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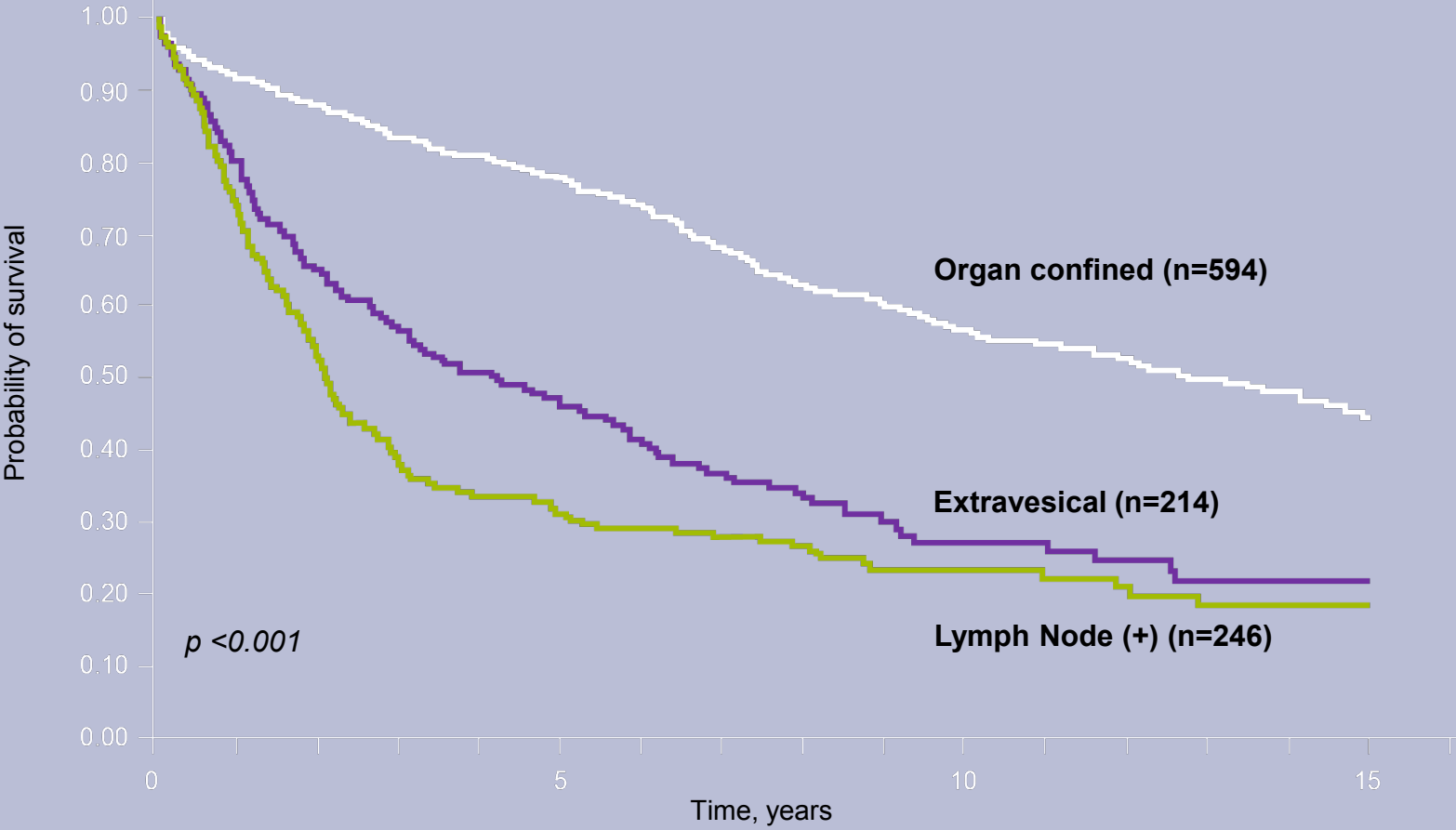
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TERAPIA NEOADIUVANTE NEL TUMORE DELLA VESCICA

Angelo Dinota
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Sopravvivenza attesa dei pazienti con carcinoma uroteliale della vescica in fase muscolo-infiltrante



Mod. da [Stein JP, et al. J Clin Oncol 2001; 19: 666-675](#)

CHEMIOTERAPIA NEOADIUVANTE

- Nonostante i progressi compiuti negli ultimi anni nella tecnica chirurgica e nella qualità dell'assistenza post-operatoria, la sopravvivenza è ancora strettamente dipendente dallo stadio patologico.
- In circa la metà dei pazienti con stadio \geq pT2 si osserva la comparsa di metastasi a distanza entro 2 anni e la sopravvivenza a 5 anni non supera il 50%
- La chemioterapia neoadiuvante è stata sviluppata con l'intento di migliorare questi risultati
- I vantaggi della chemioterapia neoadiuvante sono rappresentati:
 - ✓ dalla capacità di determinare "in vivo" la chemiosensibilità della neoplasia
 - ✓ dalla riduzione volumetrica della massa neoplastica e del grado di infiltrazione vescicale
 - ✓ la possibilità di eseguire un intervento chirurgico meno demolitivo o un approccio "bladder sparing",
 - ✓ dal controllo precoce delle micrometastasi

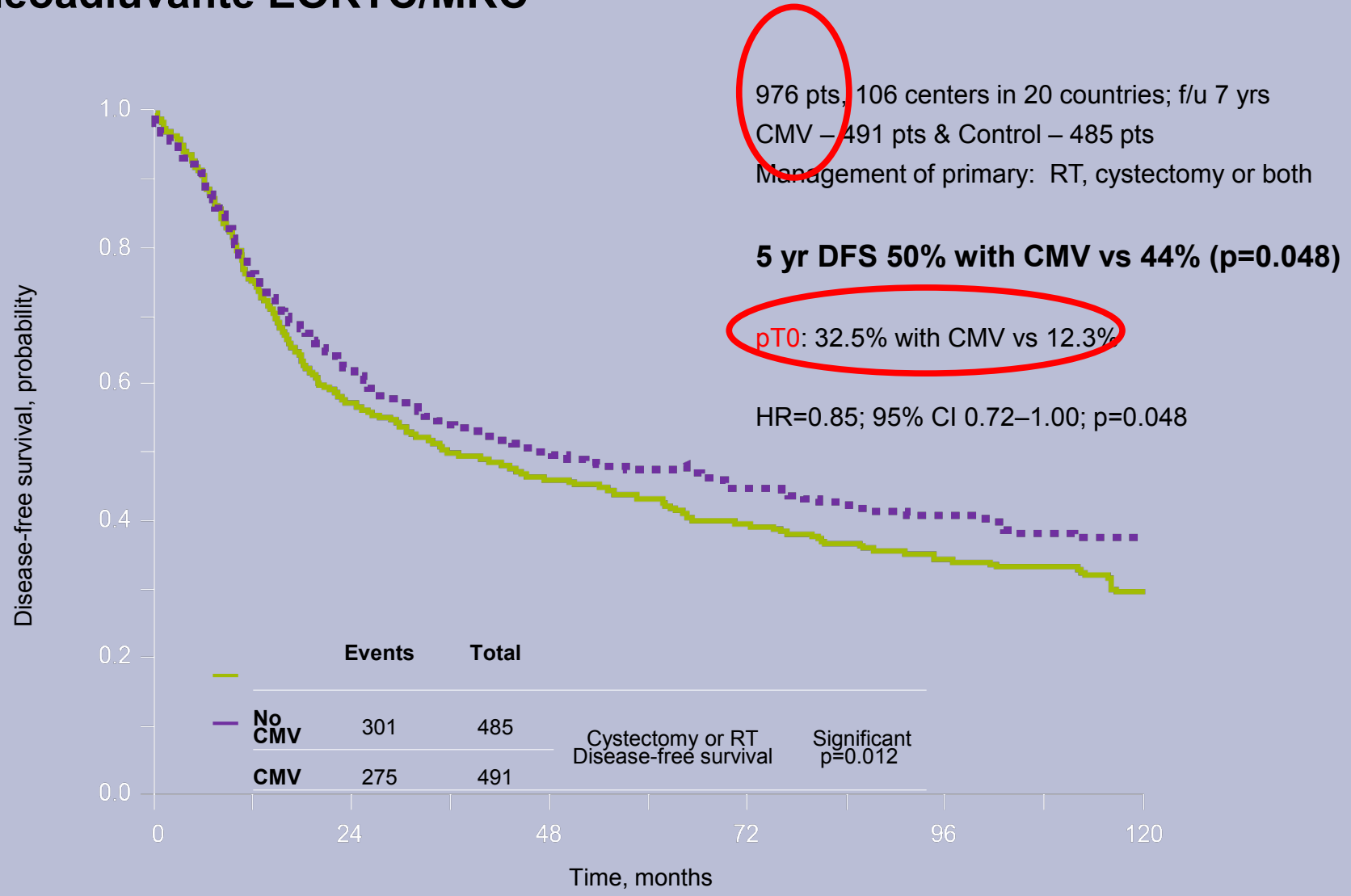
CHEMIOTERAPIA NEOADIUVANTE

BOX1. Studi clinici randomizzati di Chemioterapia NeoAdiuvante.

Gruppo	Neoadiuvante	Standard	Pazienti	Sopravvivenza
Aust/UK (44)	DDP/RT	RT	255	No differenza
Canada/NCI (45)	DDP/RT o preop RT+Cist	RT o preop RT+Cist	99	No differenza
Spain (CUETO). (46)	DDP/Cist	Cist	121	No differenza
EORTC/MRC (47)	CMV/RT o Cist	RT or Cist	976	6% differenza a 10 anni in favore di CMV
SWOG Intergroup (48)	M-VAC/Cist	Cist	298	Trend in favore di M-VAC (p= .06)
Italy (GUONE) (49)	M-VAC/Cist	Cist	206	No differenza
Italy (GISTV) (50)	M-VEC/Cist	Cist	171	No differenza
Nordic I-II (51)	ADM/DDP/RT /Cist MTX/ DDP /Cist	RT/Cist Cist	620	8% differenza in favore della Terapia neoadiuvante (11% nei cT3)
Abol-Enein (52)	CarboMV/Cist	Cist	194	Beneficio per CarboMV

DDP/C=Cisplatino, MTX=Methotrexate, ADM=Doxorubicina, E=Epirubicina, V=Vinblastina, Carbo=Carboplatino, Cist= Cistectomia, RT= Radioterapia

Trial neoadjuvante EORTC/MRC



Mod. da [Hall et al. Lancet 1999; 354: 535–540](#)

Trial neoadjuvante SWOG 8710

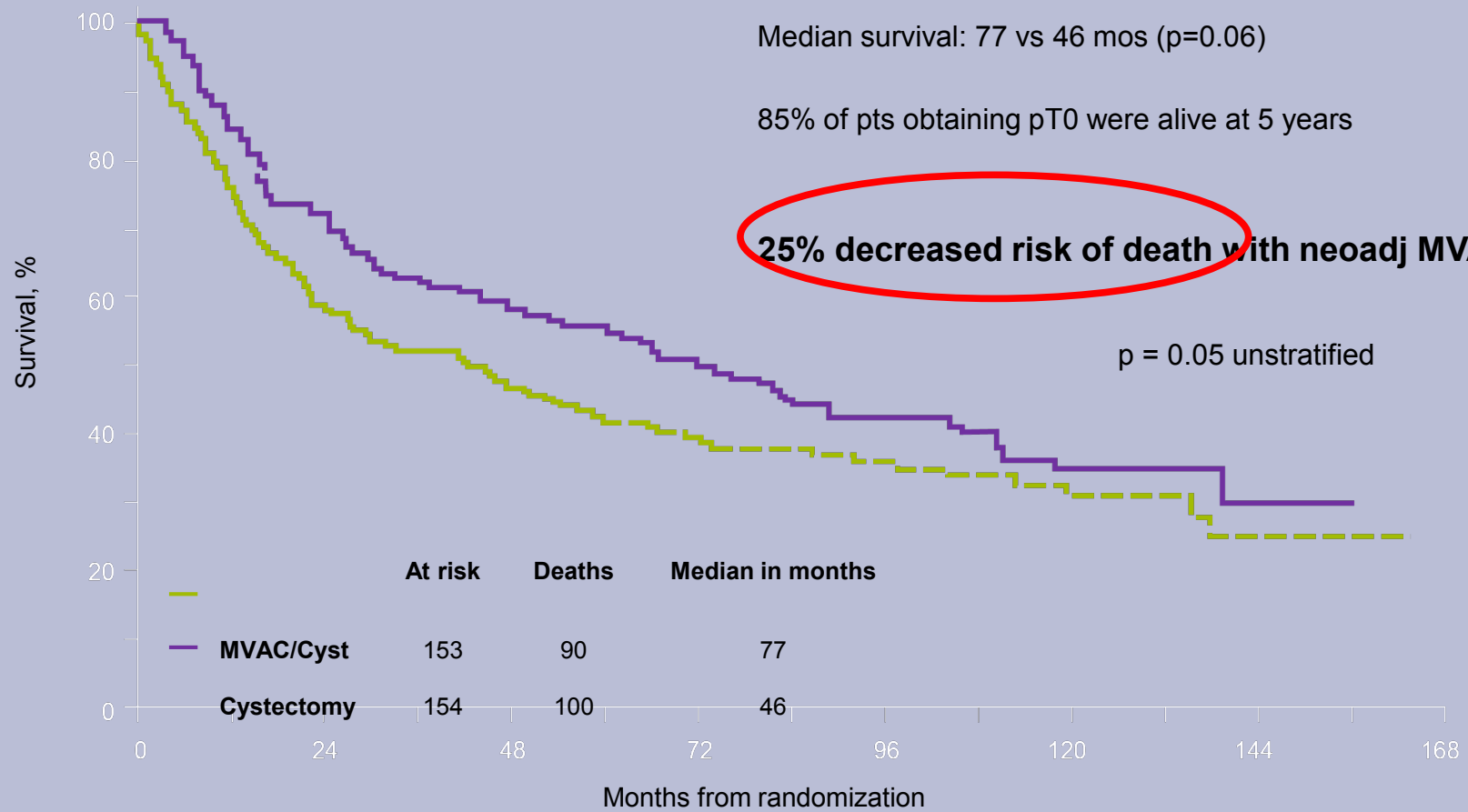
317 patients from 126 institutions (T2-T4a)
 Phase III randomized; Cystectomy ±3 cycles neo MVAC

Median survival: 77 vs 46 mos (p=0.06)

85% of pts obtaining pT0 were alive at 5 years

25% decreased risk of death with neoadj MVAC

p = 0.05 unstratified



CHEMIOTERAPIA NEOADIUVANTE

- ◆ Una meta-analisi pubblicata nel 2003 su Lancet per conto dell'Advanced Bladder Cancer (ABC) Meta-analysis Collaboration, in cui vengono analizzati i dati di ben 2688 pazienti, ha evidenziato un significativo beneficio in termini di sopravvivenza globale, con un **HR di 0.87**, per gli schemi di polichemioterapia comprendenti cisplatino.
- ◆ Pochi anni dopo è stato pubblicato su European Urology un aggiornamento di tale meta-analisi comprendente 3005 pazienti che costituivano il 98% dei pazienti inseriti nella totalità dei trials noti. Sostanzialmente tale update ha confermato i dati dello studio di Lancet
- ◆ Sempre su European Urology, in base ad un'ulteriore metanalisi pubblicata nel 2012 la chemioterapia neoadiuvante di combinazione a base di cisplatino è stata considerata un ben definito **standard** in grado di **migliorare la sopravvivenza** complessiva nel carcinoma muscolo invasivo della vescica

LINEE GUIDA 2013 EAU

“La chemioterapia neoadiuvante è raccomandata per il cancro della vescica in stadio T2-T4, cN0M0 e dovrebbe sempre prevedere un trattamento di combinazione a base di cisplatino”

(raccomandazione di Grado A, basata su studi clinici di buona qualità e consistenza includenti almeno uno studio randomizzato)

Utilizzo dei trattamenti neoadiuvanti in Europa

	No. of sites	No. of MIBC seen annually, mean	Range	No. of annual cystectomies, mean	Range
Western European centres	71	69	20–250	48	20–130
Central European centres	39	66	25–250	39	20–140

	Sites offering any NCT, %	Estimated portion of patients considered for NCT, mean, %	Range	Site estimating > 30% of patients to be considered for NCT, %
Western European centres	68	20	2–85	25
Central European centres	95	9	5–50	5

MIBC: muscle invasive bladder cancer; NCT: neoadjuvant chemotherapy

Trial	Patients, n	Regimen	Survival benefit
Nordic Cystectomy I	325	Cisplatin plus doxorubicin	No
Nordic Cystectomy II	317	CM	No
International Collaboration of Trialists	976	CMV X 3	Yes
SWOG/US Intergroup	317	MVAC X 3	Yes

CM: cisplatin, methotrexate; CMV: cisplatin, methotrexate, vinblastine; SWOG: Southwest Oncology Group; MVAC: methotrexate, vinblastine, doxorubicin

CHEMIOTERAPIA NEOADIUVANTE

The
Oncologist®

Genitourinary Cancer

Neoadjuvant Chemotherapy for Muscle-Invasive Bladder Cancer: A Systematic Review and Two-Step Meta-Analysis

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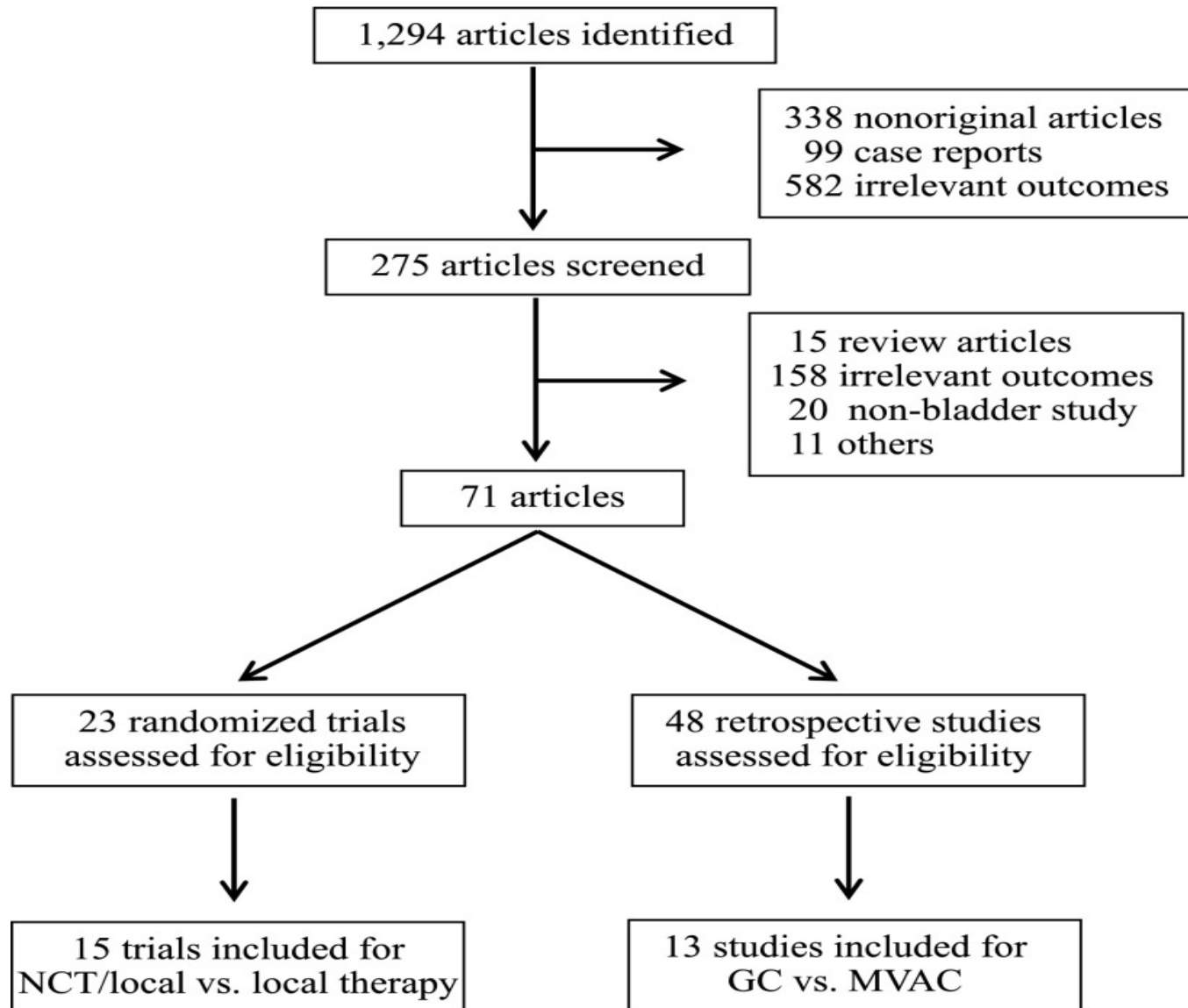
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Disclosures of potential conflicts of interest may be found at the end of this article.

Key Words. Chemotherapy • Bladder cancer • Neoadjuvant • Platinum • Survival

2016

CHEMIOTERAPIA NEOADIUVANTE



CHEMIOTERAPIA NEOADIUVANTE

Studi Randomizzati

Study	Year	Country	Events/no. of patients			Standard arm	Median follow-up (months)
			NCT	Control	Regimen		
Wallace et al. [23]	1991	U.K.	46/83	41/76	Cisplatin	R/T	16
Raghavan et al. [23]	1991	Australia	25/42	26/54	Cisplatin	R/T	16
Martinez-Piñero et al. [24]	1995	Spain	43/62	38/60	Cisplatin	C	78.2
Cortesi	Unpublished	Italy	43/82	41/71	MVEC	C	37
Shipley et al. [25]	1998	U.S.	31/61	31/62	MCV	R/T with cisplatin ± C	60
Bassi et al. [26]	1999	Italy	53/102	60/104	MVAC	C	NA
Sengeløv ^a et al. [27]	2002	Denmark	70/78	60/75	Cisplatin + MTX	C or R/T	NA
Grossman et al. [4]	2003	U.S.	90/153	100/154	MVAC	C	100.8
Sherif ^b et al. [16]	2004	Northern Europe	145/306	173/314	Cisplatin + doxorubicin or MTX	R/T + C or C	56.4
BA06 30894 [5]	2011	International	282/491	309/485	CMV	C or R/T	96
Osman et al. [28]	2014	Egypt	11/30	15/30	Gemcitabine + cisplatin	C	36
Kitamura et al. [29]	2014	Japan	NA/64	NA/66	MVAC	C	55
Khaled et al. [30]	2014	Egypt	NA/59	NA/55	Gemcitabine + cisplatin	C or R/T	37.4

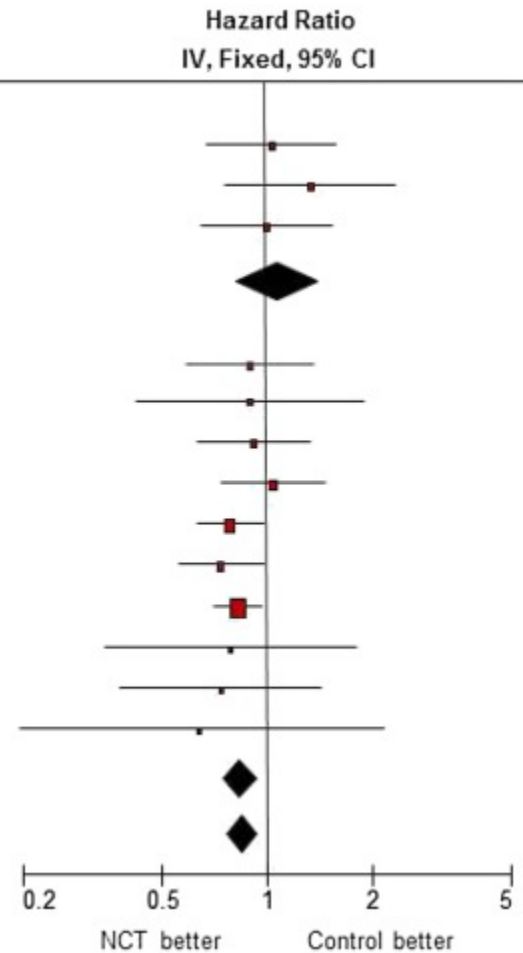
^aDAVECA 8901 and DAVECA 8902 trials.

^bNordic I and Nordic II trials.

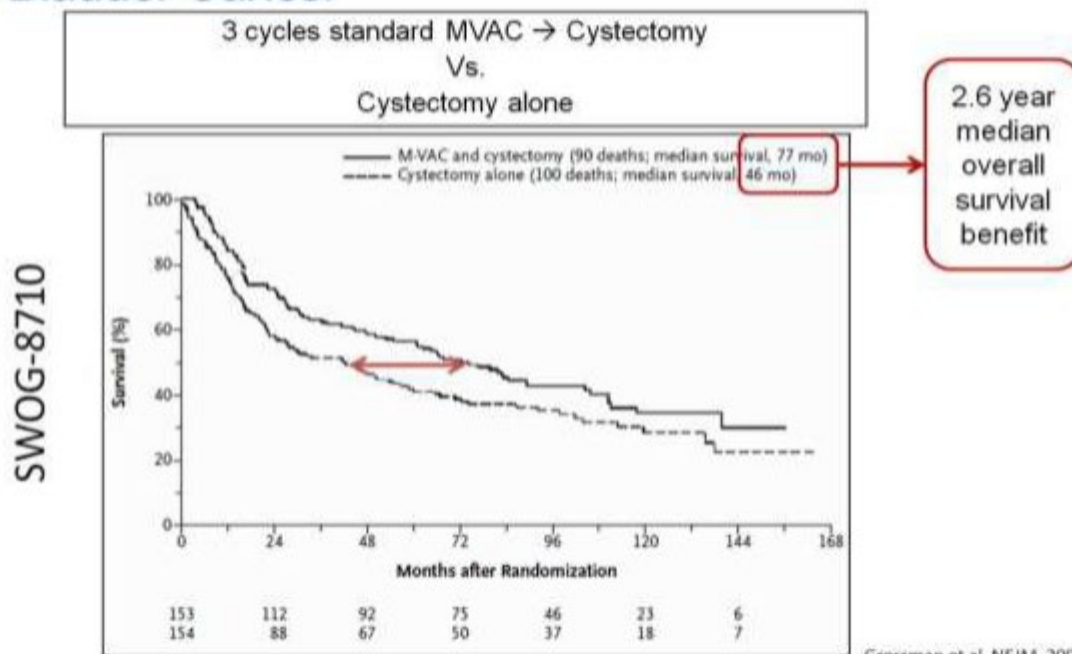
Abbreviations: C, cystectomy; CMV, cisplatin, methotrexate, and vinblastine; MCV, methotrexate, cisplatin, and vinblastine; MTX, methotrexate; MVAC, methotrexate, vinblastine, doxorubicin, and cisplatin; MVEC, methotrexate, vinblastine, epirubicin, and cisplatin; NA, not available; NCT, neoadjuvant chemotherapy; R/T, radiotherapy.

CHEMIOTERAPIA NEOADIUVANTE

Study	NCT	Control	Weight	Hazard Ratio IV, Fixed, 95% CI
Single platinum				
Wallace et al. 1991 [23]	59/83	50/76	4.9%	1.05 [0.69, 1.60]
Wallace et al. 1991 [23]	34/41	37/55	2.8%	1.36 [0.78, 2.38]
Martinez-Piñero et al. 1995 [24]	43/62	38/59	4.7%	1.02 [0.66, 1.57]
Subtotal				1.10 [0.84, 1.44]
Combination platinum				
Cortesi (unpublished)	43/82	41/71	4.9%	0.91 [0.60, 1.39]
Shiple et al. 1998 [25]	31/61	31/62	1.6%	0.91 [0.43, 1.92]
Bassi et al. 1999 [26]	53/102	60/104	6.3%	0.93 [0.64, 1.35]
Sengeløv et al. 2002 [27]	70/78	60/75	7.3%	1.06 [0.75, 1.50]
Sherif et al. 2004 [16]	145/306	173/314	18.4%	0.80 [0.64, 0.99]
Grossman et al. 2003 [4]	90/153	100/154	11.1%	0.75 [0.57, 0.99]
BA06 30894 2011 [5]	282/491	309/485	34.5%	0.84 [0.72, 0.98]
Osman et al. 2014 [28]	11/30	15/30	1.3%	0.80 [0.35, 1.83]
Khaled et al. 2014 [30]	NA/59	NA/55	2.0%	0.75 [0.39, 1.46]
Kitamura et al. 2014 [29]	NA/64	NA/66	0.6%	0.65 [0.19, 2.20]
Subtotal				0.84 [0.76, 0.93]
Total			100.0%	0.87 [0.79, 0.96]



Neoadjuvant Chemotherapy is standard of care for Muscle Invasive Bladder Cancer



Quali sono i pazienti candidabili ?

cT2-4cN0 «*FIT*» per cisplatino

(ECOG PS:0-1 e GFR > 60 ml/min)

- riduzione del 14% del rischio di morte (HR= 0.86; p=0.003)
- vantaggio assoluto di sopravvivenza del 5-8%

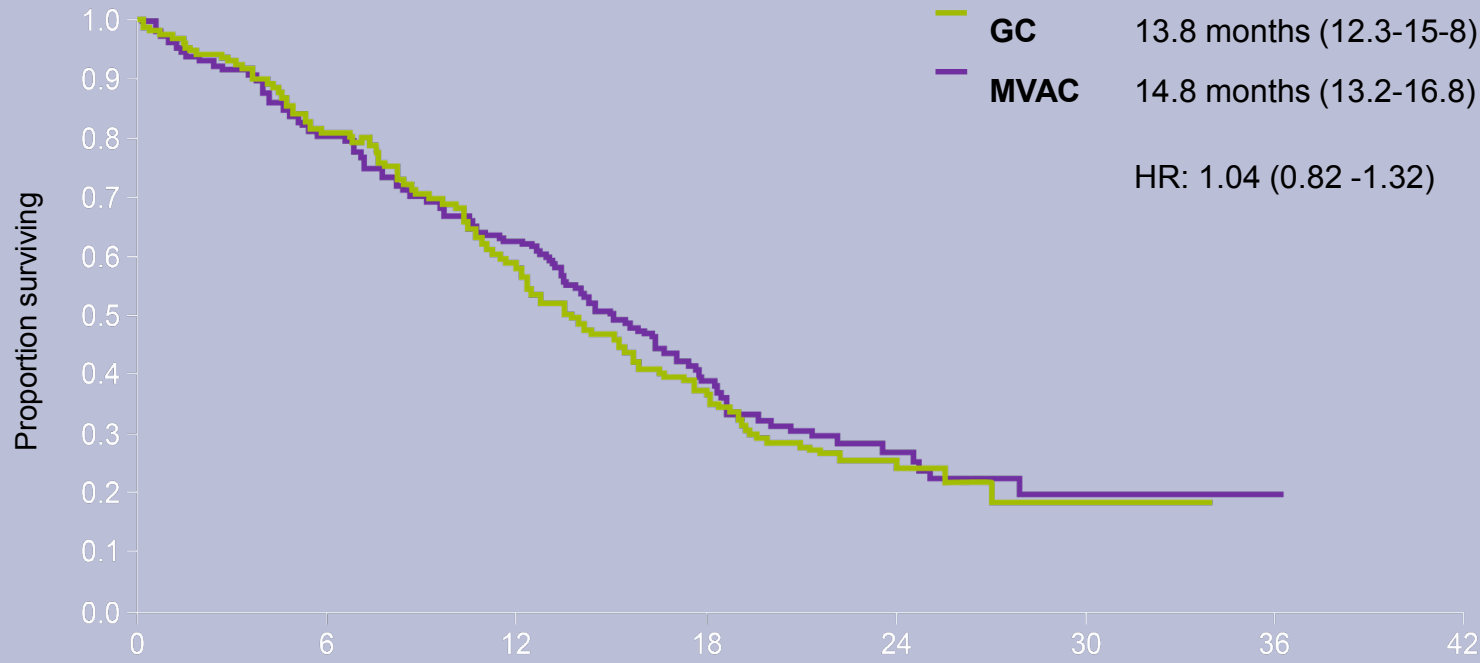
Chirurgia più chemioterapia rispetto a sola chirurgia

“The differences between the survival curves are too small.

	Breast	Bladder	Colon
	Meta-analysis	Meta-analysis	Pooled analysis
Journal	Lancet	Eur Urology	J Clin Oncol
Year	1998	2005	2004
# of patients	17,723	3005	3302
Absolute difference in survival (years)	7% (10)	5% (5)	7% (5)
Disease-free survival	0.77	0.78	0.7

Prima linea chemioterapia

Overall survival for MVAC vs Gem/Cis



Pts at risk

	0	6	12	18	24	30	36
MVAC	202	161	124	54	18	4	0
GC	203	120	120	52	18	1	0

Mod. da [von der Maase H, et al. J Clin Oncol 2000; 18: 3068-3077](#)



CLINICAL STAGING^d

ADDITIONAL WORKUP^a

PRIMARY TREATMENT

ADJUVANT TREATMENT

Stage IIIA
(cT3, N0;
cT4a, N0;
cT1-T4a,
N1)

- Abdominal/pelvic CT or MRI^{a,p} if not previously done
- Chest imaging
- Bone scan^a if clinical suspicion or symptoms of bone metastases

Neoadjuvant cisplatin-based combination chemotherapy^q followed by radical cystectomy^{b,v} (category 1)

or
Concurrent chemoradiotherapy^{r,s,t,u} (category 1)

or
Non-cystectomy candidates:
Concurrent chemoradiotherapy^{r,s} or RT^s

Reassess tumor status 2-3 months after treatment^s

No tumor → Observation

Tumor → If Tis, Ta, or T1, consider intravesical BCG^l or Surgical consolidation^b or Treat as metastatic disease (BL-9)

No tumor → Observation

Tumor → Chemotherapy^q or Palliative TURBT and Best supportive care

Based on pathologic risk (pT3-4 or positive nodes), consider adjuvant RT^s or consider adjuvant cisplatin-based chemotherapy^q if no neoadjuvant treatment given

See Follow-up (BL-E)

^a See Principles of Imaging for Bladder/Urothelial Cancer (BL-A).

^b See Principles of Surgical Management (BL-B).

^d The modifier "c" refers to clinical staging based on bimanual examination under anesthesia, endoscopic surgery (biopsy or transurethral resection), and imaging studies. The modifier "p" refers to pathologic staging based on cystectomy and lymph node dissection.

^p Consider PET/CT scan (skull base to mid-thigh) (category 2B).

^q See Principles of Systemic Therapy (BL-G 1 of 5).

^r See Principles of Systemic Therapy (BL-G 4 of 5).

^s See Principles of Radiation Management of Invasive Disease (BL-H).

^l There are data to support equivalent survival rates. Not all institutions have experience with these multidisciplinary treatment approaches, which require a dedicated team.

^u Optimal candidates for bladder preservation with chemoradiotherapy include patients with tumors that present without hydronephrosis, are without concurrent extensive or multifocal Tis, and are <6 cm. Ideally, tumors should allow a visually complete or maximally debulking TURBT. See Principles of Radiation Management of Invasive Disease (BL-H).

^v Cystectomy alone is appropriate for those not eligible to receive cisplatin-based chemotherapy. Patients with N1 disease do better if there is a response to neoadjuvant chemotherapy than if there is a response to surgery alone.

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any patient with cancer is in a clinical trial. Participation in clinical trials is especially encouraged.

[See Recurrent or Persistent Disease \(BL-10\)](#)

Linee guida EAU e ASCO 2016

Recommendations and qualifying statements

Adjuvant chemotherapy

Adjuvant cisplatin based combination chemotherapy may be offered to patients with pT3/4 and/or pN+ disease if no neoadjuvant chemotherapy has been given.

While neoadjuvant chemotherapy is recommended, adjuvant chemotherapy may be offered to high-risk patients who did not receive neoadjuvant treatment.

Terapia adiuvante nella vescica

Cistectomia più chemioterapia adiuvante versus sola cistectomia

DFS: 36% di riduzione del rischio di ricaduta

OS: 21% di riduzione del rischio di morte

Riduzione del rischio di morte anche nei tumori delle alte vie urinarie

Kim HS et al, Oncotarget, 2017;
Seisen T et al, J Clin Oncol, 2017



Tumori della vescica: terapia adiuvante

- **Quando?**

Nei pazienti che *non* hanno fatto *chemioterapia neoadiuvante* (sempre preferibile) prima della cistectomia

- **A chi?**

Ai pazienti (fit per cisplatino) con tumore delle **basse e alte** vie urinarie che dopo la chirurgia sono: *pT3-4 pNo o qualsiasi pT pN+*



IL FUTURO ?



PURE-01 (NCT02736266): Neoadjuvant pembrolizumab before radical cystectomy for MIBC

- Fit and planned for cystectomy
- Predominant (i.e. 50% at least) UC histology
- cT₃bN0 stage
- Residual disease after TURB (surgical opinion, cystoscopy or radiological presence)
- GFR ≥20 ml/min (Cockcroft – Gault formula)
- ECOG-PS 0-1

- **Indipendentemente dall'eleggibilità per cisplatino**

3×3 weekly cycles of pembrolizumab 200 mg IV

Pre-post treatment tissue/blood sample collection for biomarker analyses

Pre-post treatment imaging: multiparametric bladder MRI (mpMRI); ¹⁸F-DG-PET/CT scan, T/A CT scan

Additional DD-MVAC x 4 cycles in non-responding pts (investigator choice)

- Cystectomy
- Post-cystectomy management according to EAU guidelines
- Survival data collected until 2-y post cystectomy

- Pathologic complete response (pT0) in ITT population is the primary endpoint
- The H₁ is pT0 ≥25% and H₀ pT0 ≤15%
- **71 pts** will be enrolled, with **43 pts** at first stage according to MinMax design
- pT0 limits for H0 rejection: **6 (1st stage); 14 (2nd stage)**
- 80% power and a one-sided test of significance at the 10% level
- Data cut-off: May 10th, 2018; Median Follow-up: 8 months

Pembrolizumab neoadiuvante ha determinato un 42% di risposte complete patologiche

Novità!

Table 3. Pathologic Response to Pembrolizumab

Response	All Treated Patients (N = 50)	PD-L1 CPS $\geq 10\%$ (n = 35)	PD-L1 CPS $< 10\%$ (n = 15)
Primary end point			
Pathologic complete response, No. (%)	21 (42)	19 (54.3)	2 (13.3)
95% CI	28.2 to 56.8		
Secondary end point			
Pathologic downstaging to pT<2, No. (%)	27 (54)	23 (65.7)	4 (26.7)
95% CI*	39.3 to 68.2		
Treatment failure, No. (%)			
pT2N0	2 (3.8)		
pT3-4N0	6 (12)		
pTanyN+	10 (20)		
Additional MVAC chemotherapy†	5 (10)		
RECIST v1.1 PD	0		

Necchi A. et al. J Clin oncol, 2018



Atezolizumab neoadiuvante nei pazienti platino unfit

Novità!

ABACUS: disegno dello studio

- Analisi ad interim di uno studio di fase II
- **Criteri di elegibilità**
 - **T2-T4aNoMo** carcinoma uroteliale della vescica
 - Malattia residua dopo TURBT
 - **Inelegibilità per chemioterapia a base di cisplatino**

ABACUS: trattamento

- Atezolizumab 1200 mg somministrato per due cicli ogni 21 giorni
- Chirurgia dopo 4-8 settimane dal primo ciclo di atezolizumab
- **Coprimari endpoints:** pCR (> 20%), incremento conta CD8+

pCR Rate, n/N (%; 95% CI)	Evaluable Population (n = 68)
All patients	20/68 (29; 19-42)
PD-L1 positive*	10/25 (40; 21-61)
PD-L1 negative*	5/31 (16; 5-34)

Powles T. et al. ASCO 2018. Abstract 4506



CONCLUSIONI

- Nei pazienti cT2-4cN0-1 fit per cisplatino bisogna fare la chemioterapia neoadiuvante per prolungare la sopravvivenza e ridurre le recidive
- Pazienti con malattia post-intervento pT3-4N0 o qualsiasi pTN1 che non hanno fatto chemioterapia neoadiuvante (sempre preferibile) possono trarre beneficio dalla terapia adiuvante
- Dal momento che il percorso terapeutico per i tumori della vescica può non essere univoco, sarebbe opportuno che i pazienti a cui è stato diagnosticato un tumore della vescica (con conferma istologica) fossero gestiti in maniera multidisciplinare nell'ambito di un Gruppo Interdisciplinare di Cure (GIC).





GRAZIE PER L'ATTENZIONE