

Considerazioni di Farmacoeconomia nel mRCC

Lorenzo G Mantovani, EconD, MSc, DSc

CIRFF-

Università degli Studi di Napoli Federico II

Problema

- **Ci sono più interventi sanitari efficaci di quanti ne possiamo finanziare (anche una volta eliminati tutti gli “sprechi”)**
- **Le risorse sanitarie sono limitate**
- **Le risorse che dedichiamo ad un intervento non le possiamo dedicare ad un altro**
- **Qualcuno deve decidere quali finanziare**
- **Come?**

Quali criteri (razionali) di scelta?

- **Censo**
- **Caso**
 - **Dadi**
 - **Roulette**
 - **T/C**
 - **tempo**
- **Altro**

Quali criteri razionali di scelta?

- Censo
- Caso
 - Dadi
 - Roulette
 - T/C
 - tempo
- Altro

Economics

“... study of how societies use scarce resources to produce valuable commodities and distribute them among different people”

Paul A Samuelson, Nobel Laureate 1970

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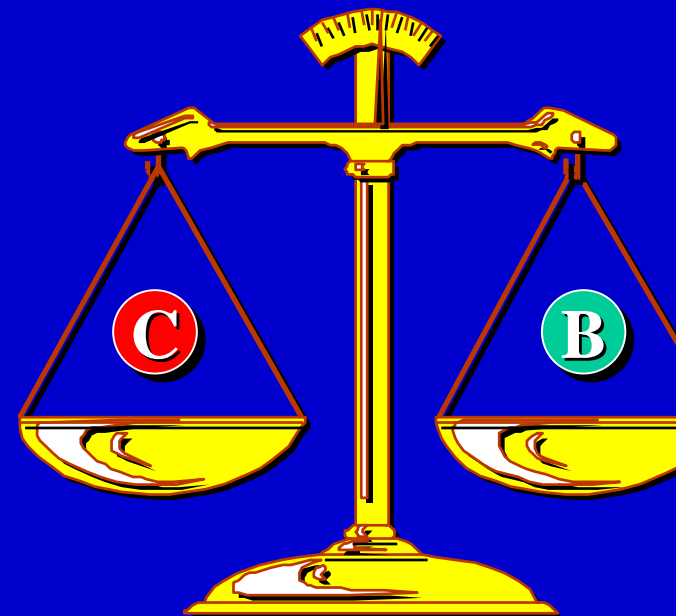
Economics

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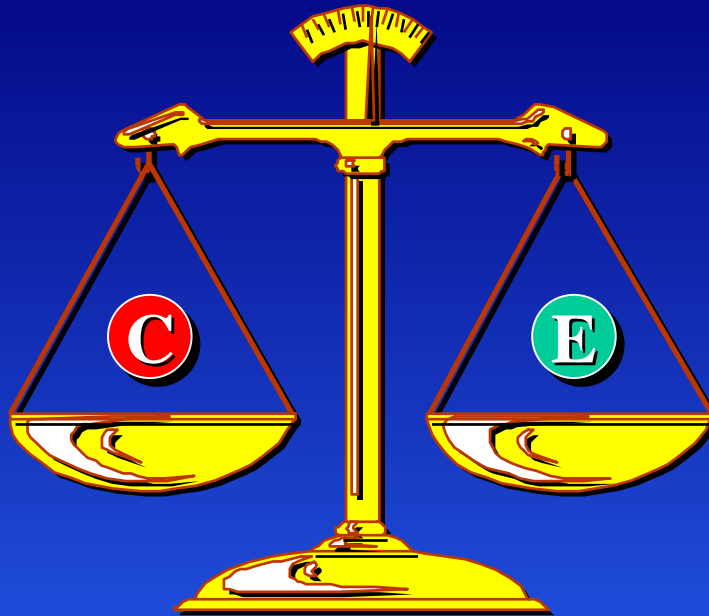
Le valutazioni economiche sono...

- Un elemento della decisione, non la decisione
- ... finalizzate non a contenere i costi, ma ad applicare alla sanità i concetti dell'economia
 - massimizzare
 - benessere
 - risorse
 - scarse
 - applicabili ad usi (interventi) alternativi



Costi ed Effetti di un Intervento

Diretti
Indiretti
Intangibili

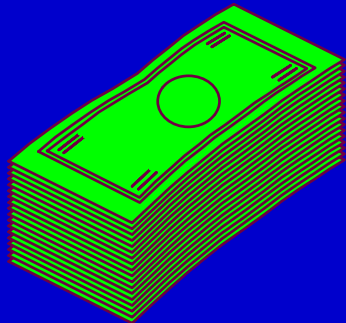


Diretti
Indiretti
Intangibili

Trattamento
Effetti collaterali

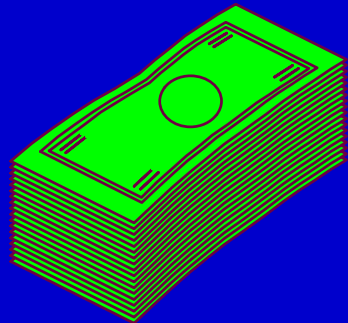
Miglioramento della salute
Risparmi sanitari (e non)

L'analisi di costo-efficacia



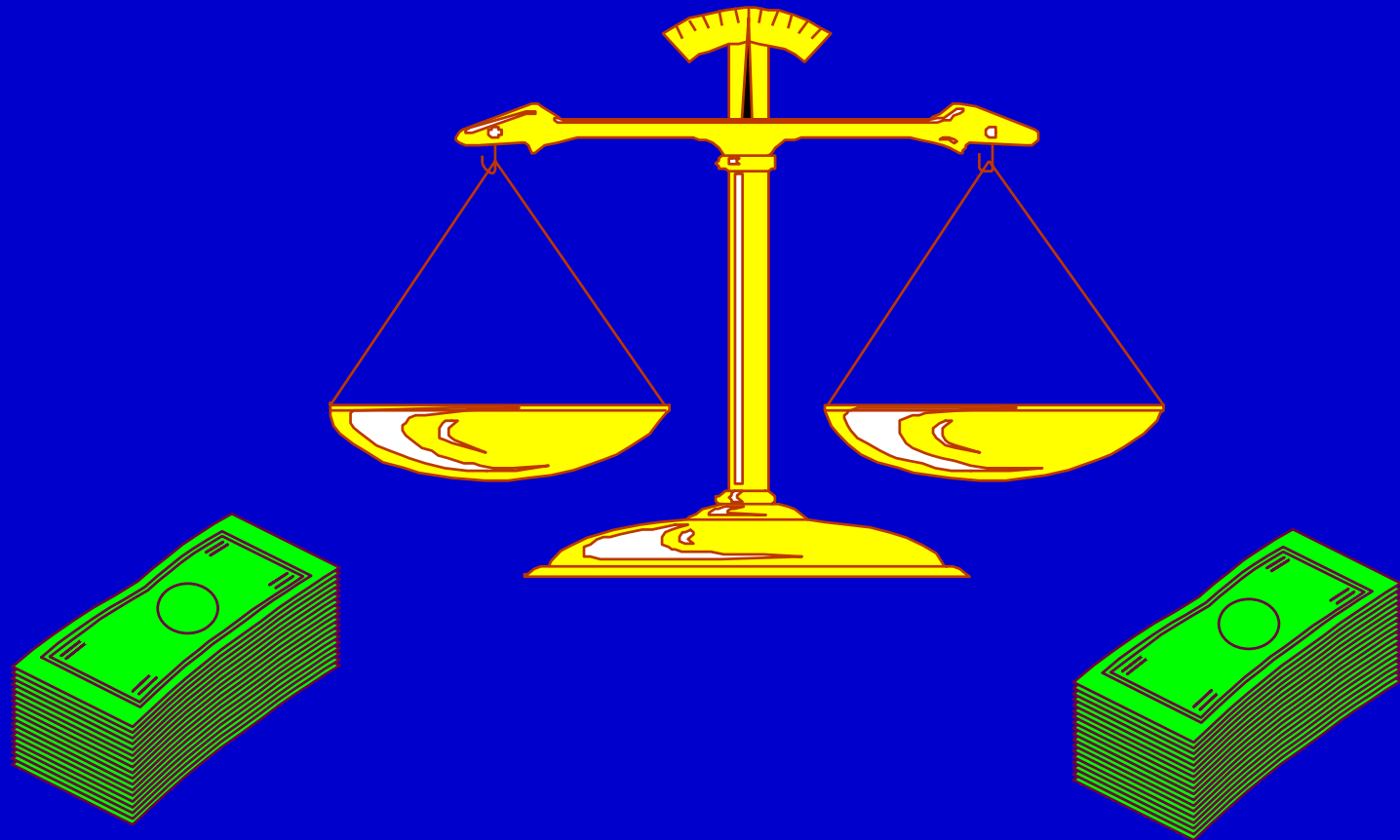
Parametri clinici
Sopravvivenza (YOLS)

L'analisi di costo-utilità



Anni di vita aggiusti
per la qualità (QALY)

L'analisi costo-beneficio



Possibili risultati

← **Costi** →

Valutare	Accettare (dominante)
Rifiutare	Valutare



VIER

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burden of renal cell cancer: A retrospective longitudinal study on occurrence, outcomes and cost using and administrative claims database

o G Mantovani^{a,*}, Andrea Morsanutto^b, Francesca Tosolini^b, Giorgio Mustacchi^c,
o Esti^b, Andrea Belisari^d, Simona de Portu^a

Center of Pharmacoeconomics, Federico II University of Naples, Via Montesano, 49, 80131 Naples, Italy

enezia Giulia Regional Health Authority, Trieste, Italy

ecology Center, Trieste, Italy

ne Charta, Milan, Italy

Aim

- Assess the cost
- Estimate survival
- Of individuals with incident diagnosis of RCC

Methods

- Design
 - Retrospective
 - Longitudinal
 - Naturalistic
 - Administrative database
 - Epidemiologic and economic study

Subjects

Source population

Enrollees with a Regional Health Service (1.2 millions) during 1996 –2005

Study population

No evidence of cancer (ICD9 140-230) during 1996-1999

First RCC diagnosis (ICD9 189) during 2000-2004

Identification

From hospital admissions

Follow-up

From diagnosis to the first of:

- June 2005
- Death
- transfer

Information

- Demographic (age and gender)
- vital status
- prescription of drugs
- hospital admissions

Statistical Analysis

- Descriptive
 - “Clinical” and demographic
- Average annual cost
 - First year of follow-up
 - Subsequent years
- Survival
 - Kaplan-Meier

Population characteristics

	With metastases	Without metastases	Difference/OR/(95% CI)	Difference/OR/(95% CI)
a)	69.8	66.7	-3.1 (-4.63/-1.46)	
	156	700	1.12 (0.84/1.47)	
	100	402		
	256	1102		
follow-up (d)	382.14	857.81	475.66 (409.57/541.56)	
	0.76	0.21	5.8 (4.79/7.04) ^b	5.5 (4.52-6.6)

d for age and sex.
ratio.

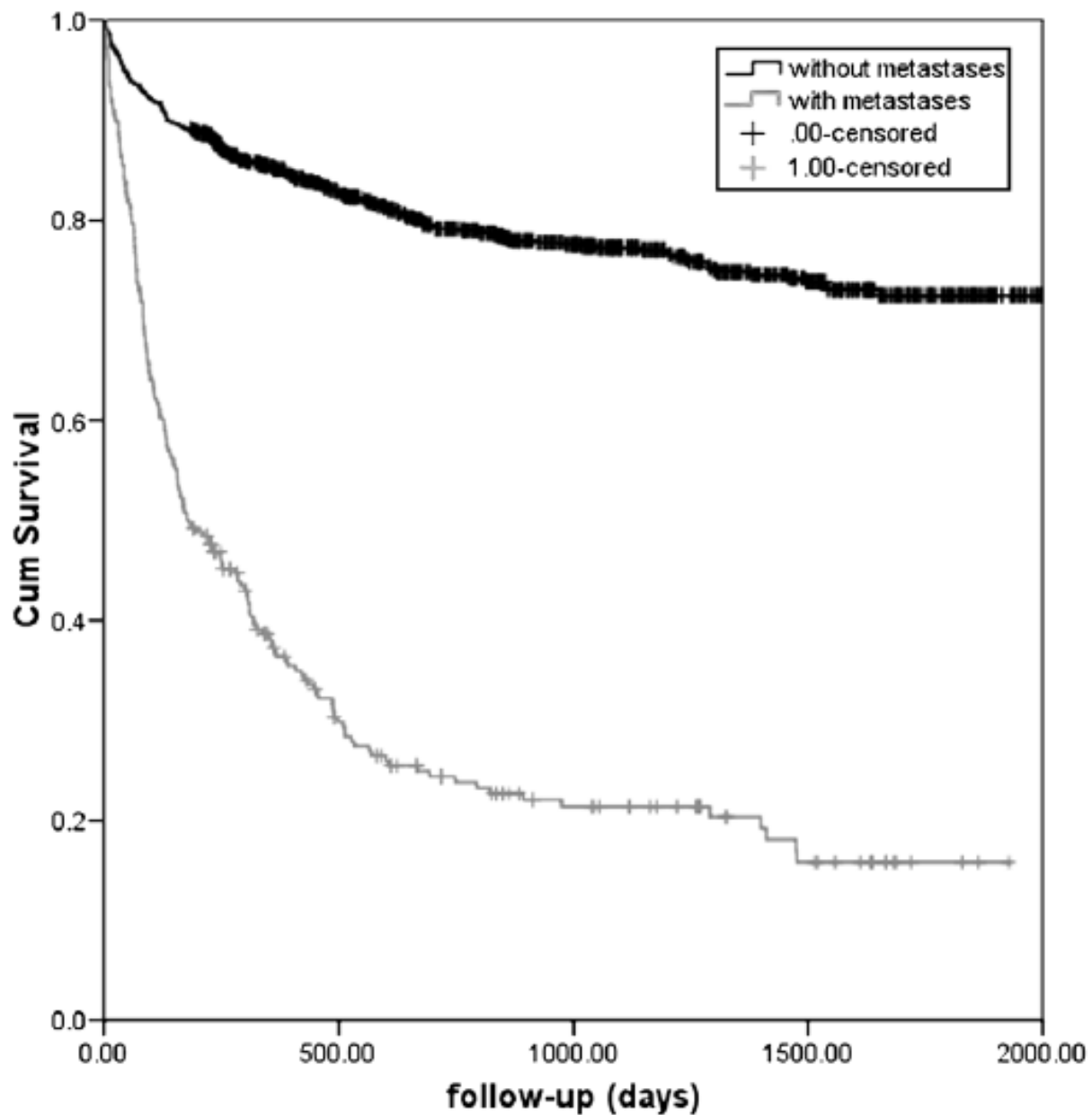


Fig. 1 - Kaplan-Meier survival curves of individuals with diagnosis of RCC with and without metastases.

2 – Cost per patient during entire follow-up period

Category	With metastases (N = 256)	W/O metastases (N = 1102)	Difference (95% CI)	Difference (IC 95%)
hospitalisation	14238.30	11424.69	2813.61 (1112.47/4514.76)	2928.97 (1326.35/4531.59)
drugs	1431.34	1719.29	-287.96 (-673.42/97.51)	-285.62 (-663.53/92.29)
outpatient care	1986.38	2946.36	-959.99 (-1744.41/-175.56)	-817.14 (-1560.39/-74.89)
health care cost	17656.02	16090.35	1565.67 (-664.21/3795.55)	1826.20 (-223.72/3876.12)

Adjusted for age and sex.

3 – Cost per patient in the first year of follow-up

Category	With Metastases (N = 256)	W/O metastases (N = 1102)	Difference (95% CI)	Difference (IC 95%)
hospitalisation	11670.12	8859.47	2810.65 (1681.76/3939.54)	2920.42 (1872.69/3968.15)
drugs	875.38	597.52	277.86 (27.62/528.09)	283.28 (24.09/542.47)
outpatient care	1147.18	1045.36	101.83 (-229.11/432.76)	159.59 (-160.55/479.73)
health care cost	13692.68	10502.34	3190.34 (1857.88/4522.79)	3363.29 (2172.48/4554.10)

Adjusted for age and sex

Discussione

- **Carenza informativa in Italia (costo, qualità di vita, etc)**
- **Tra i costi diretti, le ospedalizzazioni rappresentano la componente maggiore**
- **I soggetti con metastasi alla diagnosi hanno sopravvivenza ridotte, costo totale lievemente superiore, costo per unità di tempo (annuo) doppio**
- **Nuovi trattamenti?**

Prospettive

Economic Evaluation of sunitinib for the First-line Treatment of Metastatic Renal Cell Carcinoma in ITALY

LG Mantovani 1, A Belisari², F Scaglione³, S de Portu¹, G Carteni⁴

CIRF/Center of Pharmacoeconomics, , University of Naples Federico II, Naples

Fondazione Charta, Milan

Department of Pharmacological Sciences, University of Milan, Milan

Medical Oncology Department, AORN Cardarelli, Naples

Objective

- **The aim of the study was to assess the cost-effectiveness and the cost-utility of Sunitinib compared to other first line treatments available in Italy for mRCC**
 - **Interferon alfa (IFN- α)**
 - **Interleukin-2**
 - **Bevacizumab associated with IFN- α**

Methods

- **Technique:** A cost-effectiveness (CEA) and a cost-utility analysis (CUA)
- **Subjects:** first line treatment patients with mRCC
- **Time horizon:** up to 10 years
- **Perspective:** National Health Service
- **Costs:** Direct medical costs in 2007 €
- **Effects:** From RCT's

Cost and effects

<u>Firs-line treatment</u>	<u>IFN-a</u>	<u>Sunitinib</u>	<u>IL-2</u>	<u>Bevacizuma</u> <u>IFN</u>
Progression-free life years	0.63	1.19	0.70	0.99
LYs	1.77	2.26	1.67	2.19
QALYs	1.11	1.48	1.06	1.39
Total cost (discounted)	32,084 €	65,115 €	44,733 €	81,221 €

ICER of sunitinib vs...

Compared to:	<u>IFN-a</u>	<u>IL-2</u>	<u>Bevacizumab+IFN</u>
Incremental cost per PFLY gained	59,496	42,188	Dominant
Incremental cost per LY gained	68,231	34,702	Dominant
Incremental cost per QALY gained	88,433	48,391	Dominant

Conclusioni (1)

“Chi sa - disse Robert Browning - ma il mondo potrebbe veramente finire stanotte?”

Vero. Ma, sulla base di quanto vediamo, la maggior parte di noi si prepara ad andare a lavorare alle 8:30 domattina”.

Sir Austin Bradford Hill

Proceeding of the Royal Society of Medicine, 1965

Conclusioni (2)

“...non scoraggiatevi. La nostra esperienza ci insegna che spesso queste misurazioni non sono così onerose come sembra. Ed è nostra convinzione che (...) queste misurazioni siano spesso essenziali, in quanto è meglio avere una misura approssimativa dei fattori giusti piuttosto che una misura precisa di quelli sbagliati.”

Drummond, Stoddard, Torrance, 1987