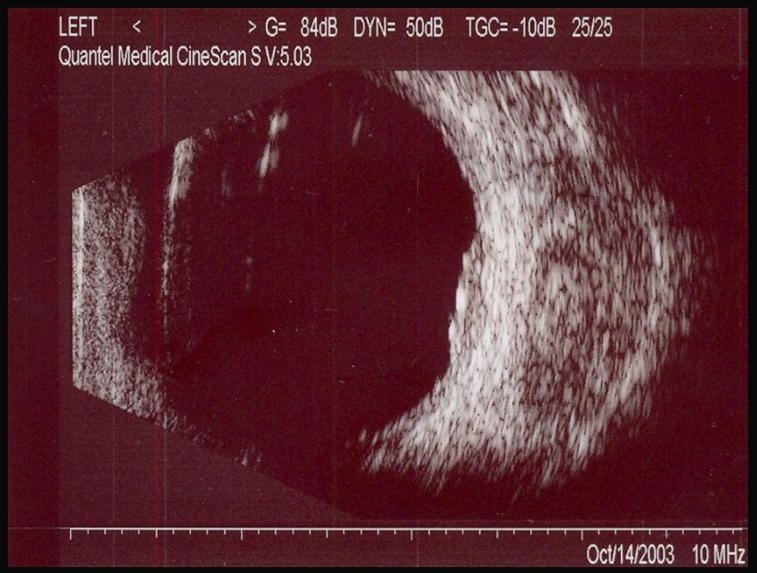


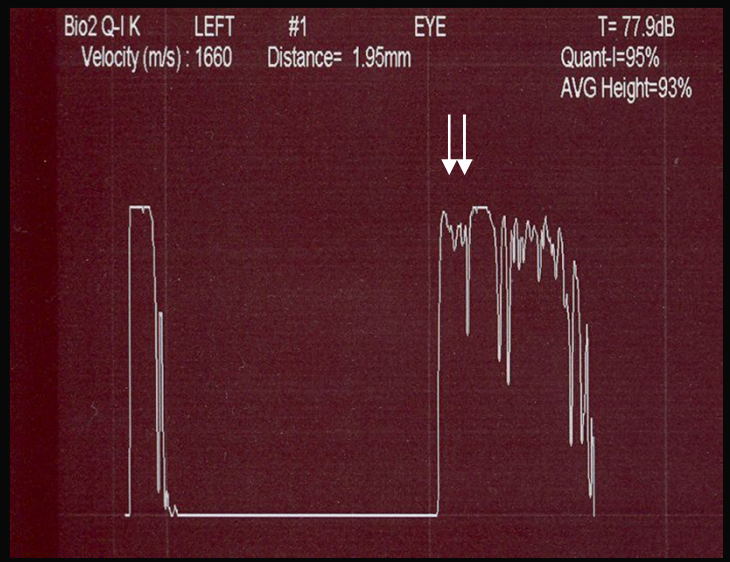





RIGHT < > G= 83dB DYN= 50dB TGC= -10dB 39/39
Quantel Medical CineScan S V:5.03


Bio2 Q-I K RIGHT #1 EYE T= 77.9dB
Velocity (m/s) : 1660 Distance= 3.94mm
Quant-I=79%
AVG Height=70%


LEFT < > G= 84dB DYN= 50dB TGC= -10dB 25/25
Quantel Medical CineScan S V:5.03
Oct/14/2003 10 MHz

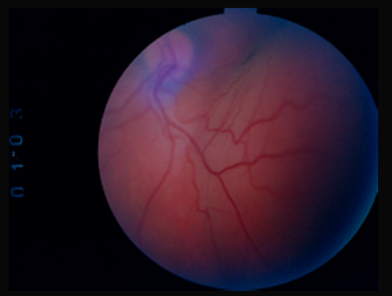

Bio2 Q-I K LEFT #1 EYE T= 77.9dB
Velocity (m/s) : 1660 Distance= 1.95mm
Quant-I=95%
AVG Height=93%

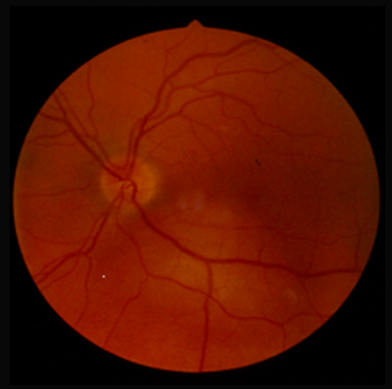
ANGIOMI CAVERNOSI DELLA COROIDE

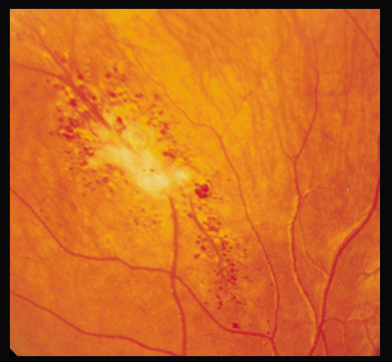
L’ angioma della coroide è un tumore benigno che si riscontra raramente nella popolazione, nel 65% dei casi come forma isolata o nel 35% in associazione con la sindrome di Struge Weber.

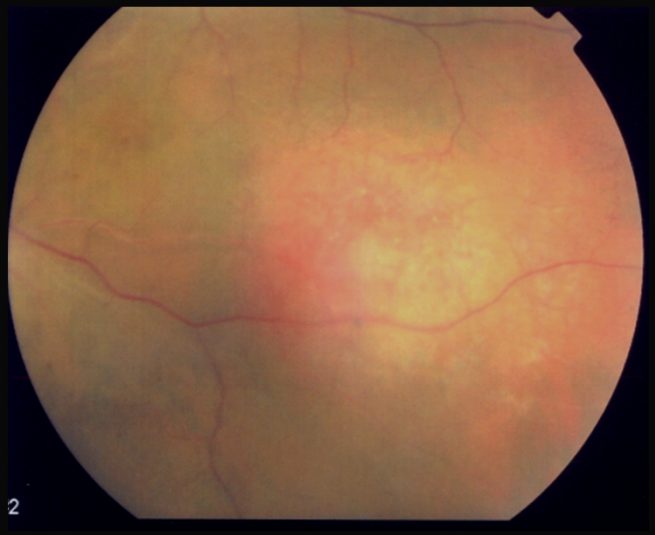
Le forme isolate sono generalmente di tipo cavernoso.

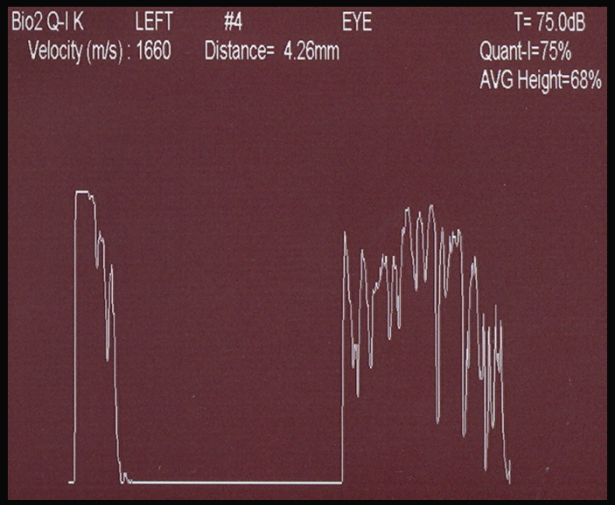
Nella sindrome di Struge Weber è più facile il riscontro di una lesione di tipo capillare, più estesa, a bordi non ben definiti, prevalentemente intracoroideale e piatta.

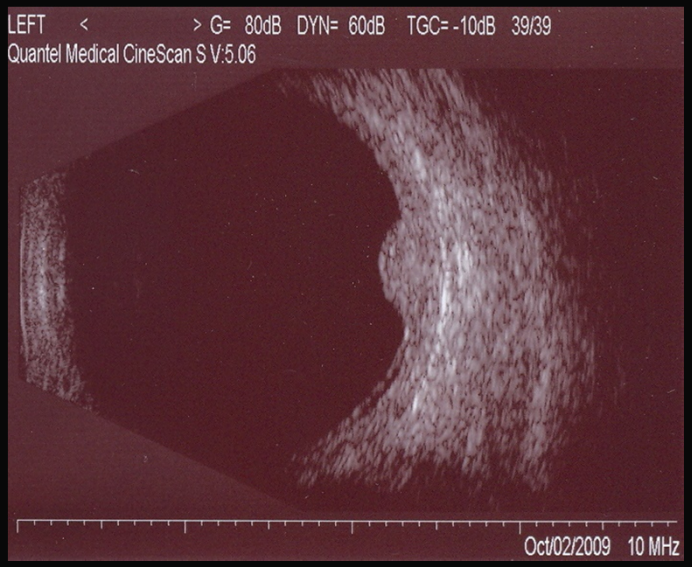


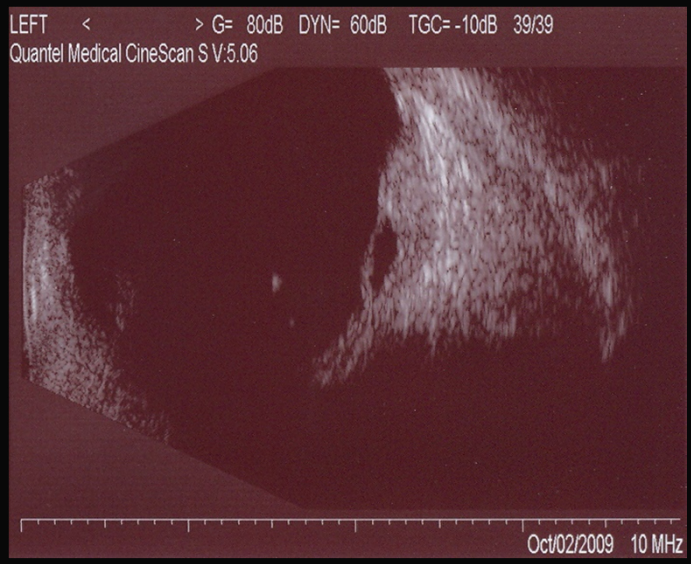




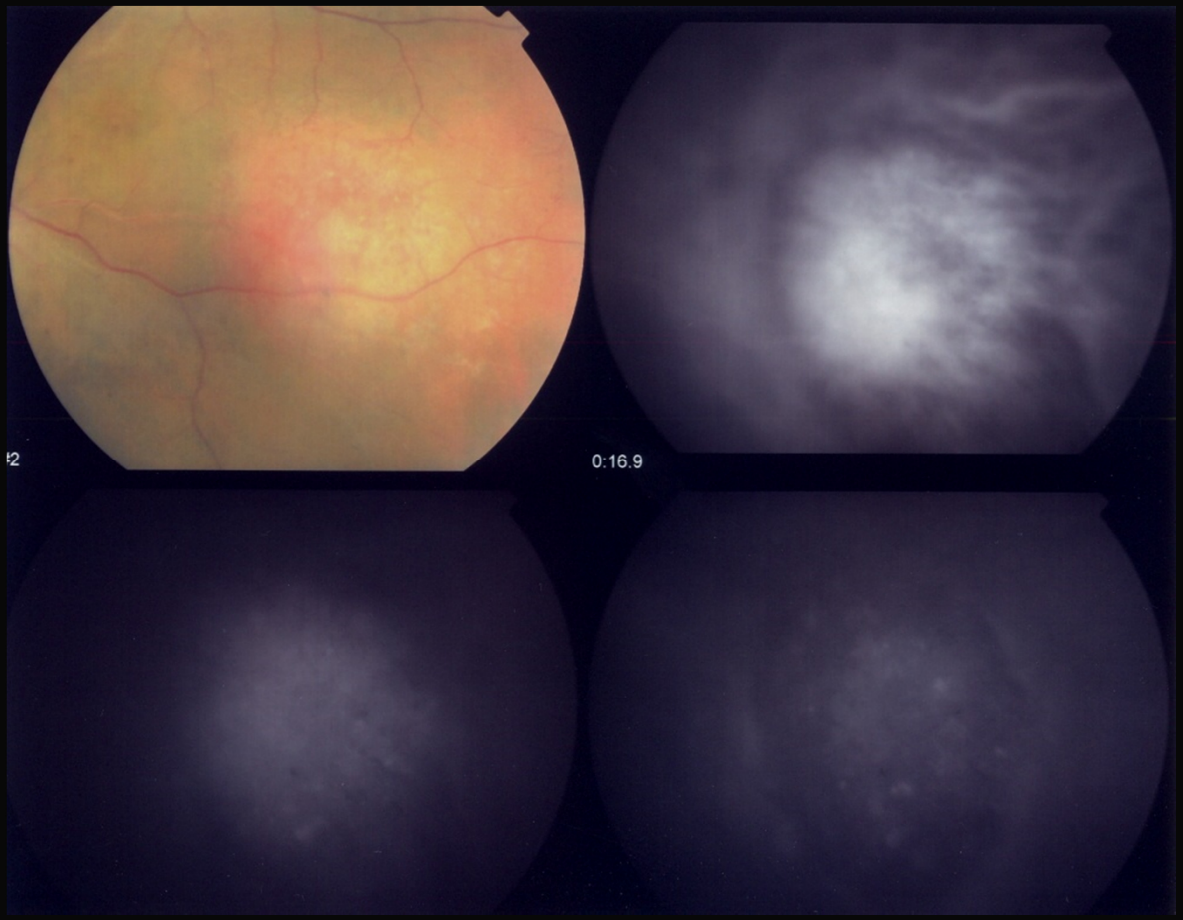

2


Bio2 Q-I K LEFT #4 EYE T= 75.0dB
Velocity (m/s) : 1660 Distance= 4.26mm Quant-I=75%
AVG Height=68%


LEFT < > G= 80dB DYN= 60dB TGC= -10dB 39/39
Quantel Medical CineScan S V:5.06
Oct/02/2009 10 MHz


LEFT < > G= 80dB DYN= 60dB TGC= -10dB 39/39
Quantel Medical CineScan S V:5.06
Oct/02/2009 10 MHz

ICG



TRATTAMENTO

- OSSERVAZIONE
- TERAPIA DEMOLITIVA
  - Enucleazione
  - Exenteratio orbitae
- TERAPIA CONSERVATIVA

OSSERVAZIONE

Piccole lesioni sospette senza crescita documentata

Volontà del paziente

To Find Small Ocular Melanoma

T thickness Spessore

F fluid liquido sottoretinico

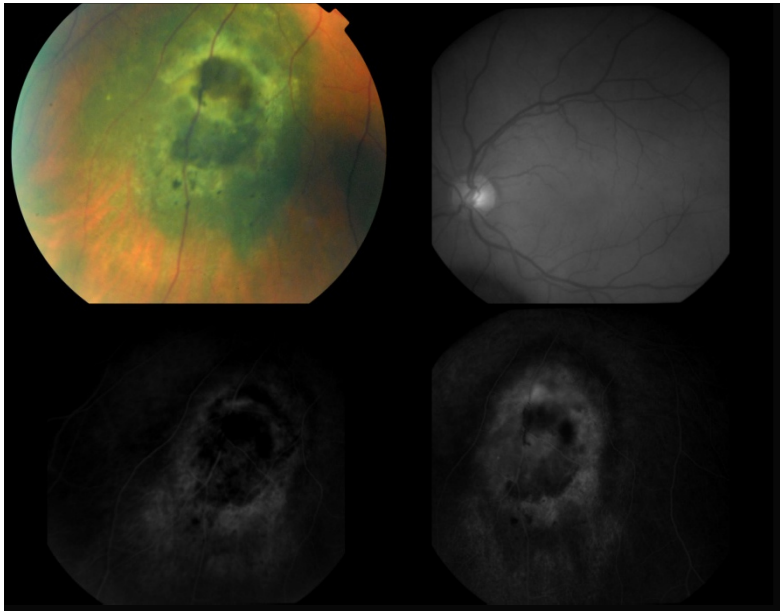
S symptom sintomi

O orange pigment pigmento arancio

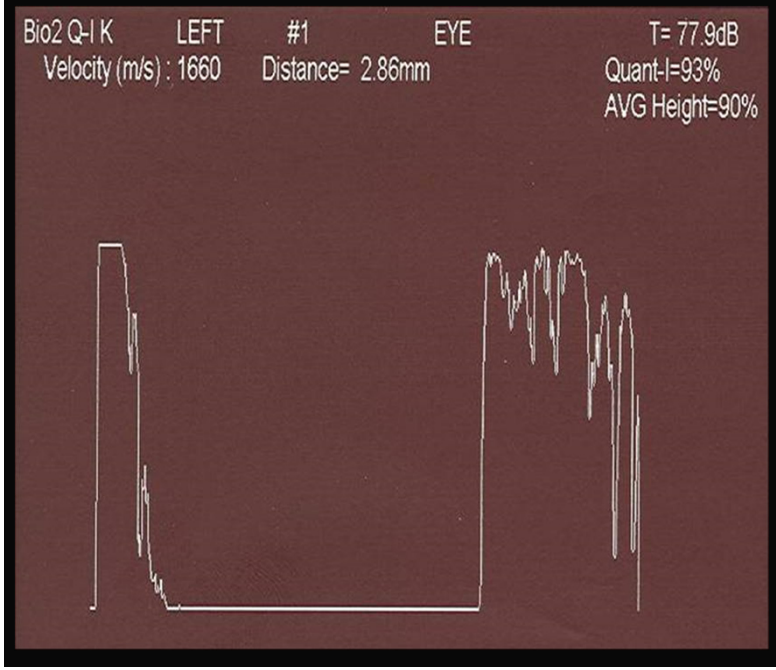
M margin touching optic disc margine tangente alla papilla

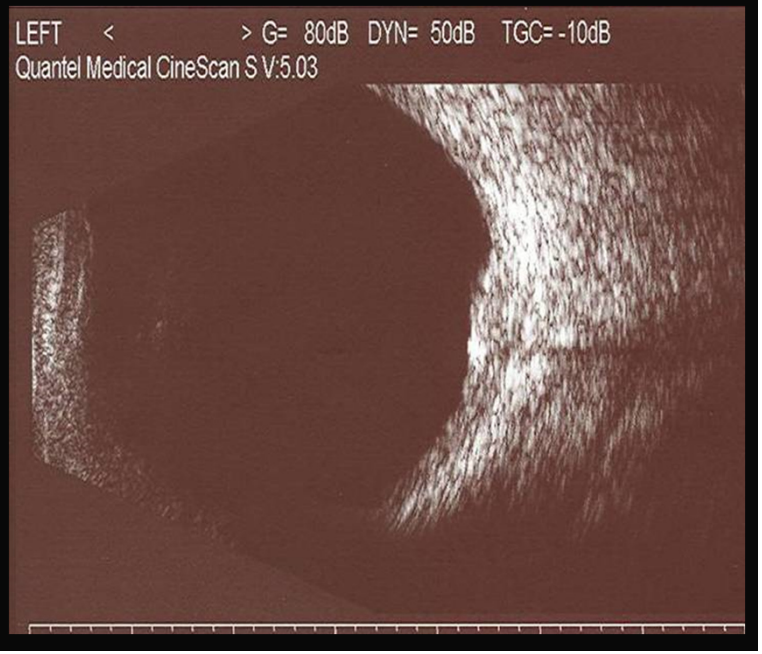
U ultrasonographic hollowness vuoto acustico

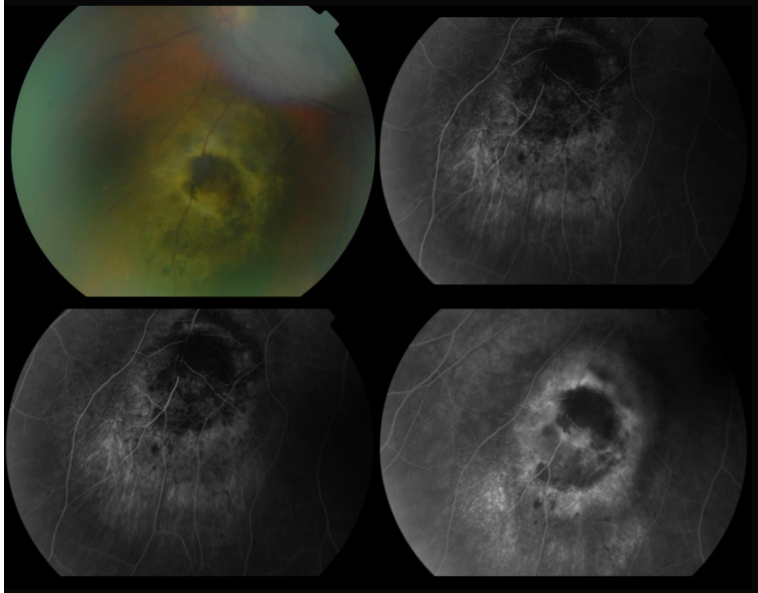
A absence of halo Assenza di alone



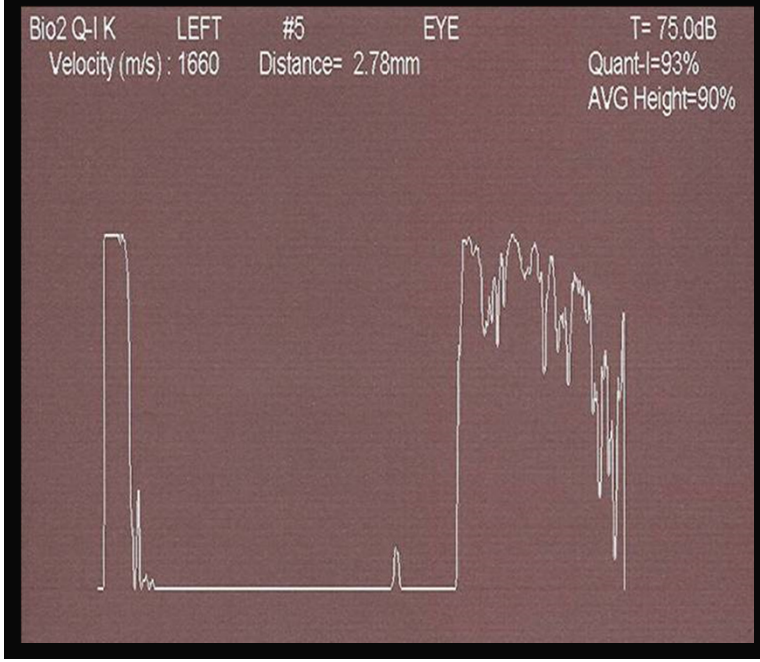
2004

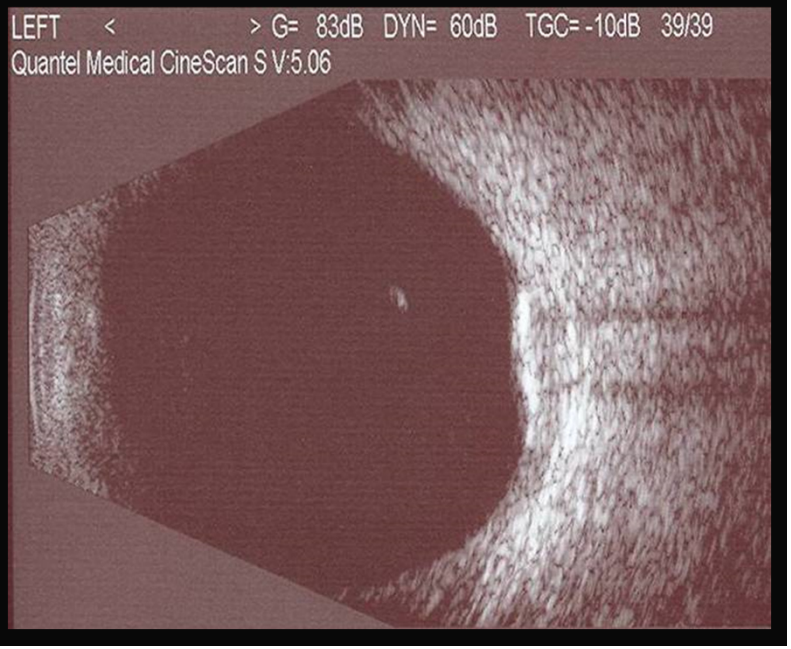

Bio2 Q-I K LEFT #1 EYE T= 77.9dB
Velocity (m/s) : 1660 Distance= 2.86mm Quant-I=93%
AVG Height=90%

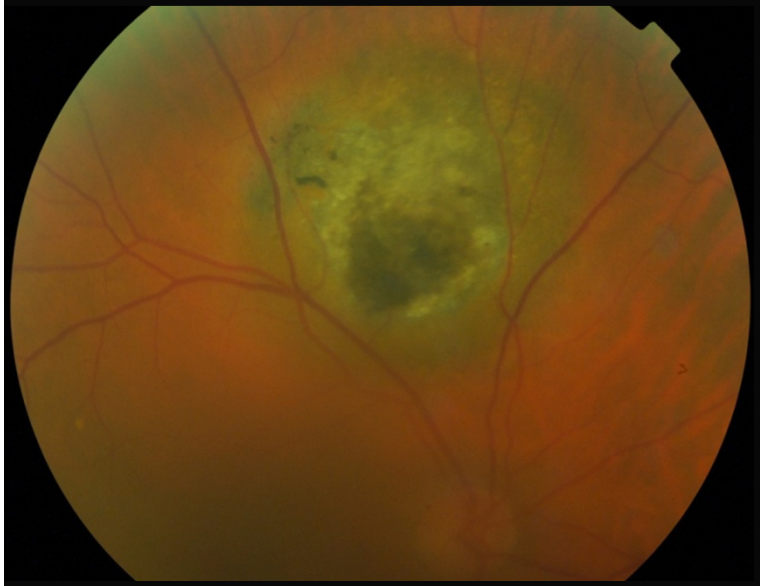

LEFT < > G= 80dB DYN= 50dB TGC= -10dB
Quantel Medical CineScan S V:5.03



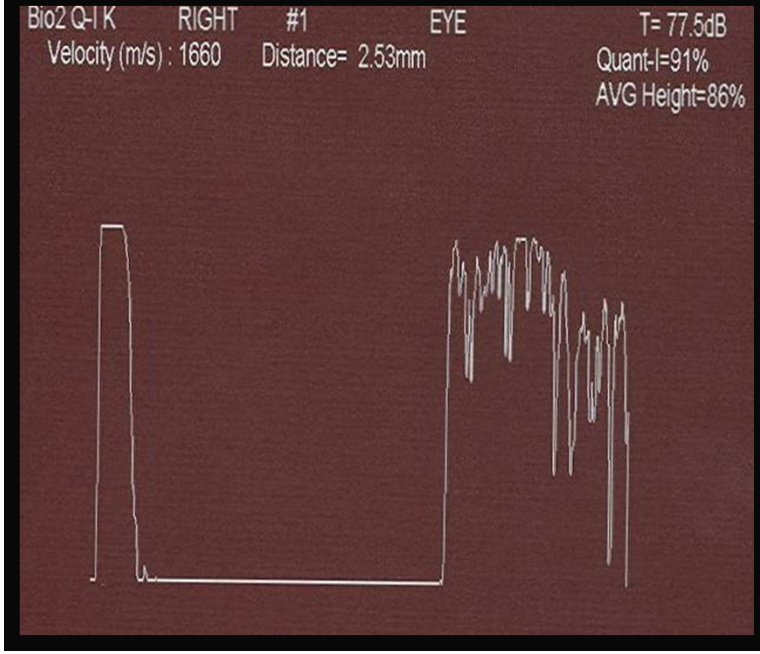
2011

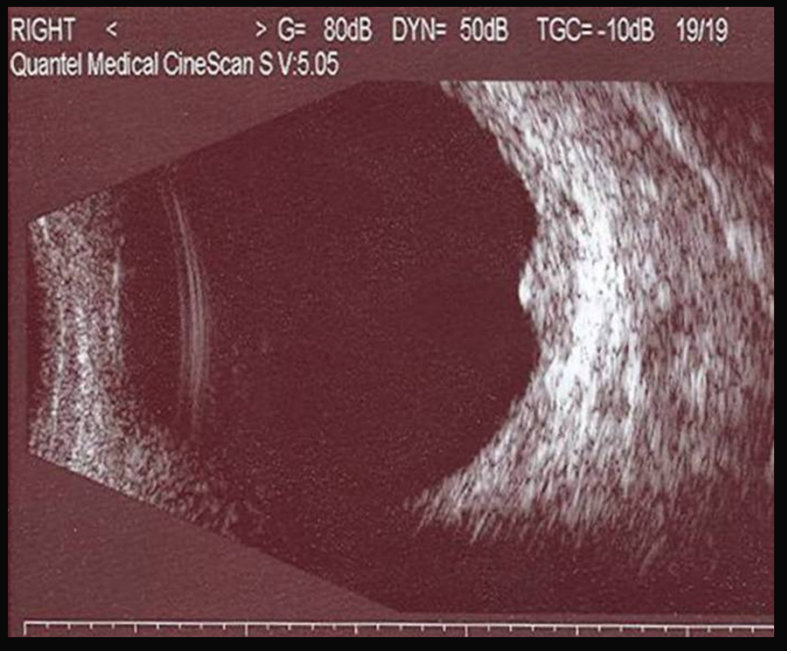

Bio2 Q-I K LEFT #5 EYE T= 75.0dB
Velocity (m/s) : 1660 Distance= 2.78mm Quant-I=93%
AVG Height=90%

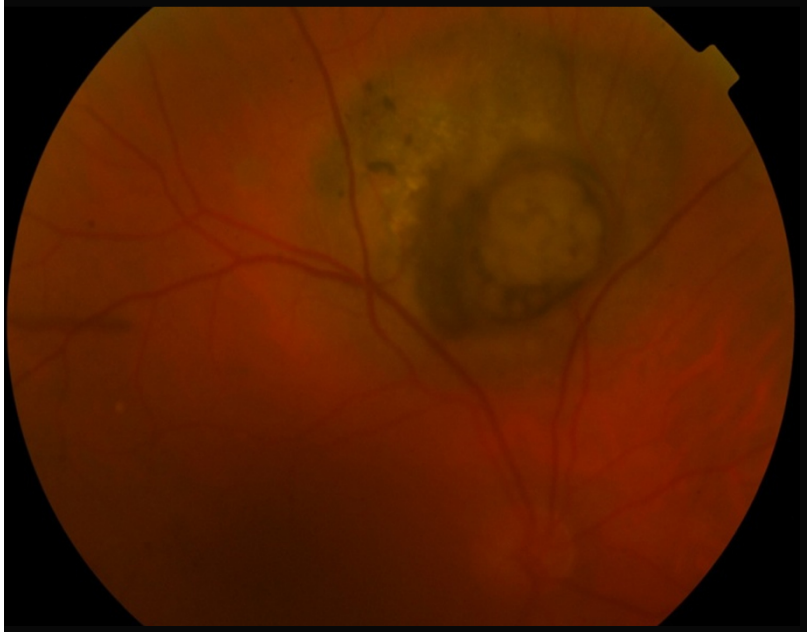

LEFT < > G= 83dB DYN= 60dB TGC= -10dB 39/39
Quantel Medical CineScan S V:5.06



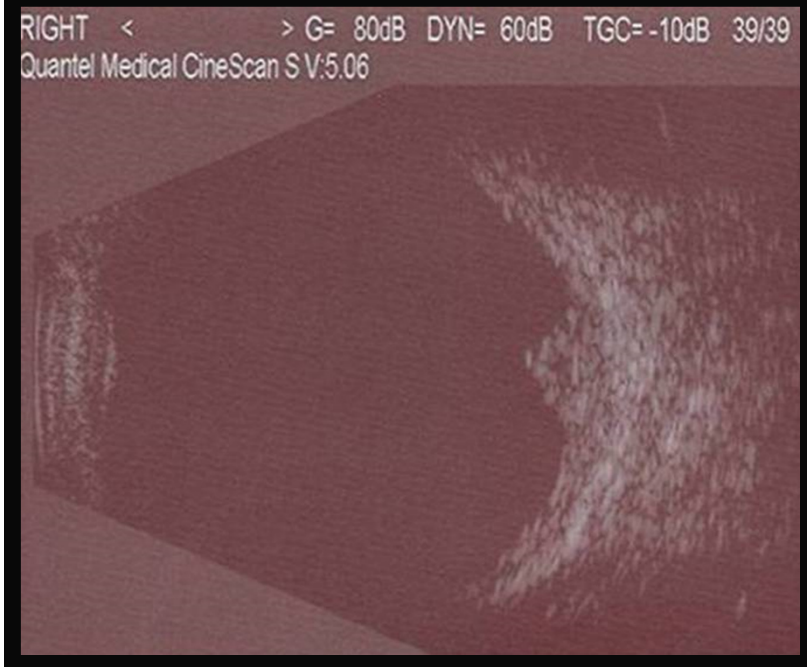
2009

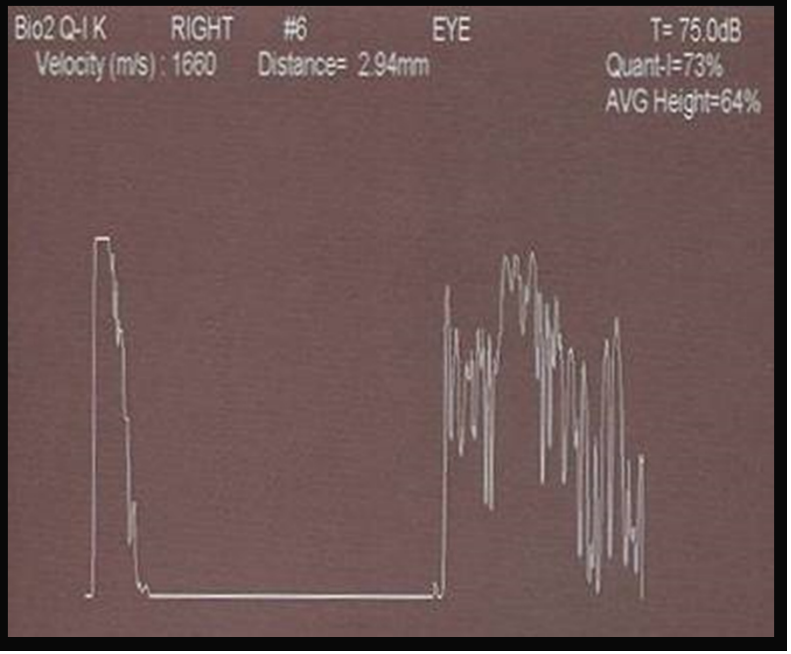

Bio2 Q-I K
RIGHT
#1
EYE
T= 77.5dB
Velocity (m/s) : 1660
Distance= 2.53mm
Quant-I=91%
AVG Height=86%


RIGHT
< > G= 80dB DYN= 50dB TGC= -10dB 19/19
Quantel Medical CineScan S V:5.05



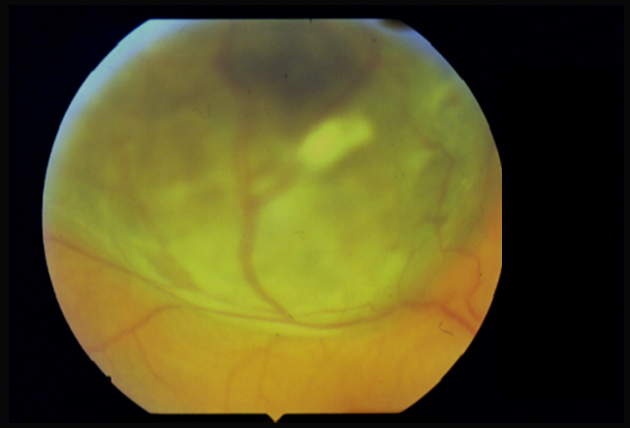
2011

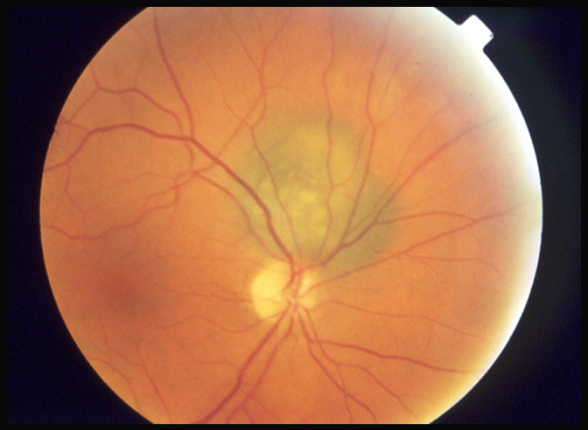

RIGHT < > G= 80dB DYN= 60dB TGC= -10dB 39/39
Quantel Medical CineScan S V:5.06


Bio2 Q-I K RIGHT #6 EYE T= 75.0dB
Velocity (m/s) : 1660 Distance= 2.94mm
Quant-I=73%
AVG Height=64%

TERAPIA DEMOLITIVA

- Estrinsecazione extrabulbare
- Lesioni di grosse dimensioni con complicanze
- Lesioni coinvolgenti la papilla ottica
- Volontà del paziente





TERAPIA CONSERVATIVA

TERAPIA CONSERVATIVA

Tasso di sopravvivenza
(a 10 anni)

- 81% Enucleazione

- 82% Brachiterapia

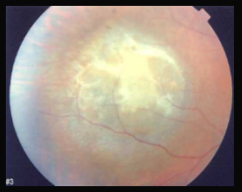
Prognosi (Mortalità)

- 35% a 5 anni
- 57% a 10 anni
- 60% a 25 anni

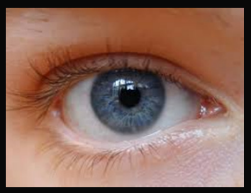
La terapia conservativa in Italia

OBIETTIVI DELLA TERAPIA CONSERVATIVA

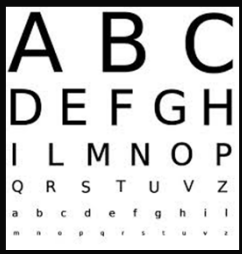
- **DISTRUZIONE DEL TUMORE**



- MANTENIMENTO DELL'INTEGRITA' ANATOMICA



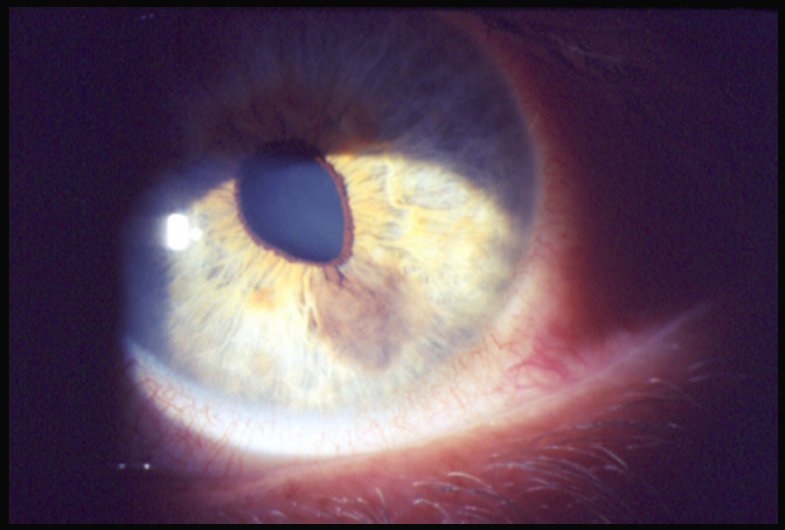
- MANTENIMENTO DELLA FUNZIONE VISIVA

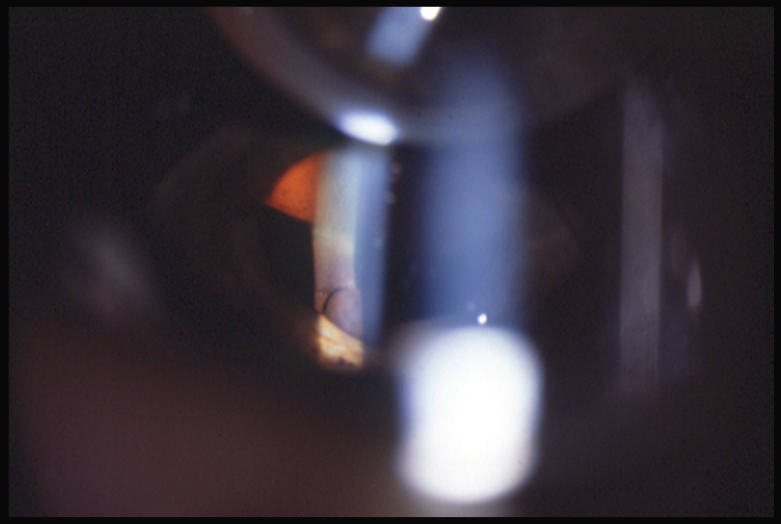


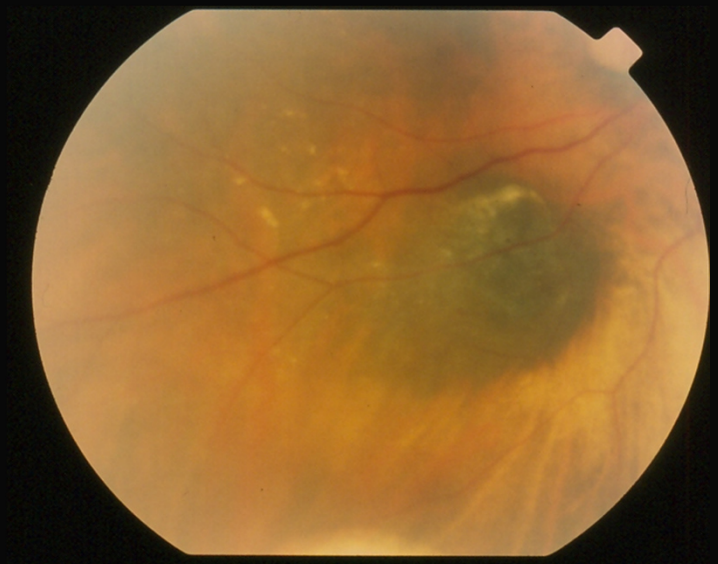
TERAPIA CONSERVATIVA

- Tumorectomia
- TTT
- Acceleratore lineare di particelle
- Brachiterapia
- Altre

TUMORECTOMIA



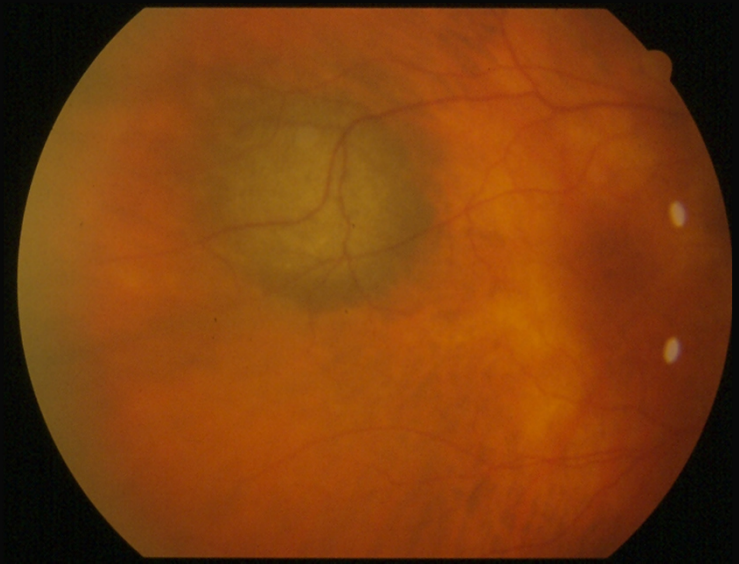




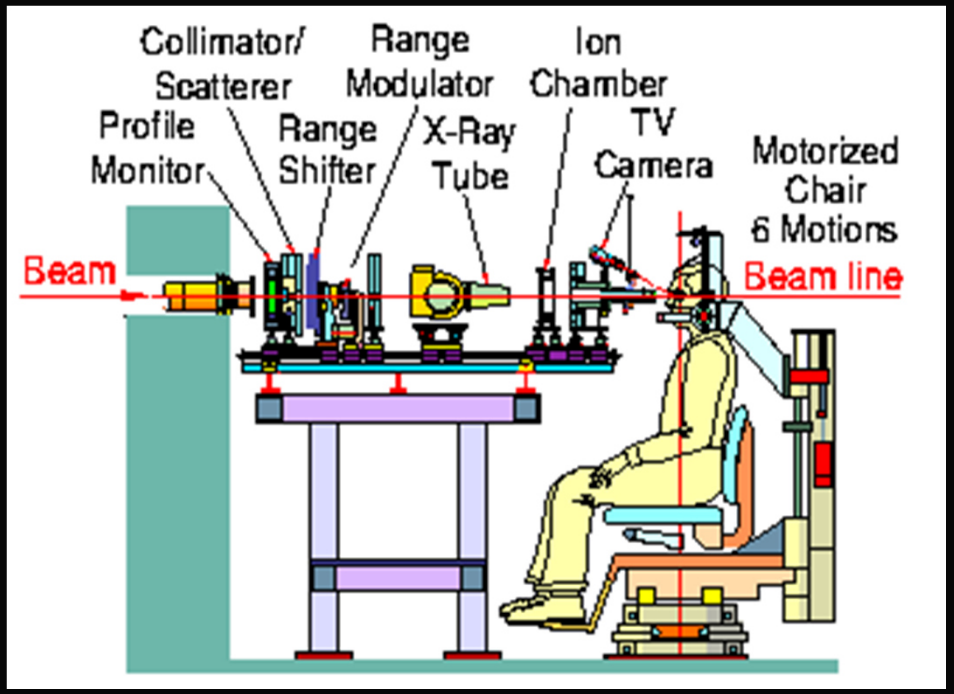
TermoTerapia Trans Pupillare

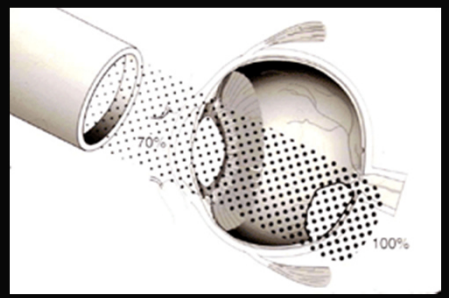
T T T

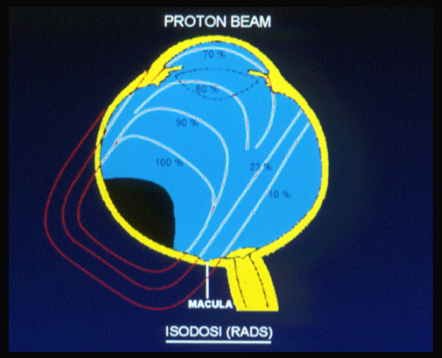
- Tumori al polo posteriore
- Spessore inferiore o uguale a 3 mm
- Terapia sandwich

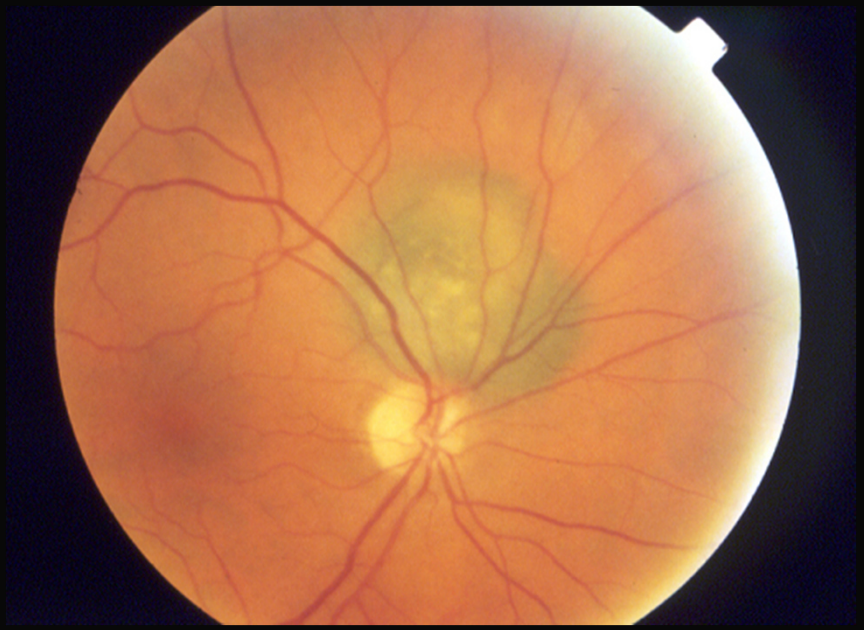


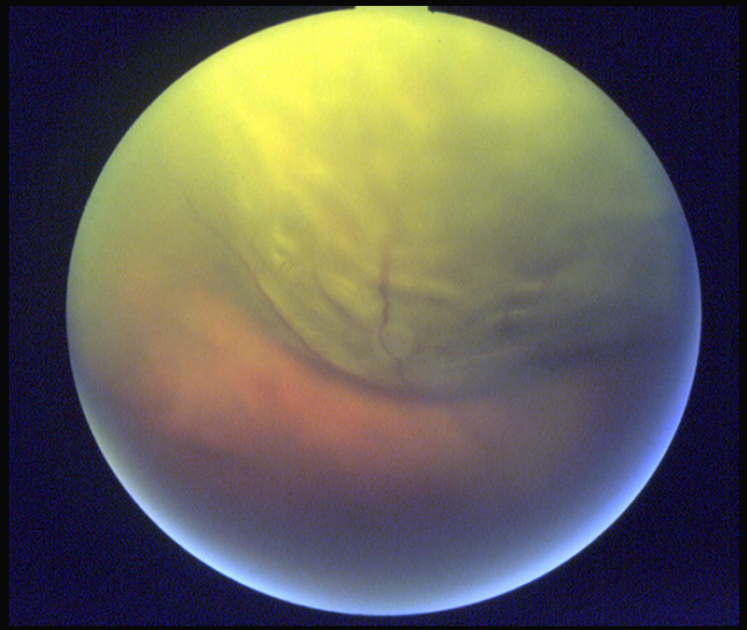
ACCELERATORE LINEARE

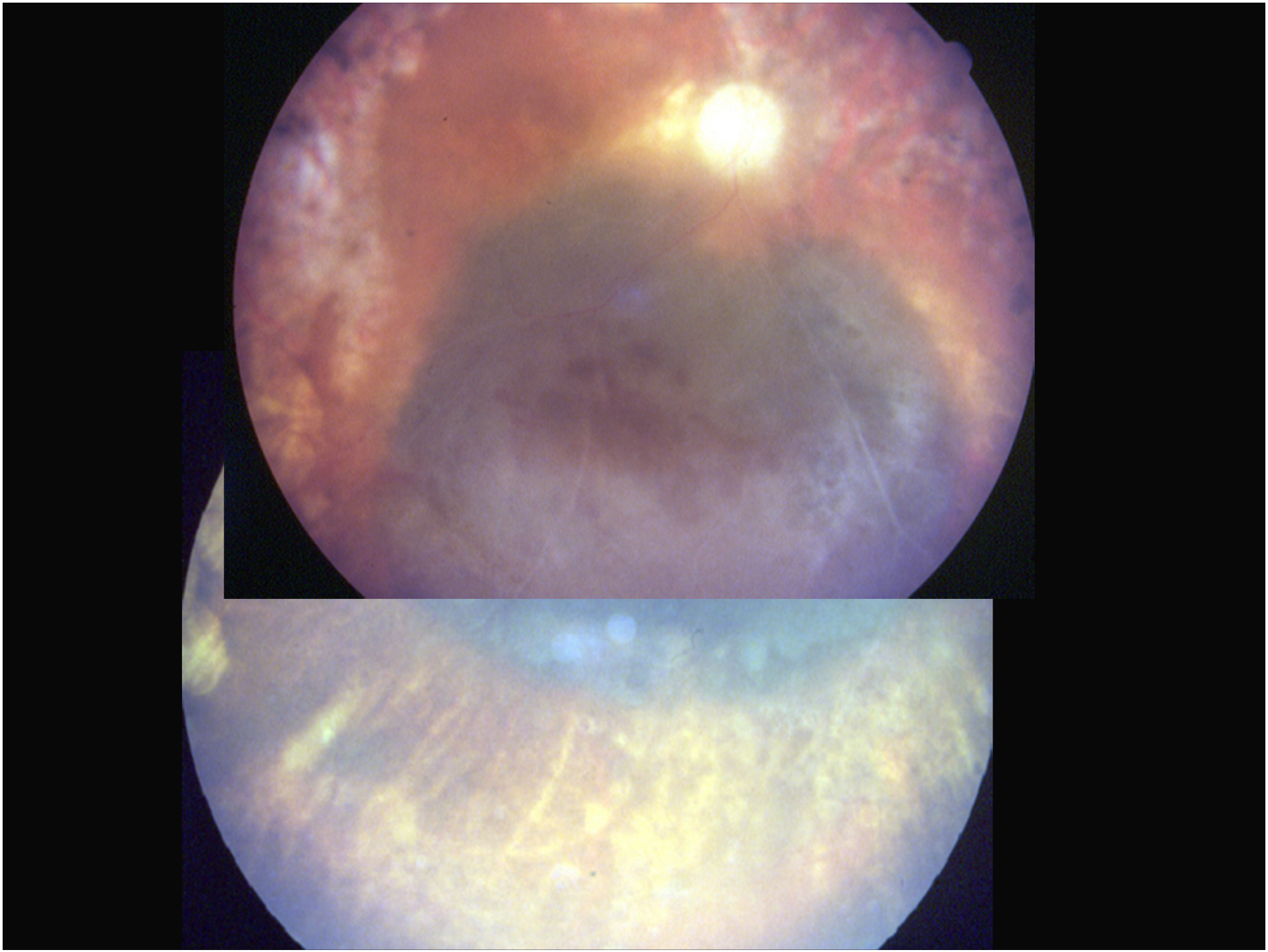












BRACHITERAPIA

(CO60,I125,RU106,PD103)

Il termine brachiterapia deriva dal greco antico *brakiùs* (corto, corta distanza in questo caso).

Una placca radioattiva emanante un'alta concentrazione di dose radiante viene applicata sulla sclera in corrispondenza della lesione tumorale

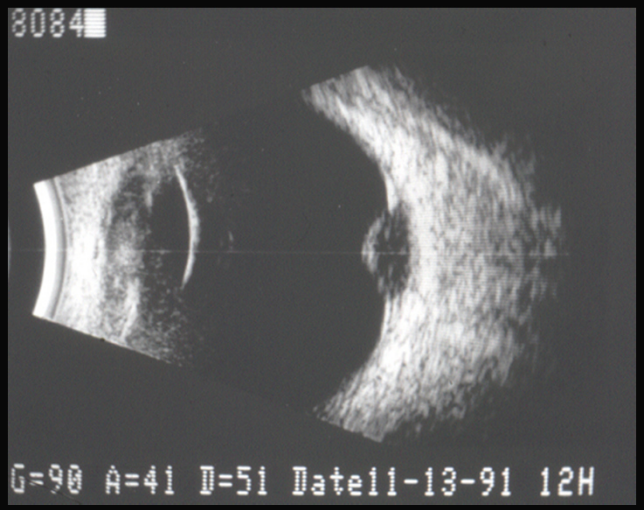
Risparmiando con relativa efficacia i tessuti sani circostanti.

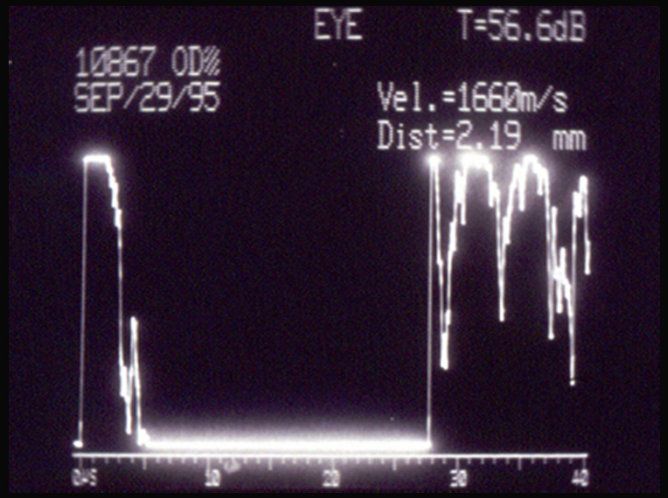
Scelta del Radionuclide

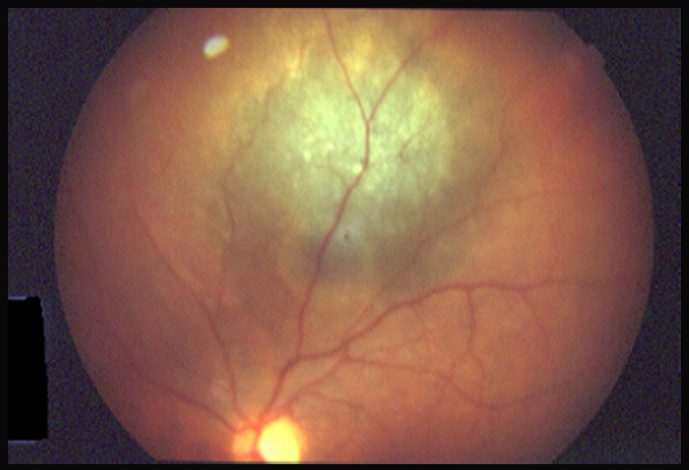
Simbolo	Emivita	Energia media	Dose/superficie	Dose/superficie in acqua	Costo
Co-60	5.26 anni	1.25	1.2	108	basso
I-125	59.6 gg	0.028	0.002	20	medio
Ru/Rh-106	367 gg	3.5	E=1800mg/cm^2	24	alto
Pd-103	17 gg	0.021	0.0004	15	medio

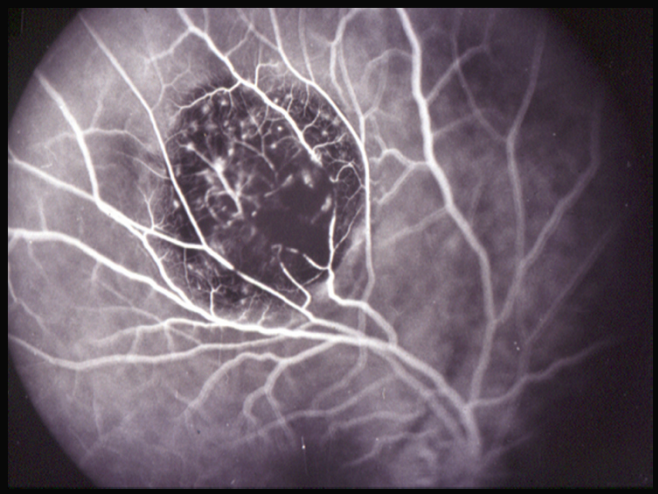
CRITERI DI CLASSIFICAZIONE CLINICA DEL MELANOMA DELL'UVEA

	BASE D'IMPIANTO (mm)	SPESSORE (mm)
MOLTO PICCOLO	INFERIORE O UGUALE A 7	INFERIORE O UGUALE A 2
PICCOLO	MAGGIORE DI 7 FINO A 10	MAGGIORE DI 2 FINO A 3
MEDIO	MAGGIORE DI 10 FINO A 15	MAGGIORE DI 3 FINO A 5
GRANDE	MAGGIORE DI 15	MAGGIORE DI 5


8084
G=90 A=41 D=51 Date11-13-91 12H


EYE
T=56.6dB
10867 OD
SEP/29/95
Vel.=1660m/s
Dist=2.19 mm





Fattori importanti per la prognosi

- Acuità visiva pre-trattamento
- Altezza e dimensioni melanoma pre-trattamento
- Distacco di retina
- Diabete

Localizzazioni secondarie (Metastasi)

- Fegato (92%)
- Polmone (31%)
- Scheletro (23%)
- Cute (17%)
- S N C (4%)

Tempo di comparsa: da 2 mesi a 30 anni

ESAMI PRELIMINARI

- **ECOGRAFIA EPATICA**
- TRANSAMINASI
- GAMMA-GLUTAMIL TRASFERASI
- FOSFATASI ALCALINA
- QUADRO SIEROPROTEICO
- FERRITINA
- RX TORACE
- SCINTIGRAFIA TOTAL BODY

UNITA' SANITARIA LOCALE n. 31
FERRARA

Servizio di Fisica Sanitaria
Direttore Dr. G. Candini

RICHIESTA DI CONSULENZA FISICO-DOSIMETRICA PER IL TRATTAMENTO DEI TUMORI OFTALMICI

Nome ..... data di nascita / /

Tipo di neoplasia .....

Sede anatomica .....

BERSAGLIO

Profondita' lungo l'asse principale ..... mm

Diametro orizzontale ..... mm Diametro verticale ..... mm

Data dell'intervento / /

Dose da erogare all'apice ..... rad pari a ..... Gy

Dose massima accettabile alla base ..... rad pari a ..... Gy

Data / / Firma del richiedente

.....

scegliere l'applicatore sul retro --->

TIPO DI APPLICATORE

RKA.1 □ RKA.2 □ RKA.3 □

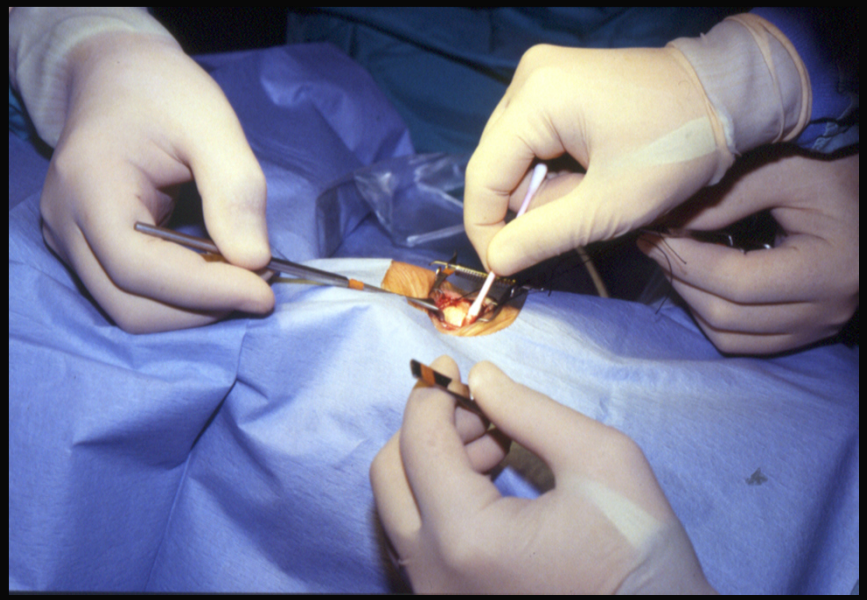
Applicatore	diametro esterno (mm)	bordo inattivo (mm)	raggio della sfera (mm)
RKA1	15.5	0.7	12
RKA2	20	0.7	12
RKA3	25	0.7	13

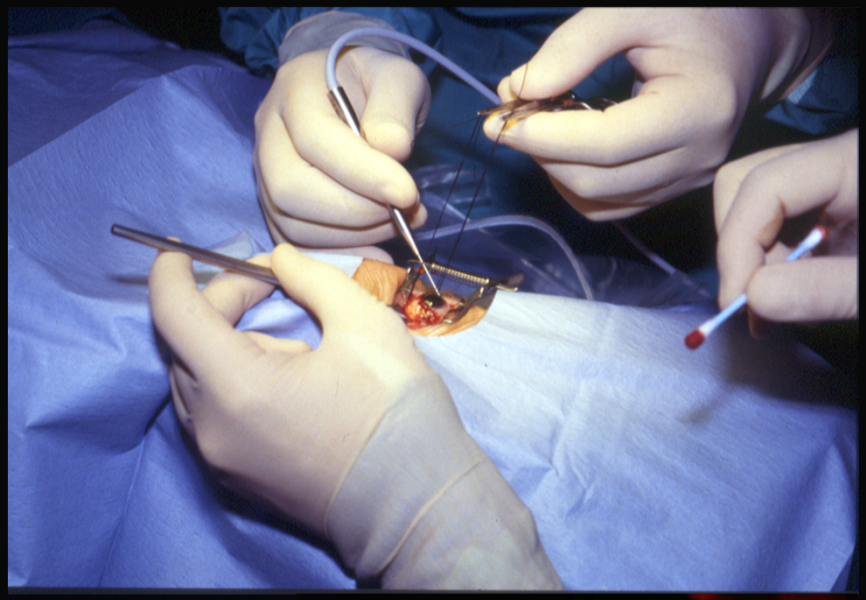
RKA.6 □ RKA.7 □

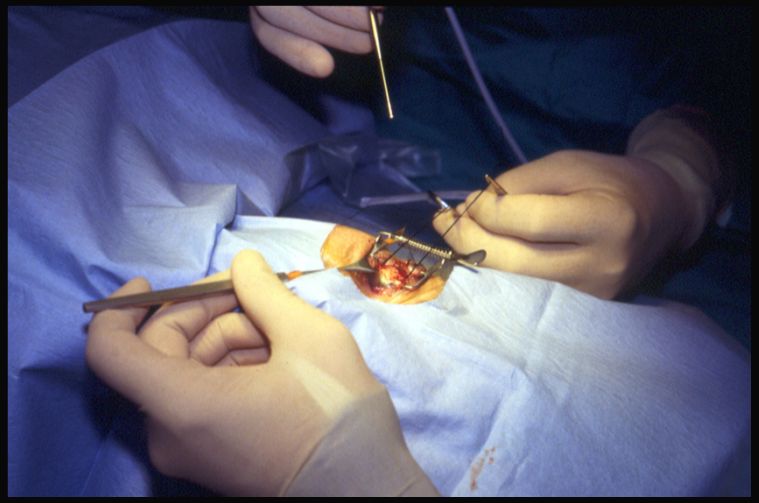
Applicatore	diametro esterno (mm)	bordo inattivo (mm)	raggio della sfera (mm)
RKA6	15.5	0.7	12
RKA7	20	0.7	12

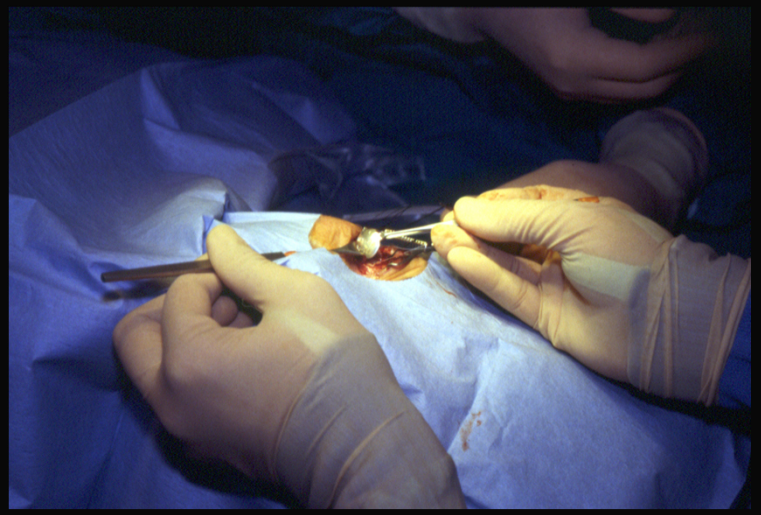
RKA.9 □

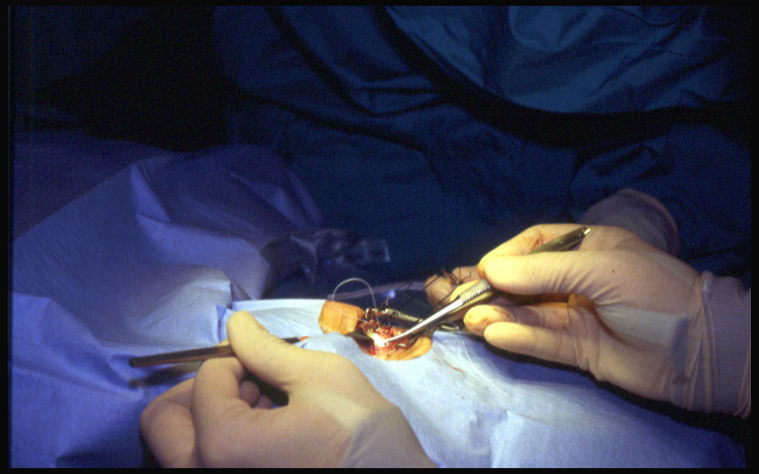
Applicatore	diametro esterno (mm)	bordo inattivo (mm)	raggio della sfera (mm)
RKA9	11.5	0.7	12

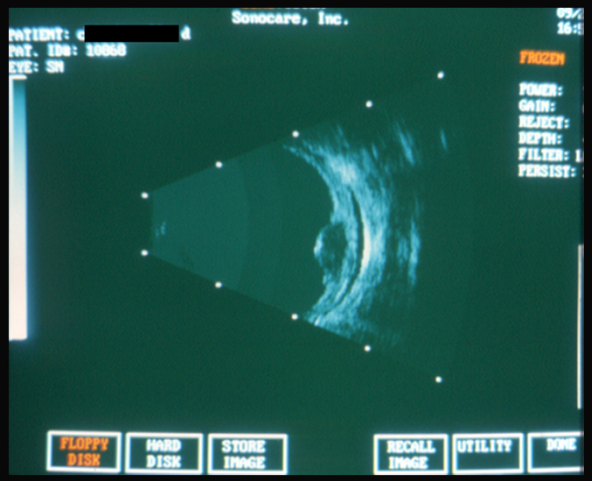











Sonocare, Inc.
FROZEN
POWER:
GAIN:
REJECT:
DEPTH:
FILTER:
PERSIST:
FLOPPY DISK
HARD DISK
STORE IMAGE
RECALL IMAGE
UTILITY
DONE

PROTOCOLLO DEI CONTROLLI POST TRATTAMENTO

OFTALMOSCOPIA

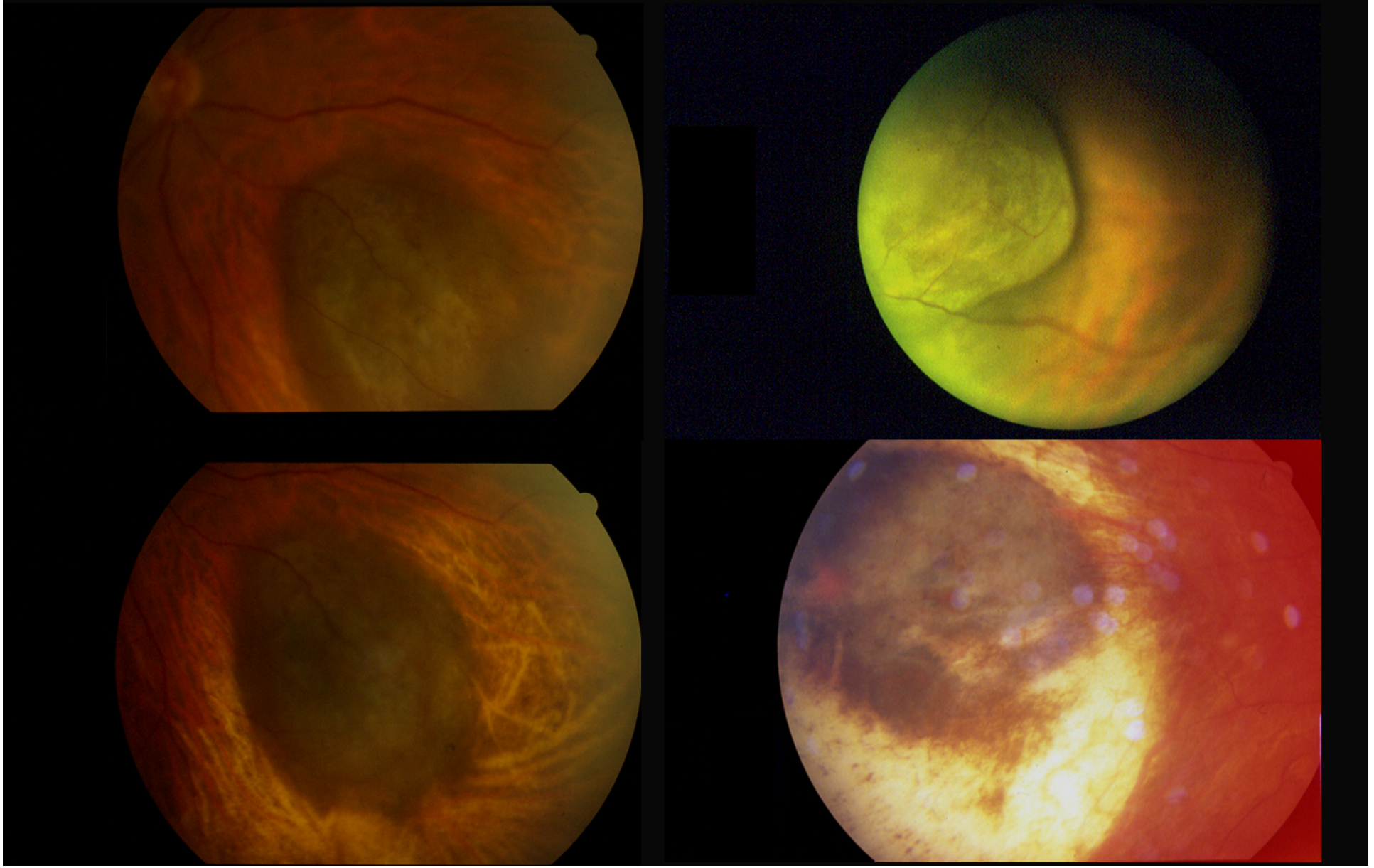
ECOGRAFIA

FLUORANGIOGRAFIA

- 1 MESE
- 3 MESI
- OGNI 3 MESI PER I PRIMI 2 ANNI
- OGNI 6 MESI FINO A CINQUE ANNI

OFTALMOSCOPIA

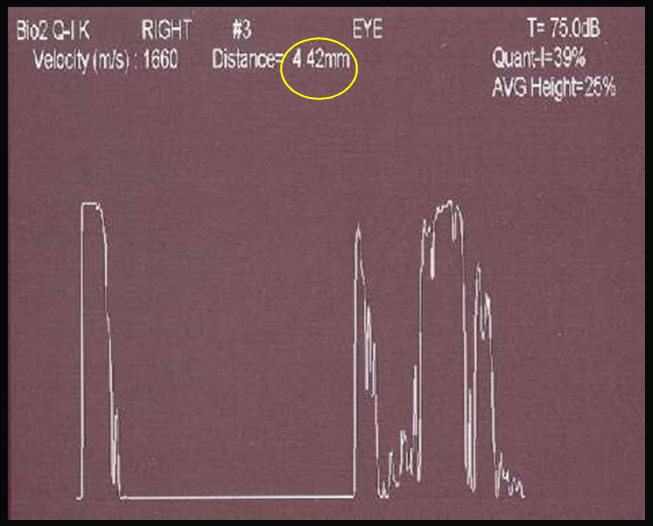
OFTALMOSCOPIA

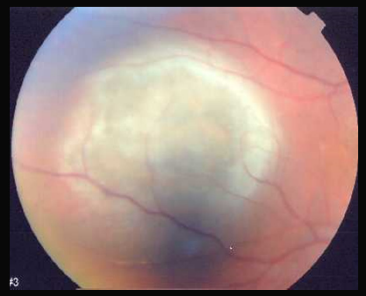


ECOGRAFIA

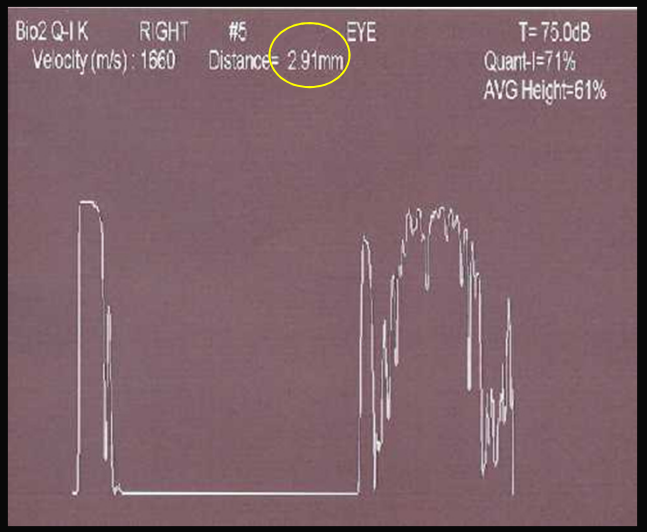
Spessore

Reflettività

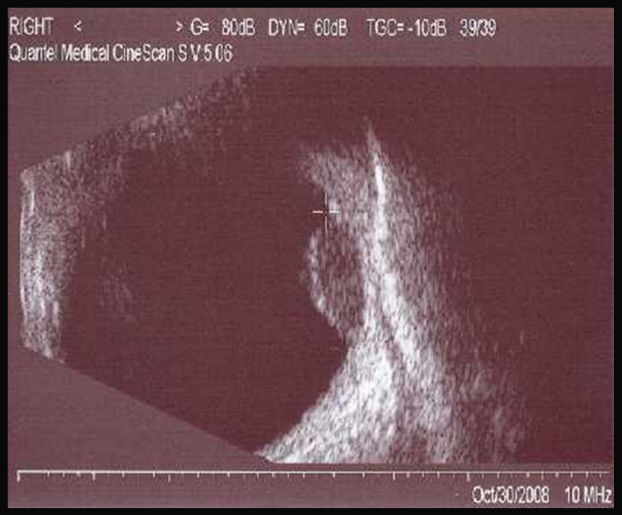


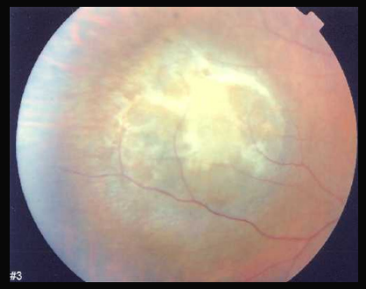


A-scan: lesione a reflettivita interna bassa Compatibile con Melanoma della Coroide. Biometria

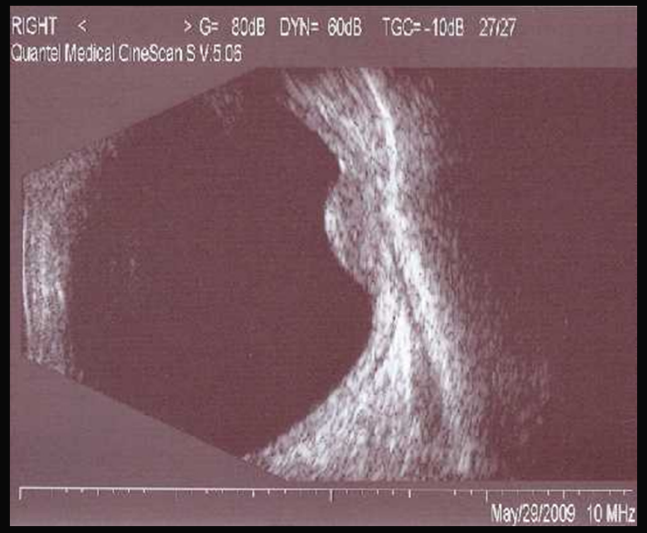


A-scan follow-up (6mesi): Riduzione dello spessore aumento della reflettività interna. Buoni indici di regressione

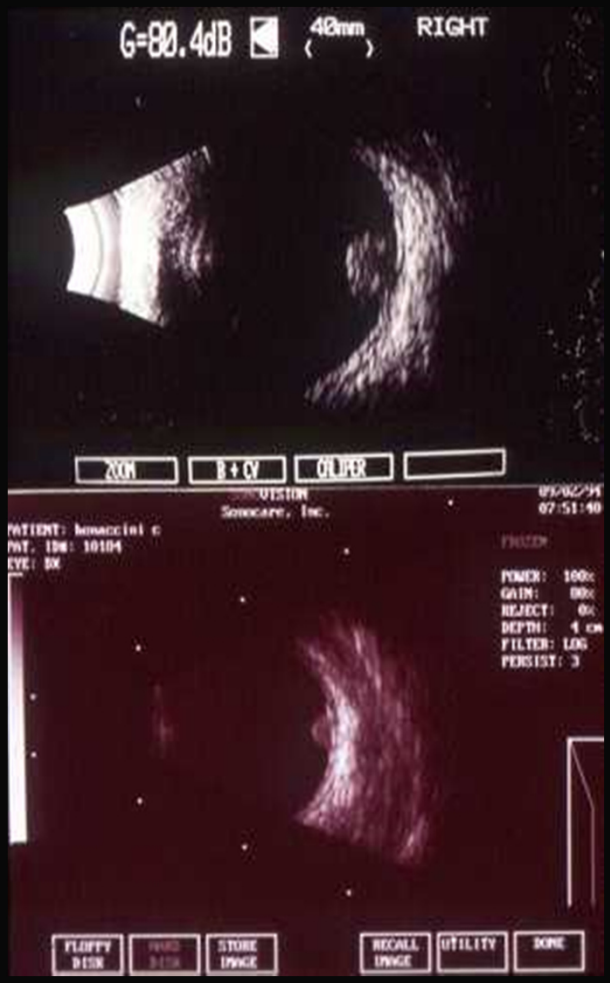


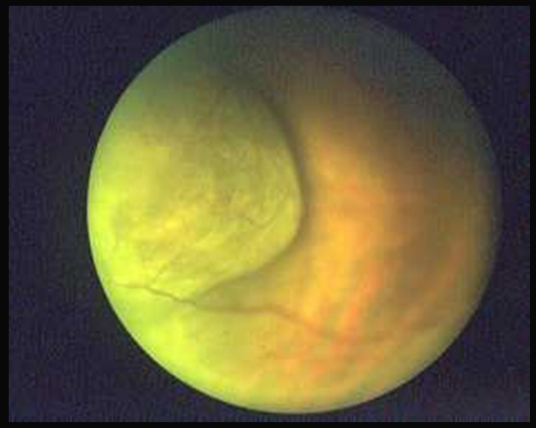


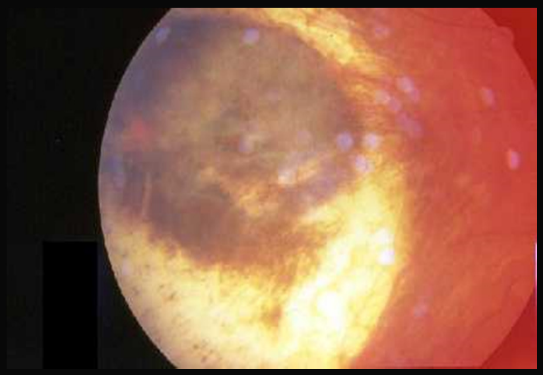
B-scan: lesione solida cupoliforme con evidente "escavazione coroideale" buona trasmissione del suono compatibile con Melanoma della Coroide. Misura della base di impianto

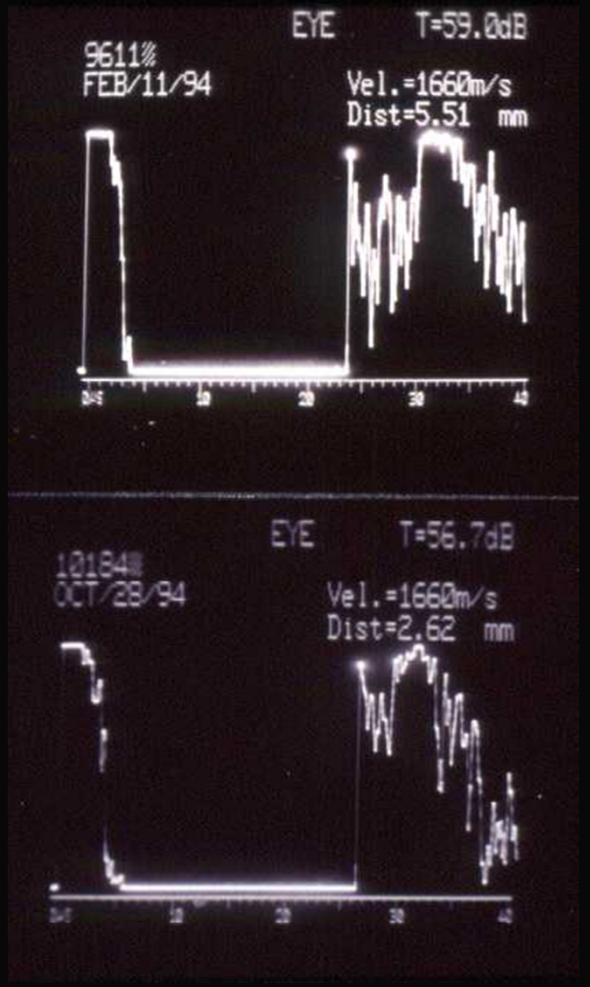


B-scan follow-up (6 mesi): Riduzione delle dimensioni aumento dell' ecogenicità scomparsa dell'escavazione. Buoni indici di regressione

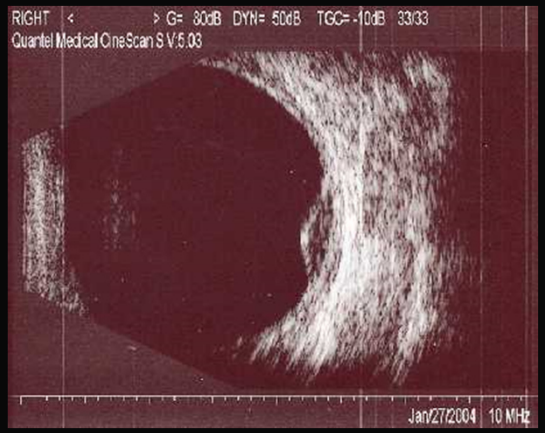

G=80.4dB
40mm
RIGHT
ZOOM
B+CV
CALIPER
VISION
Sonocare, Inc.
09/02/94
07:51:40
POWER: 100%
GAIN: 80%
REJECT: 0%
DEPTH: 4 cm
FILTER: LOG
PERSIST: 3
FLOPPY DISK
STORE IMAGE
RECALL IMAGE
UTILITY
DONE



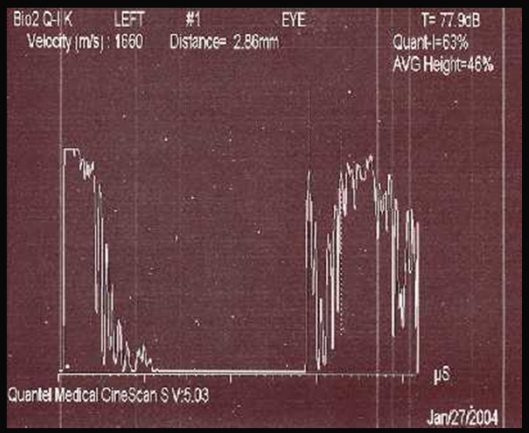



EYE
T=59.0dB
9611%
FEB/11/94
Vel.=1660m/s
Dist=5.51 mm
EYE
T=56.7dB
10184%
OCT/28/94
Vel.=1660m/s
Dist=2.62 mm

COR. Gennaio 2004

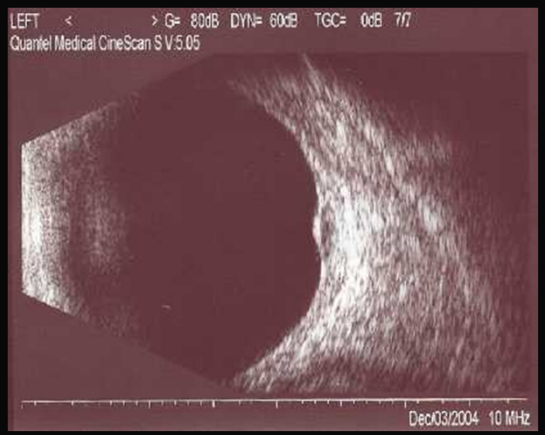


B-scan: lesione solida cupoliforme con evidente "escavazione coroideale" buona trasmissione del suono compatibile con Melanoma della Coroide.

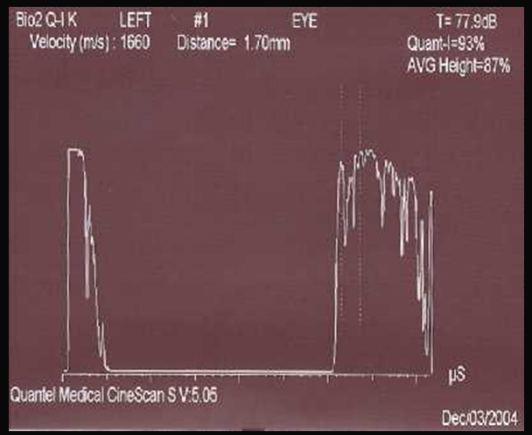


A-scan: lesione a reflettivita interna bassa Compatibile con Melanoma della Coroide. Biometria

COR. Dicembre 2004

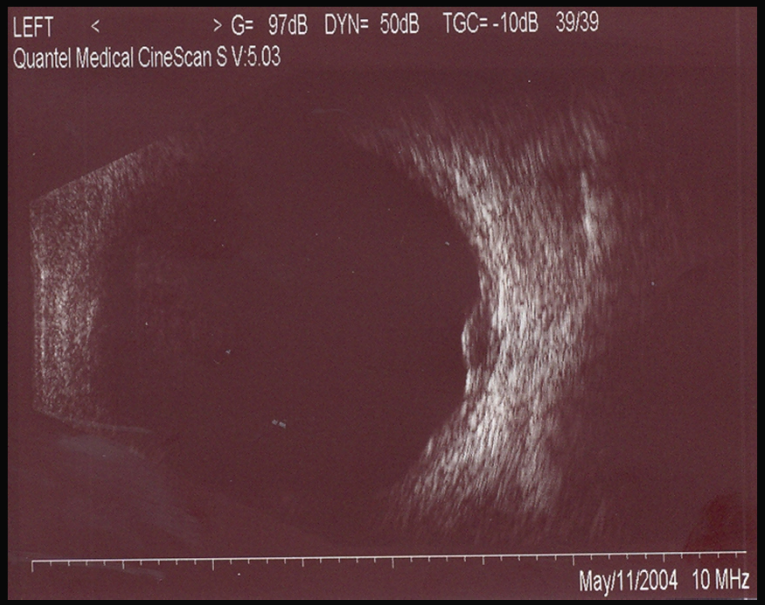


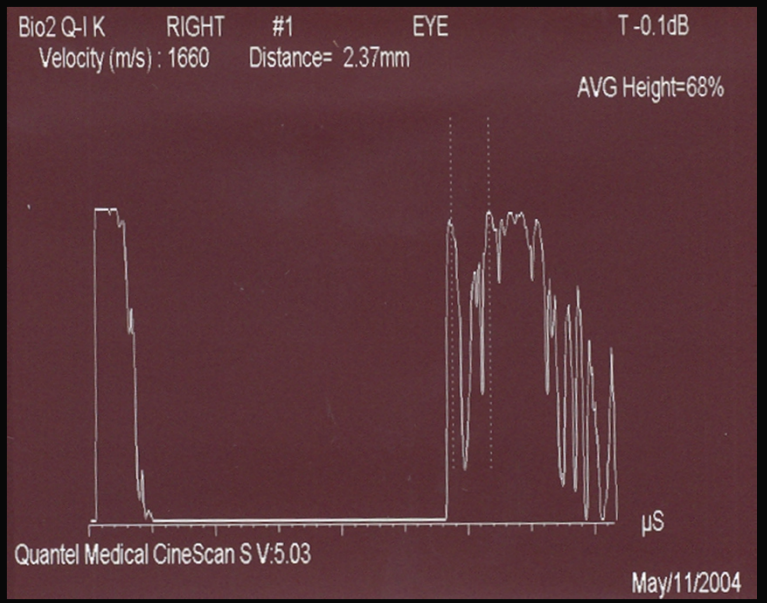
B-scan follow-up (1 anno): Riduzione delle dimensioni aumento dell' ecogenicità scomparsa dell'escavazione. Buoni indici di regressione

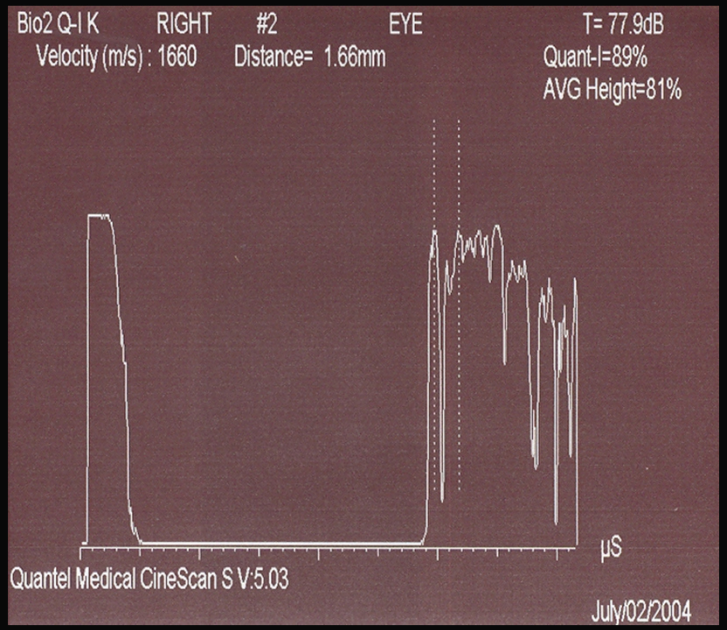


A-scan follow-up (1 anno): Riduzione dello spessore aumento della reflettività interna. Buoni indici di regressione

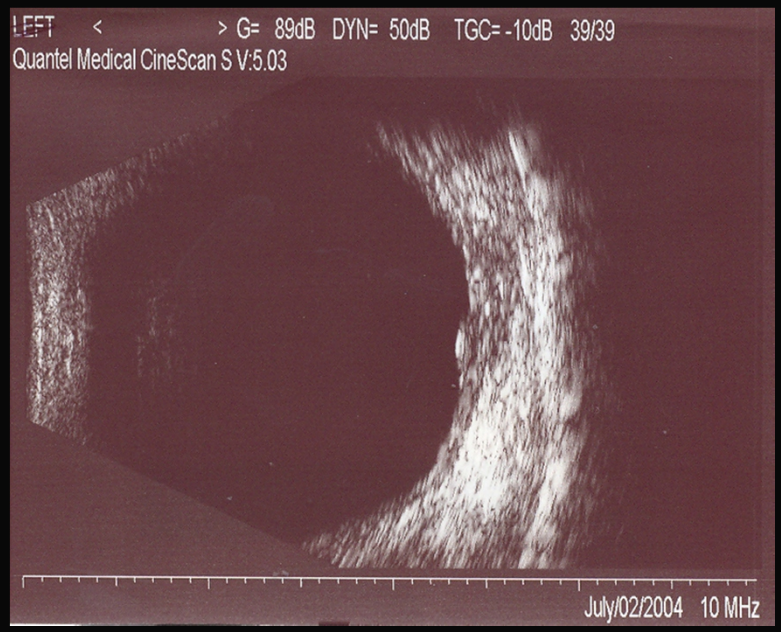
GRE. Maggio 2004

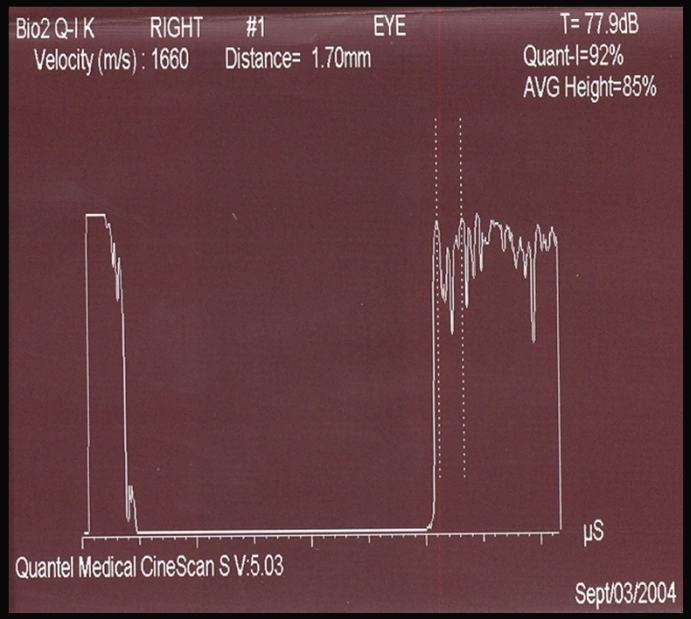






GRE. Luglio 2004





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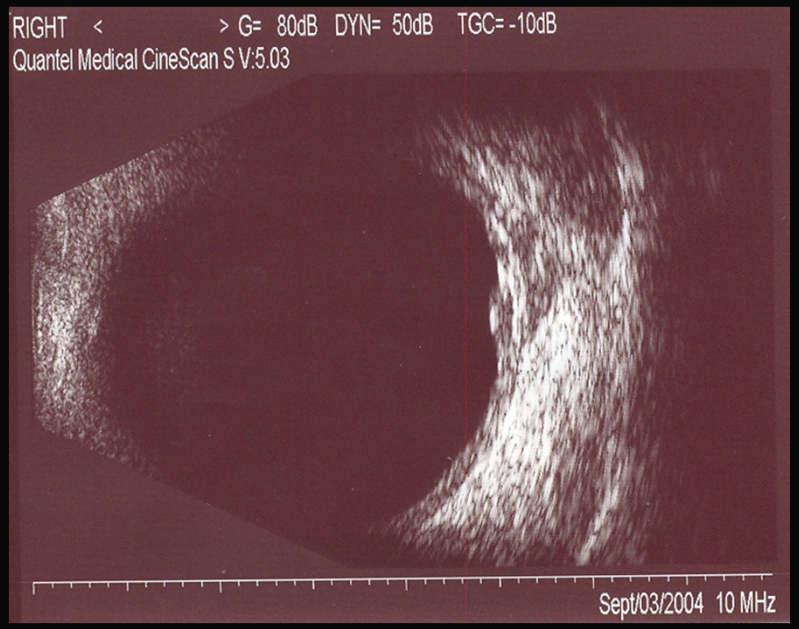

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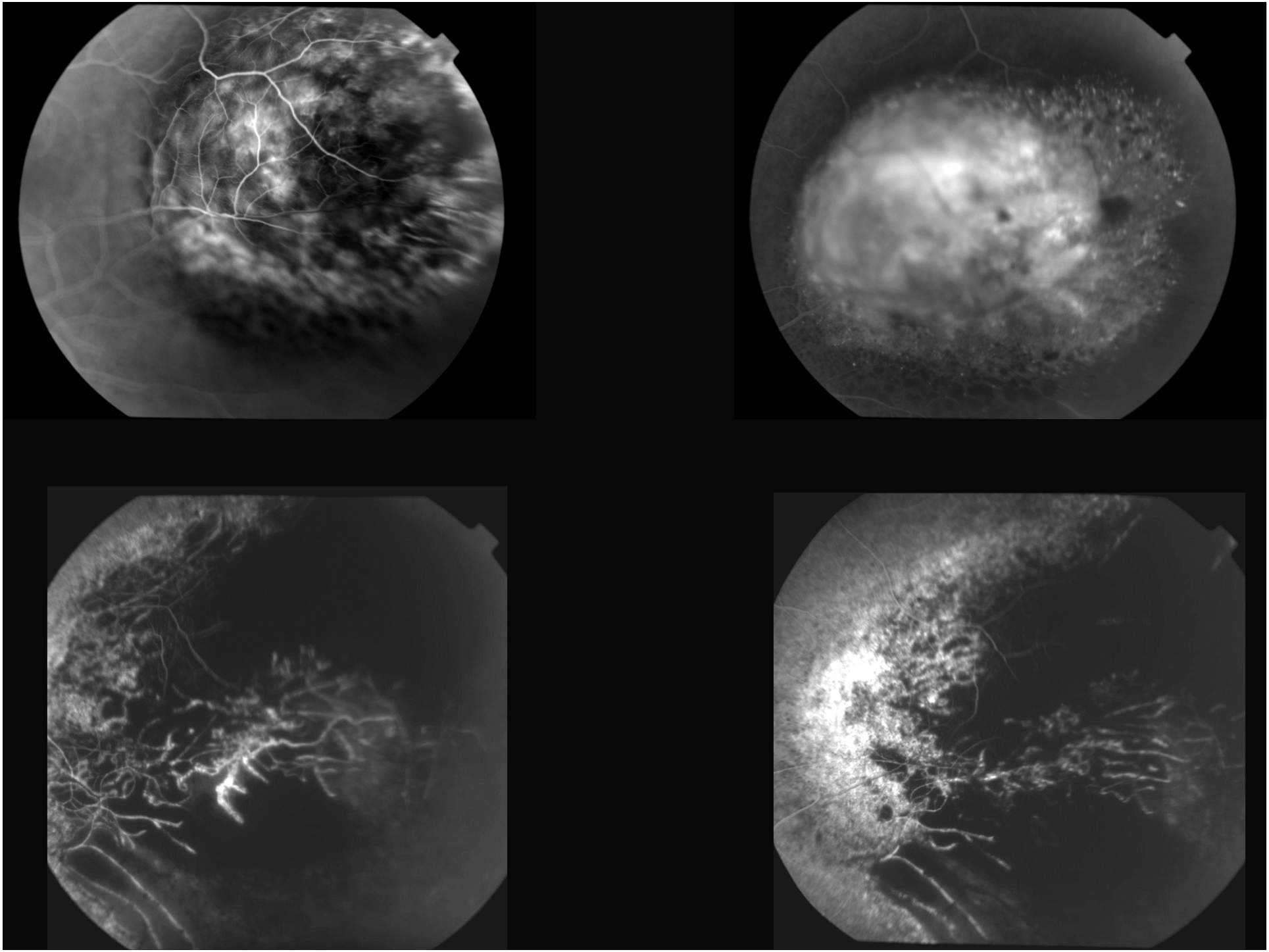
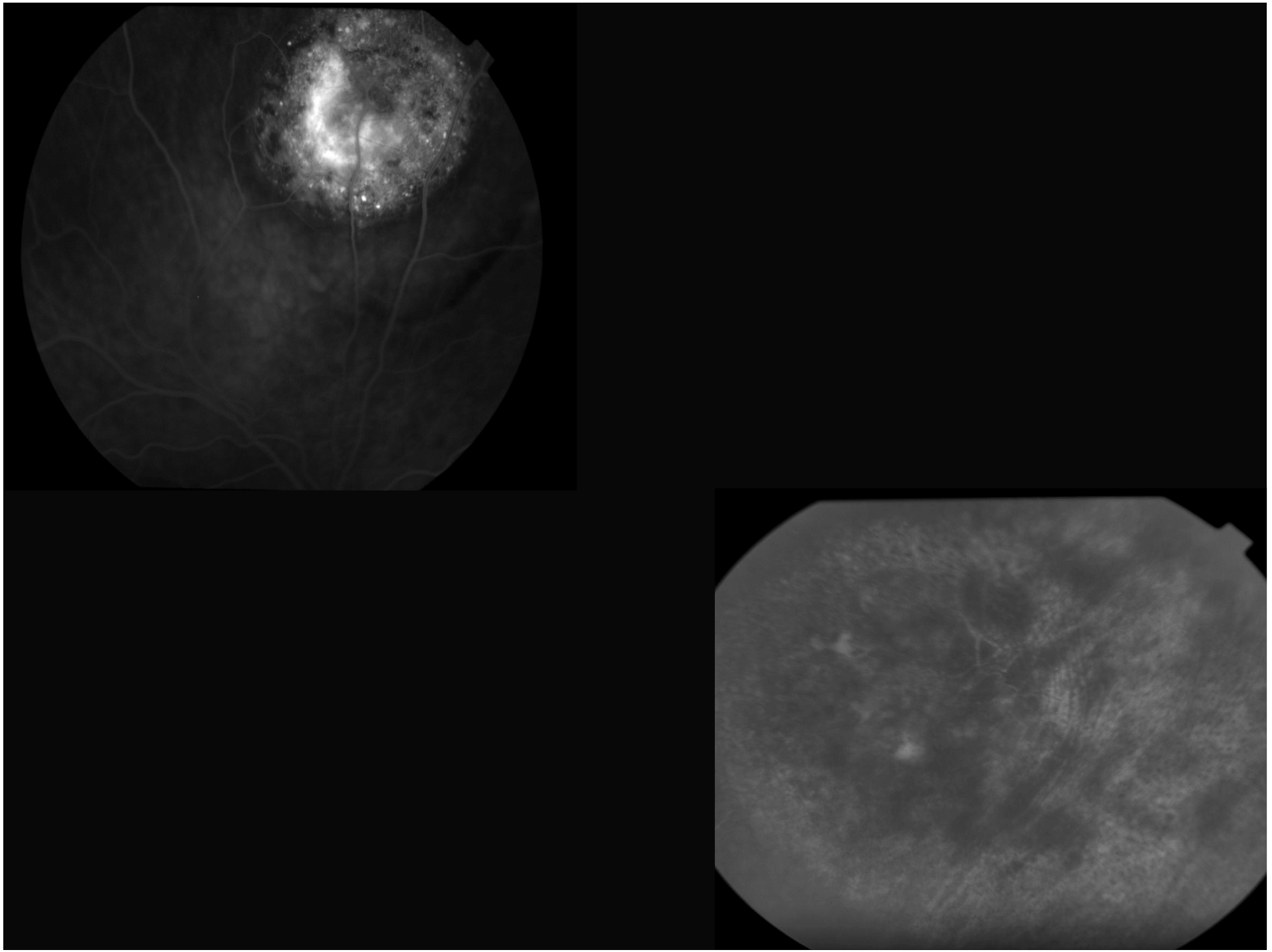




FOLLOW UP

- OGNI 6 MESI PER I PRIMI DUE ANNI
- POI OGNI ANNO

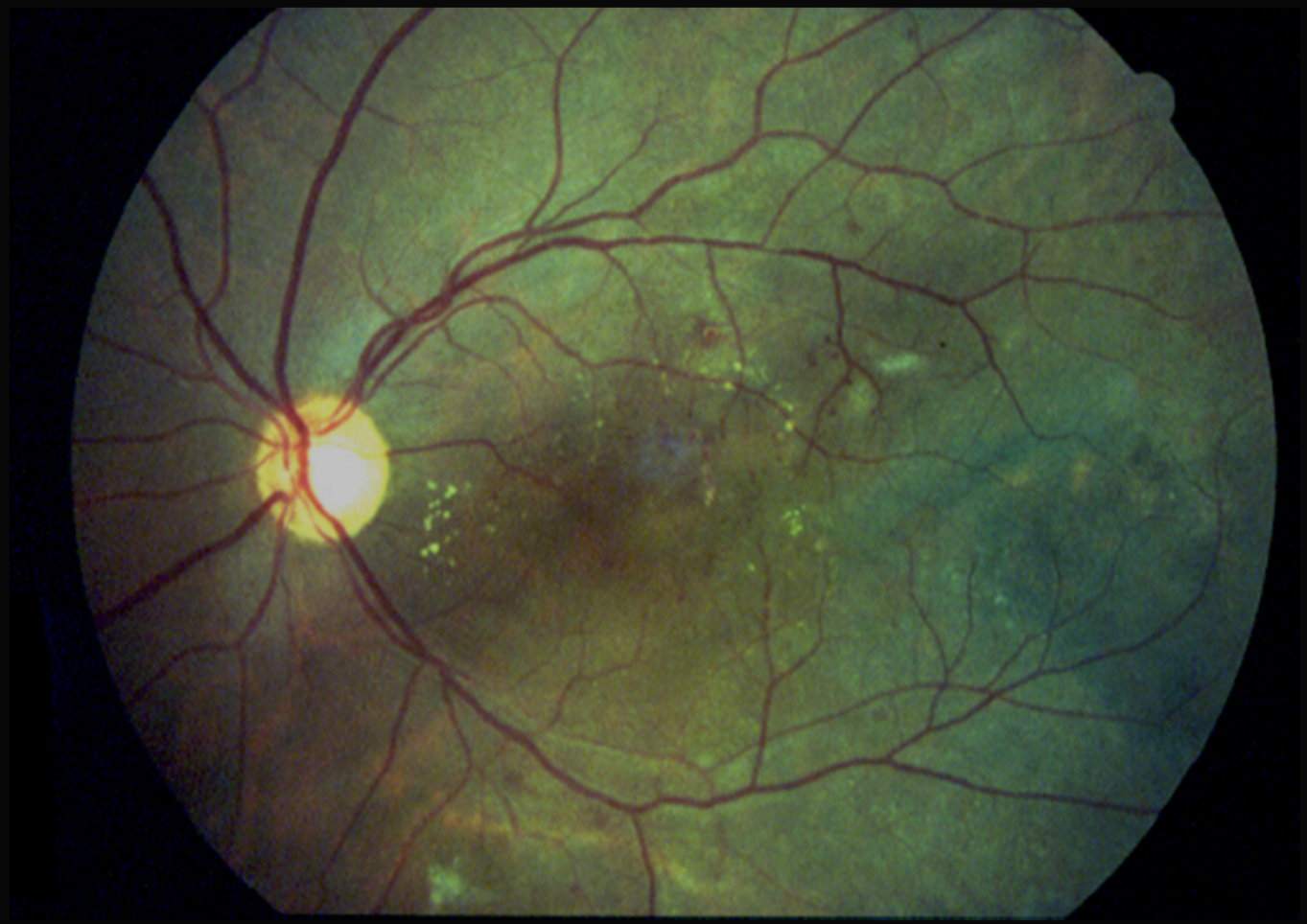
FOLLOW UP

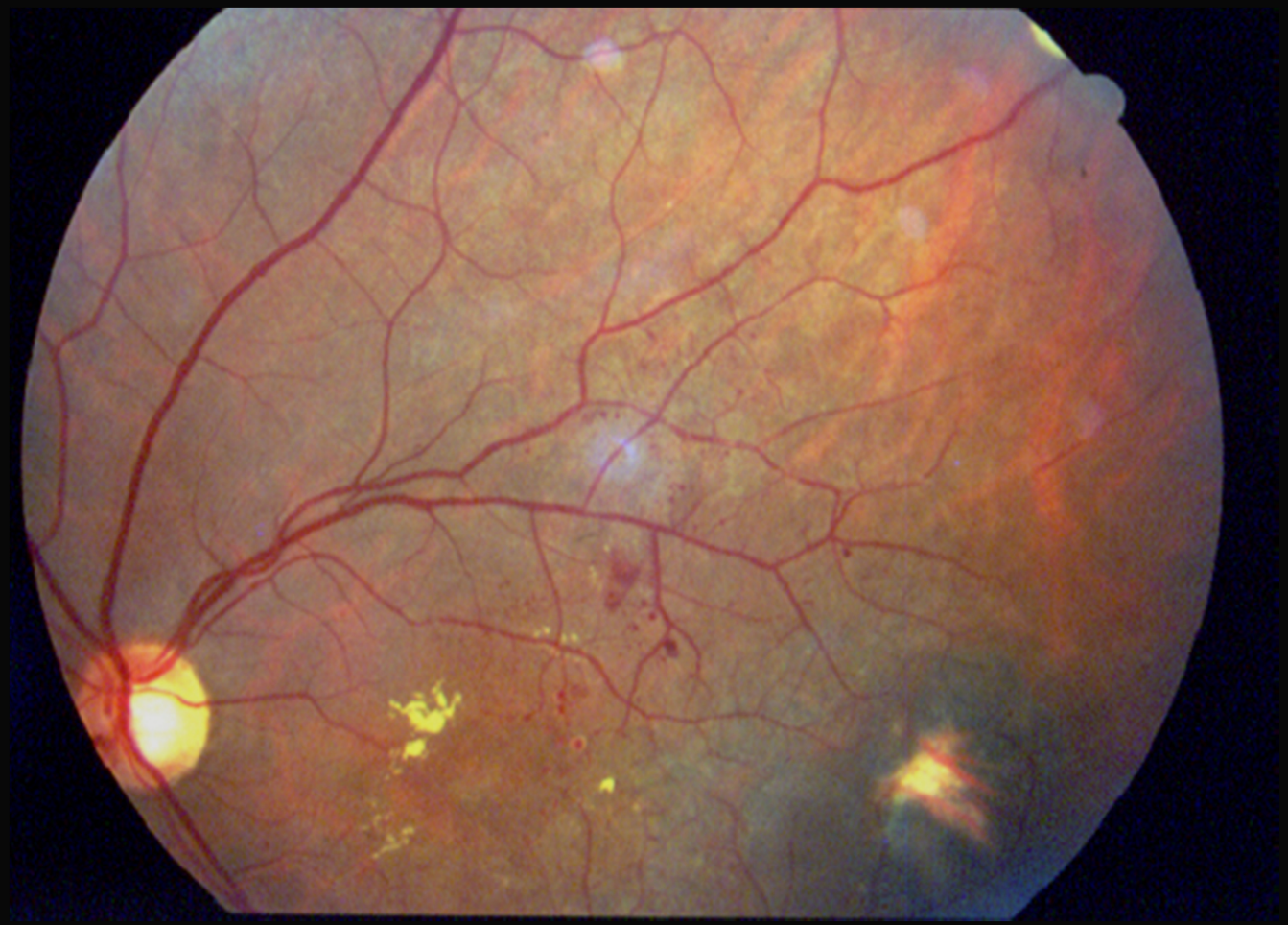
- ECOGRAFIA EPATICA
- TRANSAMINASI
- GAMMA-GLUTAMIL TRASFERASI
- FOSFATASI ALCALINA
- QUADRO SIEROPROTEICO
- FERRITINA

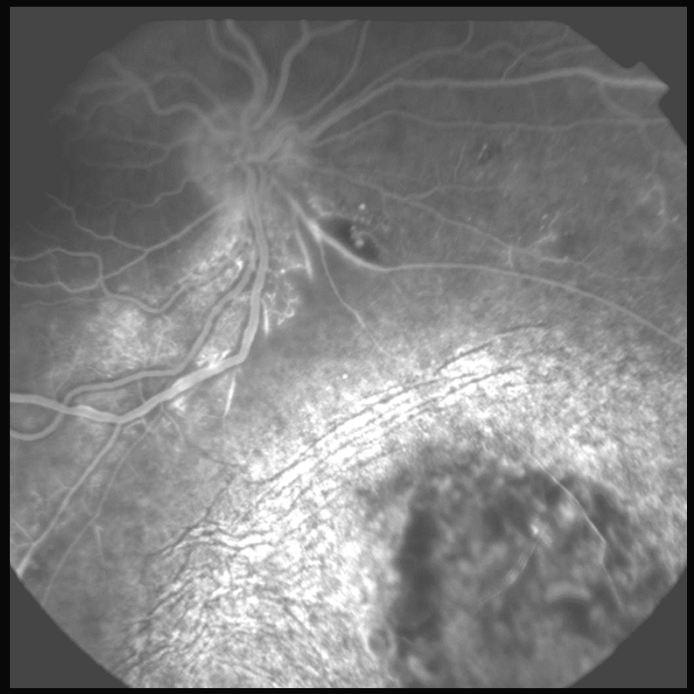
COMPLICANZE POSSIBILI DOPO TRATTAMENTO CON RUTENIO 106

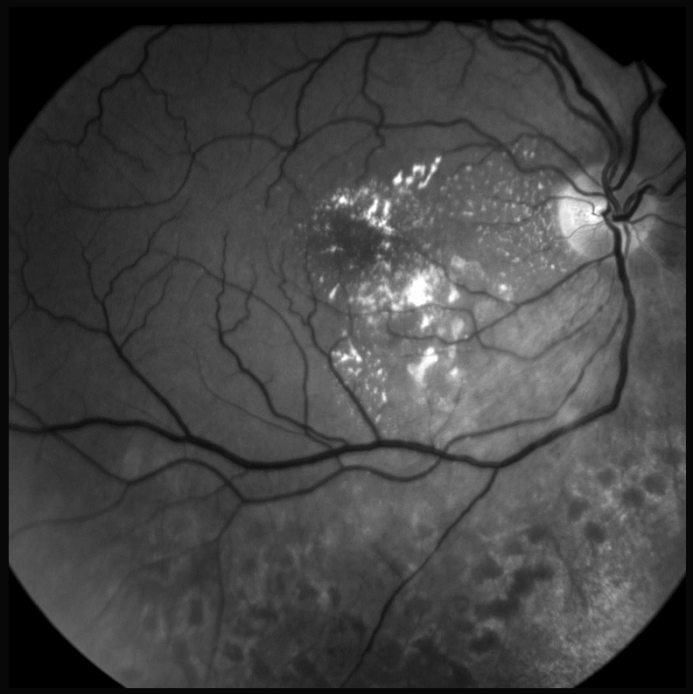
- DEGENERAZIONE MACULARE
- RETINOPATIA DA RAGGI
- PAPILLITE
- ATROFIA DEL NERVO OTTICO
- CATARATTA DA RADIAZIONE
- OPACITA' PERIFEICHE DELLA LENTE
- TROMBOSI VENA CENTRALE RETINA
- DISTACCO DI RETINA
- DISTACCO DI RETINA TRANSITORIO
- EMOVITREO
- DISTACCO DI COROIDE
- UVEITE

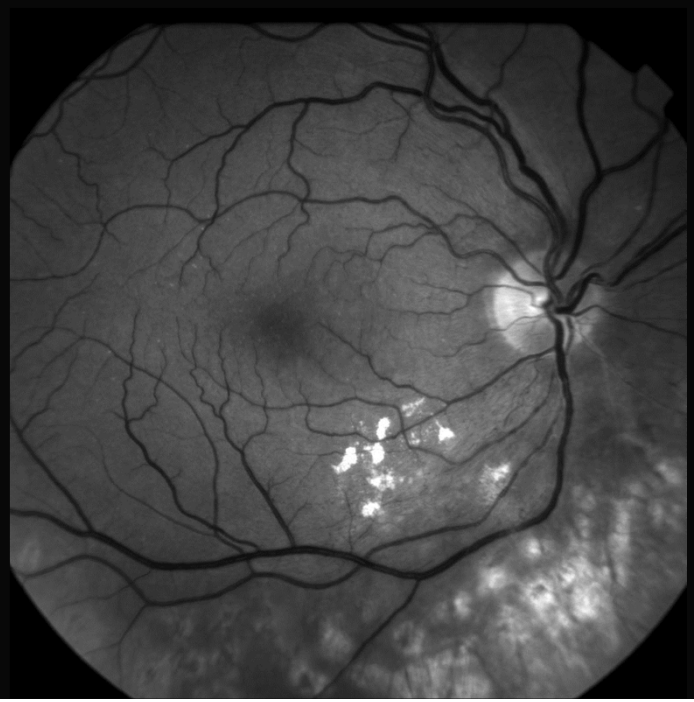
LA RETINOPATIA DA RADIAZIONI

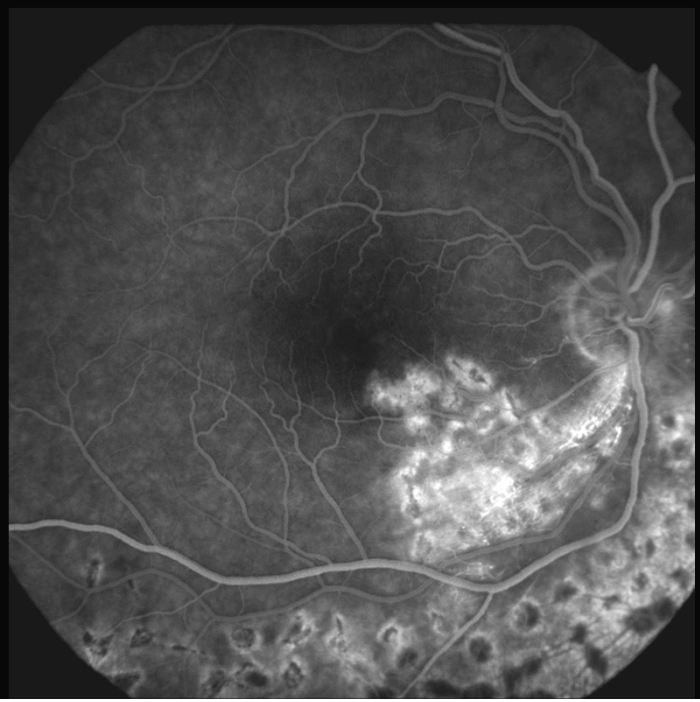




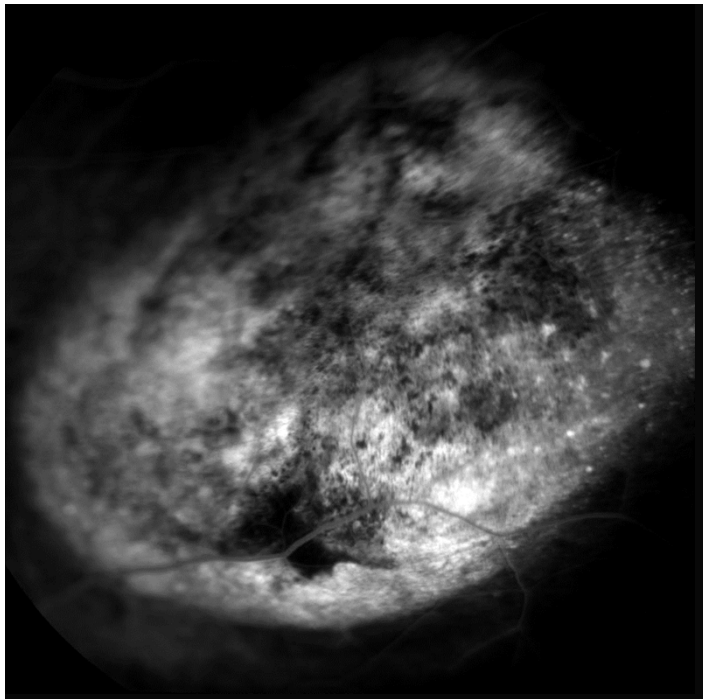


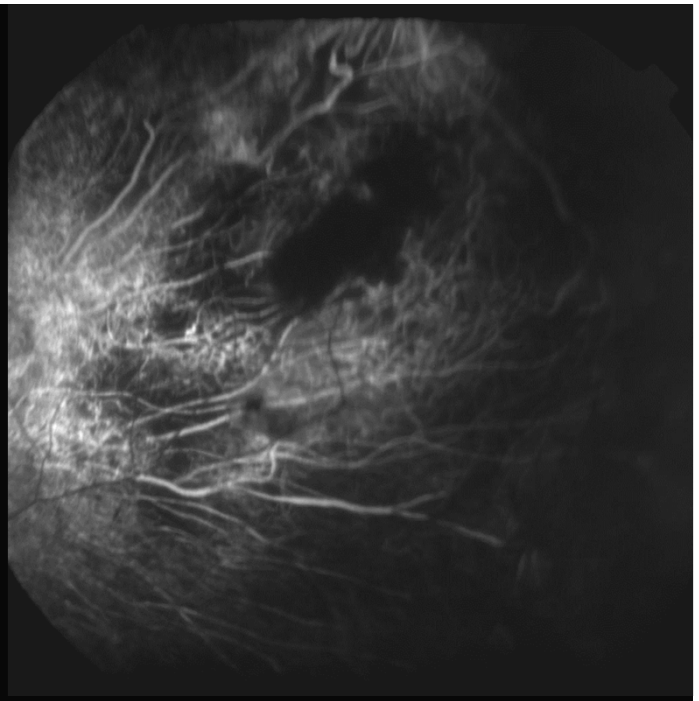


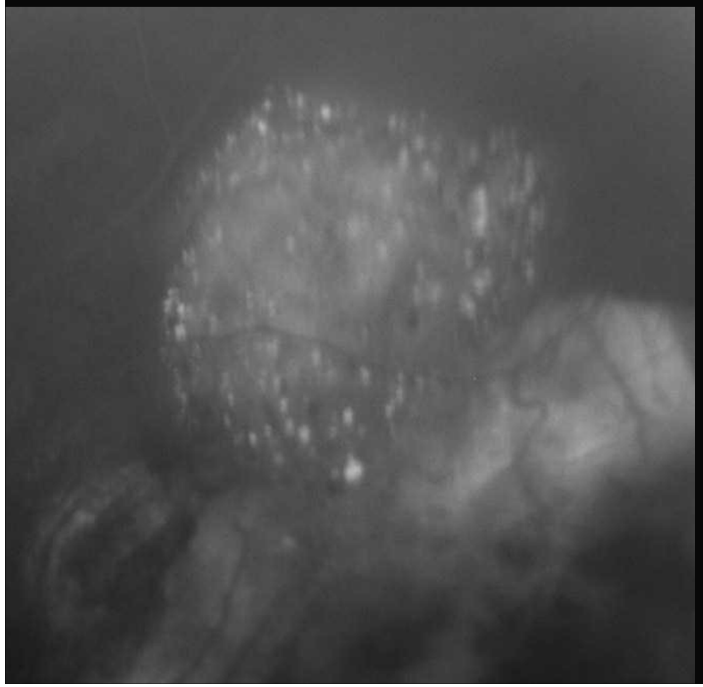


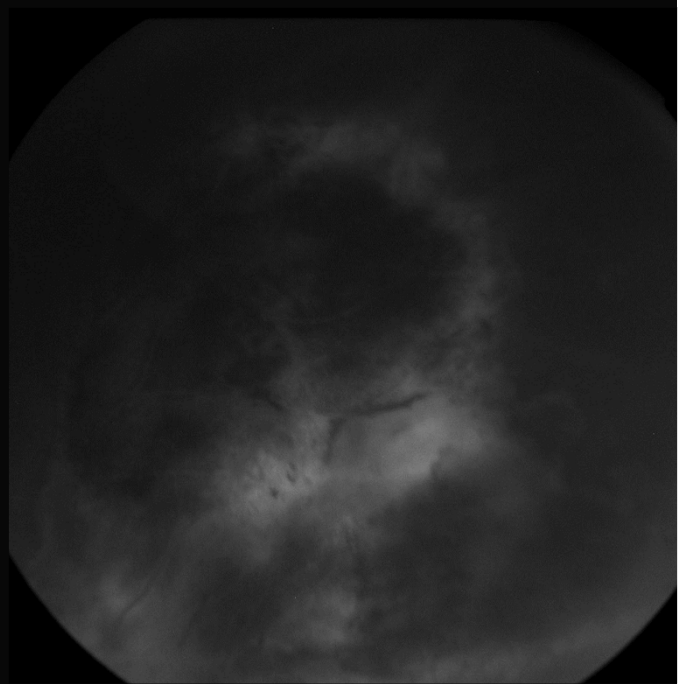


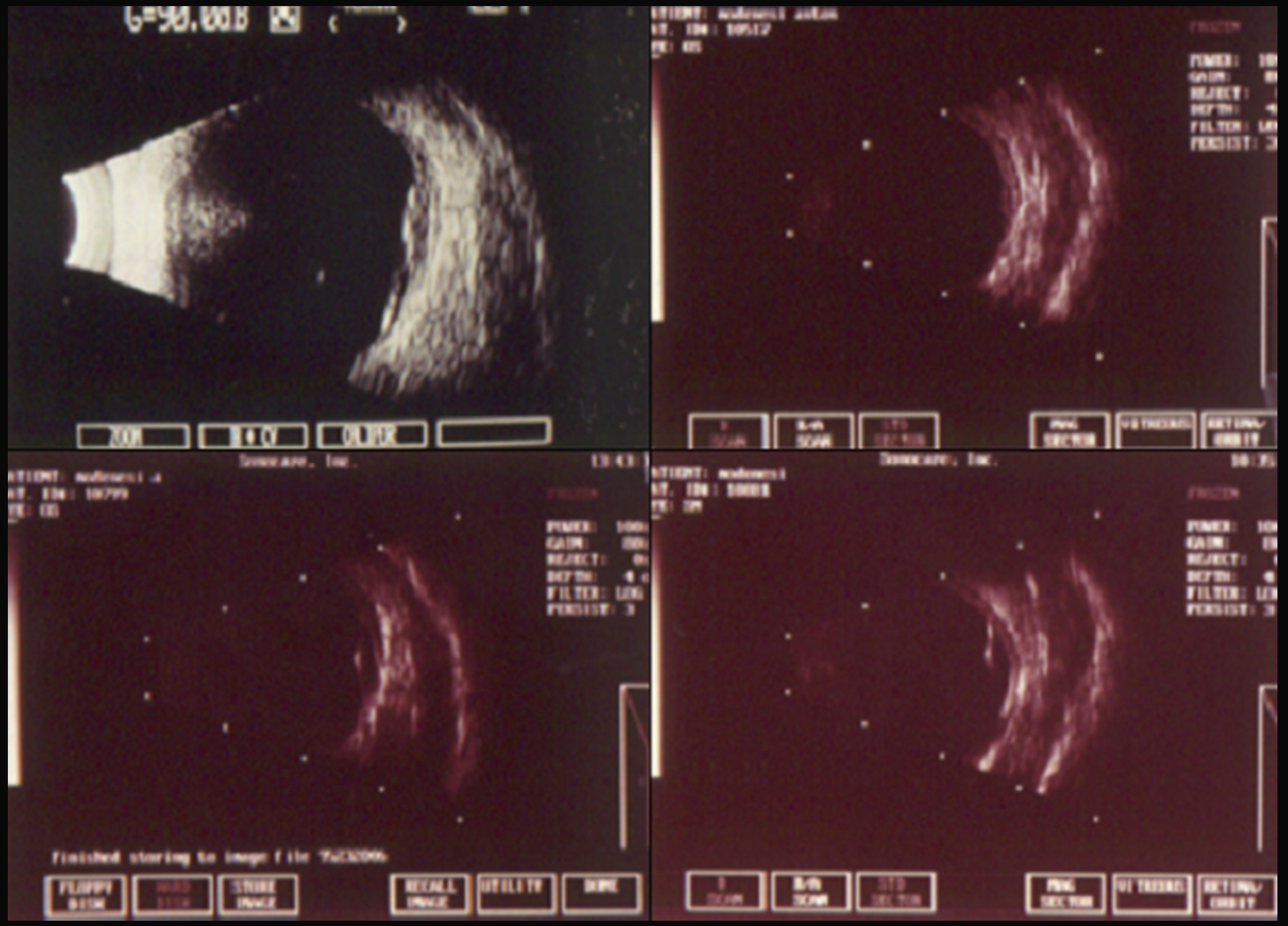
LE RECIDIVE










Sonocare, Inc.
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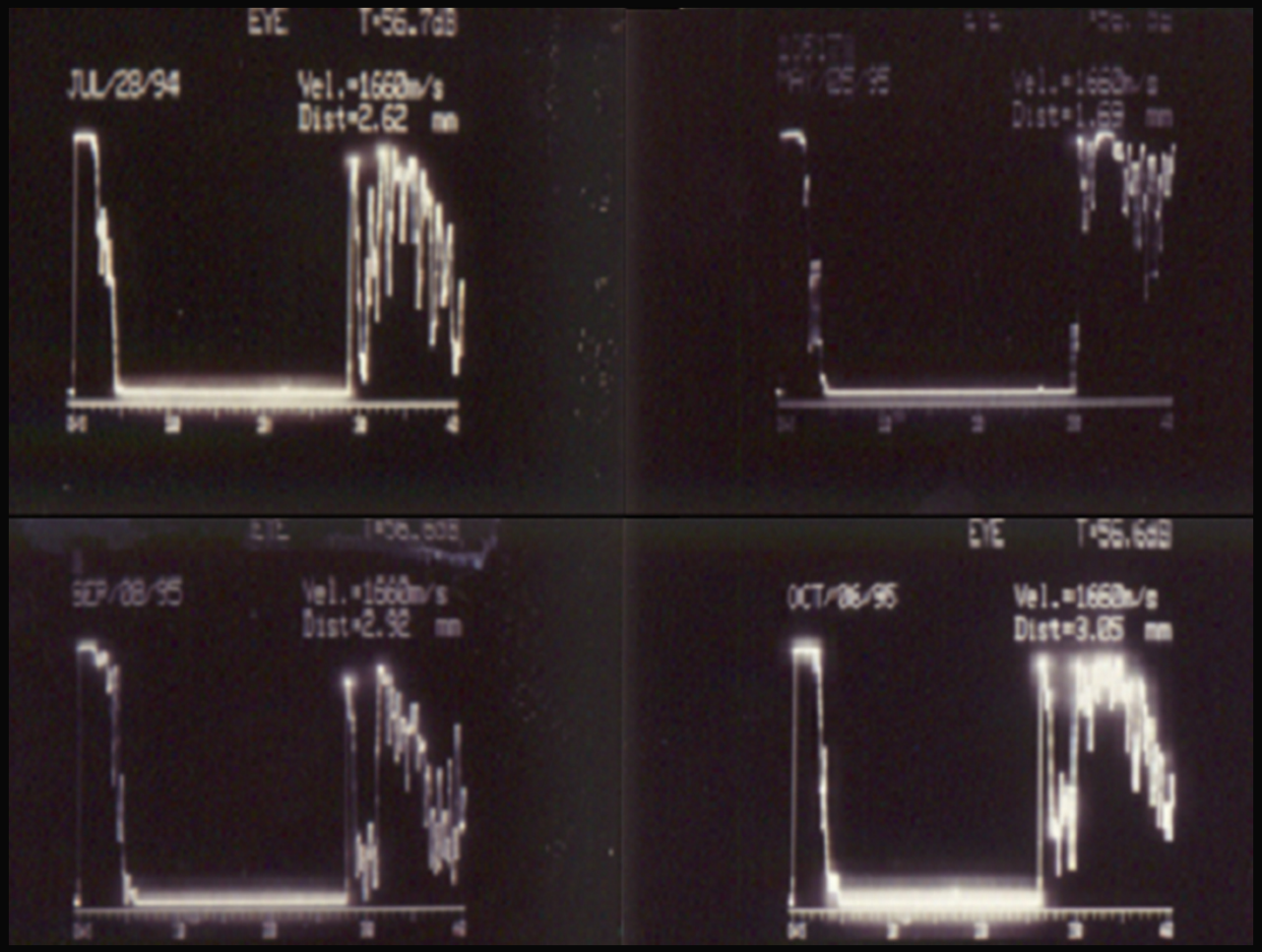
FLOPPY DISK
STORE IMAGE
RECALL IMAGE
UTILITY
DONE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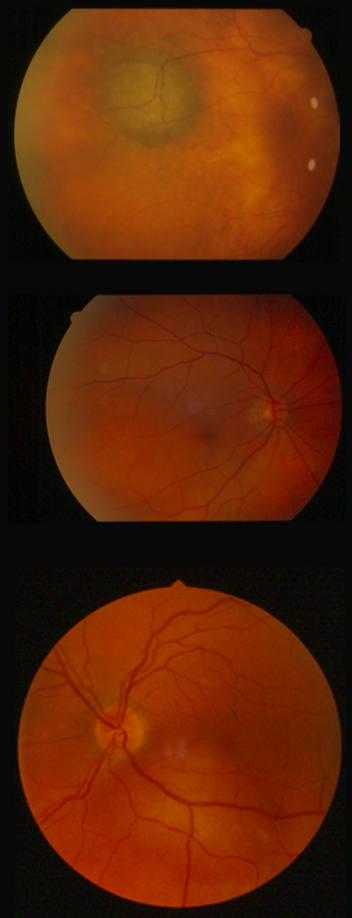
Dist=2.62 mm
SEP/08/95
Vel.=1660m/s
Dist=2.92 mm
EYE T=56.6dB
OCT/06/95
Vel.=1660m/s
Dist=3.05 mm


GRAZIE

PRINCIPALI NEOPLASIE INTRAOOCULARI DELL'ADULTO

- Melanoma dell'uvea
- Metastasi
- Angioma



- Nevo
- Nevo sospetto
- Osteoma
- Angioma retinico
- Melanocitoma
- Neurilemmoma
- Leiomioma
- Adenocarcinoma
- Angioma cavernoso misto