

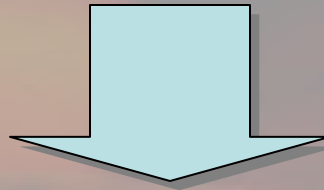
QUALITA' DELLA VITA E FARMACOECONOMIA

(VALUE-BASED MEDICINE)



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VALUTAZIONE DELL'EFFICACIA DI UNA NUOVA TERAPIA



EVIDENCE-BASED MEDICINE

LEVEL 1: RCT with low type 1 error

LEVEL 2: RCT with high type 1 error

LEVEL 3: non-RCT

LEVEL 4: series of pts with no controls

LEVEL 5: case report

???

EBM

???

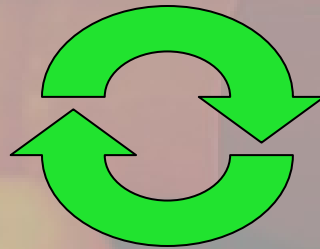
ADVANTAGES:

- robust data
- clear endpoints

DRAWBACKS:

- overlooks Quality of Life variables
- does not allow comparison among different specialties

EVIDENCE-BASED MEDICINE



VALUE-BASED MEDICINE

- 1. SAFETY**
 - 2. EFFICACY**
 - 3. COST-EFFECTIVENESS**
-

WHAT IS VALUE ?

- 1. IMPROVEMENT OF LENGTH OF LIFE**
- 2. IMPROVEMENT IN PATIENT-PERCEIVED QoL**

HEALTH-RELATED QoL INSTRUMENTS

1. FUNCTION-BASED

- Medical Outcome Study Short Form (SF-36)
- Activity of Daily Living Scale (ADL scale)
- 25-item NEI Visual Function Questionnaire (VFQ-25)

2. PREFERENCE-BASED

- Rating Scales (0-100)
- Utility Analysis

UTILITY ANALYSIS

0.0

1.0

morte

perfetta salute

1. TIME TRADE-OFF

- 1. QUAL'E' LA SUA ATTUALE TEORICA SPETTANZA DI VITA?**
- 2. QUAL'E' IL MASSIMO NUMERO DI ANNI CUI E' DISPOSTO A RINUNCIARE PER GODERE DI OTTIMA SALUTE NEGLI ANNI RIMANENTI?**

CALCOLO DELLA UTILITY

0.0

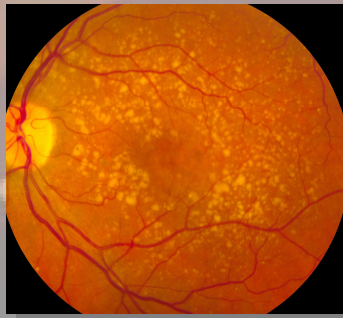
1.0

morte

perfetta salute

Es.: ARMD 73a (spettanza di vita = 10 anni)

Trade-off = 3 anni $(10-3)/10 = \underline{\mathbf{0.7}}$ (UV)



Trade-off = 6 anni $(10-6)/10 = \underline{\mathbf{0.4}}$ (UV)

95% confidence interval

UTILITY NELLE VARIE AFFEZIONI

0.0

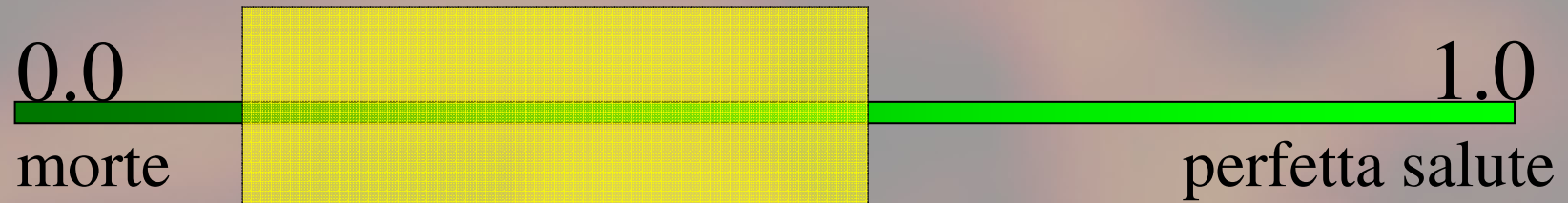
morte

1.0

perfetta salute

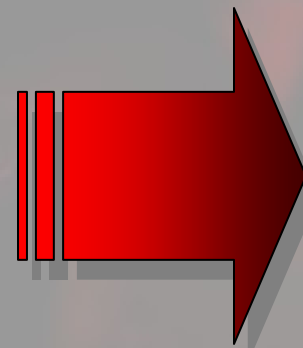
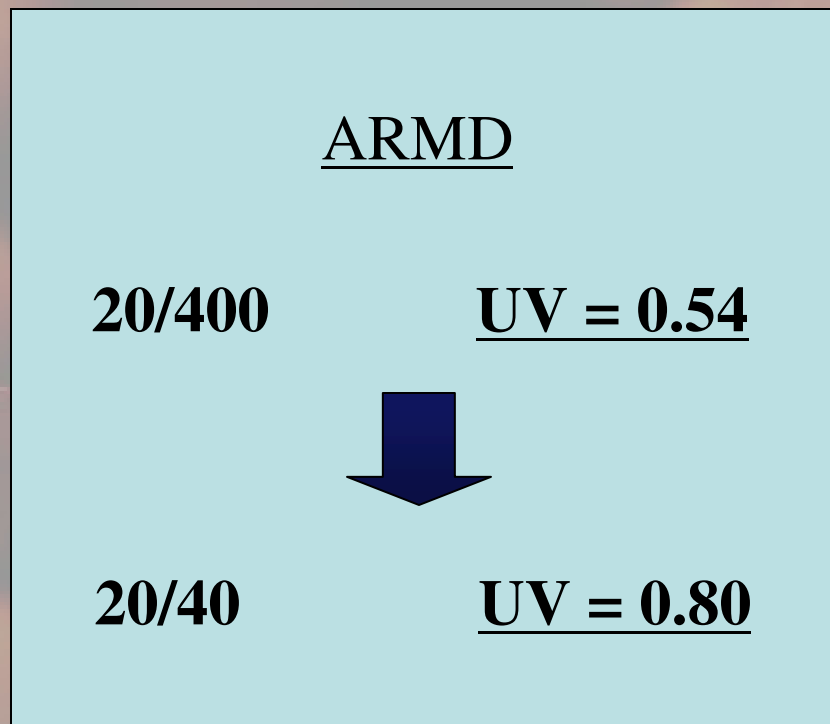
MALATTIA	UV
HIV sieropositività	0.94
Osteroporosi	0.91
Impotenza	0.85
<u>ARMD lieve (20/20-20/40)</u>	<u>0.83</u>
Cancro alla prostata (senza dolore)	0.78
AIDS	0.70
<u>ARMD media (20/50-20/100)</u>	<u>0.68</u>
Tubercolosi ospedalizzata	0.60
Rettocolite ulcerosa	0.58

UTILITY NELLE VARIE AFFEZIONI



MALATTIA	UV
Insufficienza renale totale (dialisi)	0.56
<u>ARMD grave (20/200 o meno)</u>	<u>0.47</u>
Ictus cerebrale grave	0.34
<u>Cecità</u>	<u>0.26</u>

LA UTILITY ANALYSIS PERMETTE DI
QUANTIFICARE IL MIGLIORAMENTO DELLA
QUALITA' DELLA VITA INDOTTO DA UNO
SPECIFICO TRATTAMENTO



UV guadagnato

+0.26

(UV guadagnato) x (durata in anni del beneficio ottenuto)

=

Guadagno totale indotto da un trattamento



QALY

(Quality-Adjusted-Life-Year)

SOGGETTO NORMALE

65

85



UV = 1.0

$$\underline{1.0 \times 20 = 20}$$

$$QALY = 20$$

ARMD mild

65

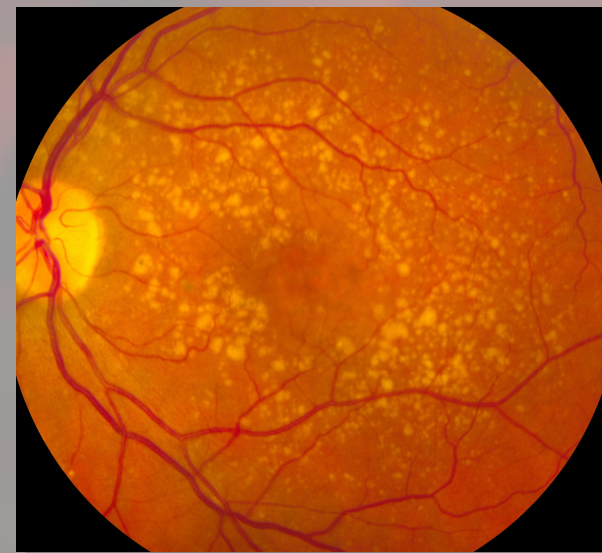
85



$$UV = 0.8$$

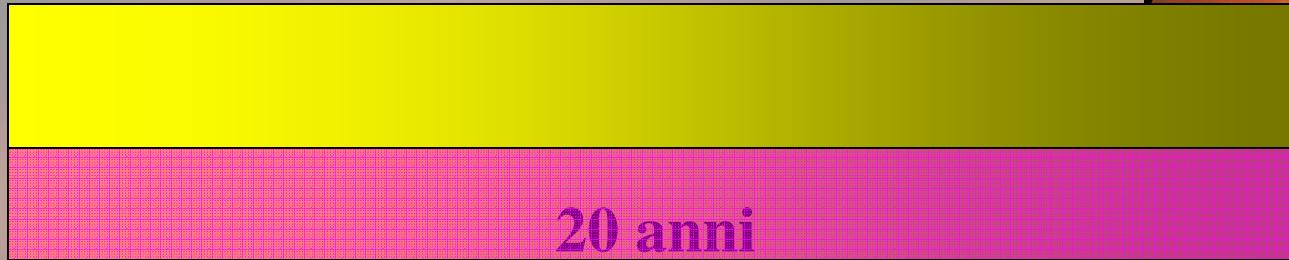
$$\underline{0.8 \times 20 = 16}$$

$$QALY = 16$$

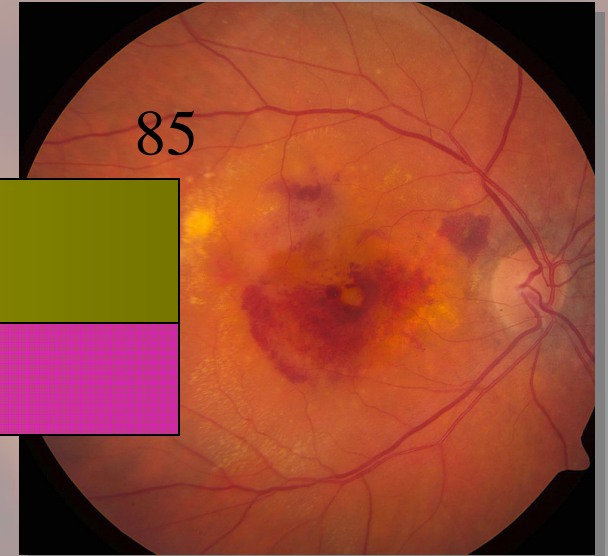


ARMD severe

65



UV = 0.54



85

$$\Delta\text{-QALY} = 0.26; 0.26 \times 20 = \mathbf{5.2}$$

65



UV = 0.80

85

IL Δ -QALY ESPRIME LA REALE
EFFICACIA DI UNA TERAPIA



IL COSTO UNITARIO DI Δ -QALY
ESPRIME IL RAPPORTO
COSTO/BENEFICIO
DI UN NUOVO TRATTAMENTO

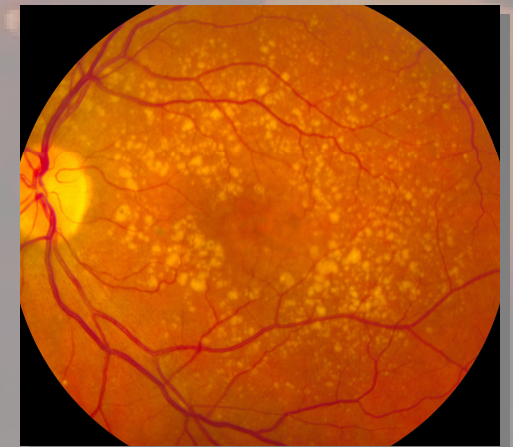
**COSTI MEDICI
DIRETTI**

**COSTI DIRETTI
NON MEDICI**

**COSTI SOCIALI
INDIRETTI**

ALTRI COSTI

**COSTO TOTALE
DEL TRATTAMENTO**

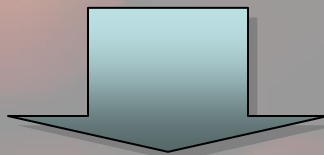


**COSTO TOTALE
DEL TRATTAMENTO**

• Δ -QALY
• DEL TRATTAMENTO

=

\$/QALY



COSTO/BENEFICIO DEL TRATTAMENTO

Dieta ipocolesterolemica (176)

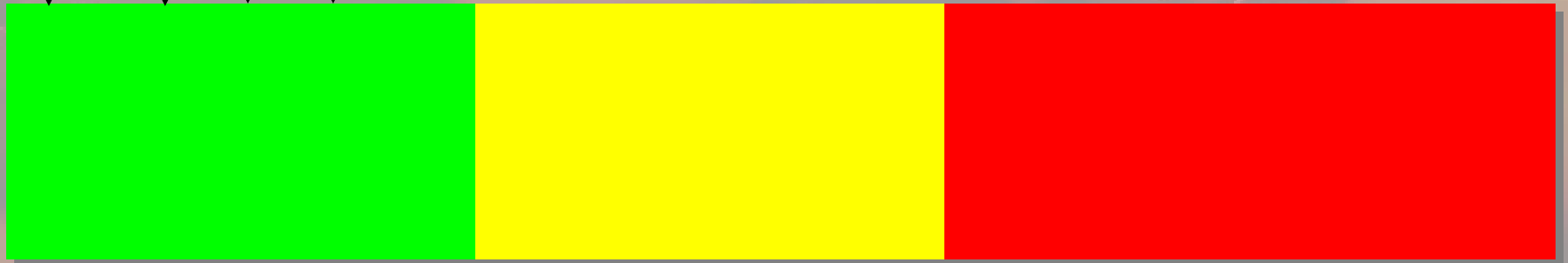
Trapianto renale (4.000)

Trattamento per ipercolesterolemia (13.500)

By-pass aorto-coronario (16.000)

20.000 \$

100.000 \$



\$ / QALY

Crioterapia x ROP (2.028)

Cataratta (2.093)

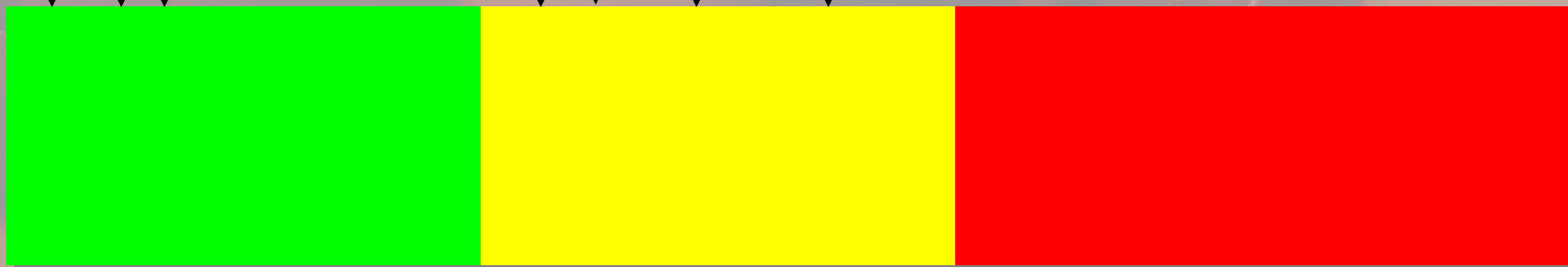
Laser x DME (3.309)

PDT x AMD/CNV (94.526)

Laser x AMD/CNV extrafoveale (23.640)

Sceening annuale x RD (43.254)

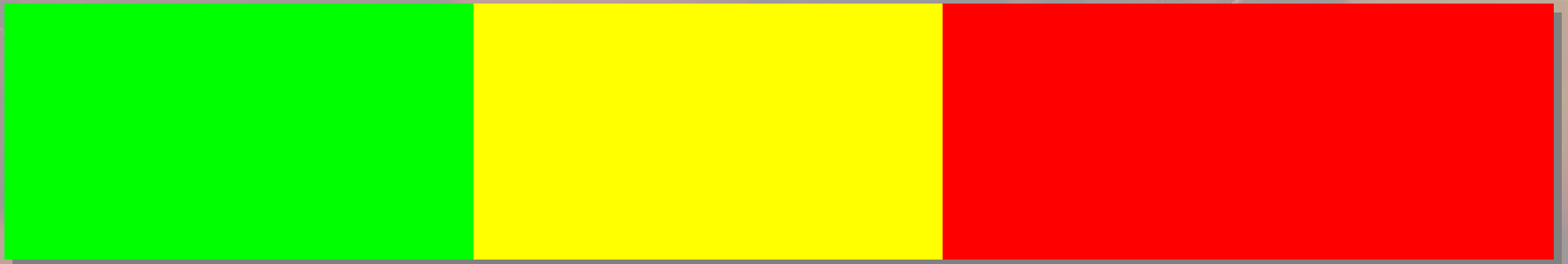
Anti-ossidanti x AMD (30.466)



\$ / QALY

NEW RETINAL PHARMACO-THERAPY

?



$\$/\text{QALY}$