

XXXIII CONGRESSO NAZIONALE AIRO

# AIRO2023

BOLOGNA,  
27-29 OTTOBRE 2023

PALAZZO DEI CONGRESSI

Radioterapia Oncologica: l'evoluzione al servizio dei pazienti

## La chemioterapia per M1 da carcinoma della prostata: Indicazioni e terapia di supporto

Giulio Francolini

Azienda Ospedaliera Universitaria Careggi

Anna Rita Alitto

Fondazione Policlinico Universitario A.Gemelli-IRCCS

## An patologica remota:

Age 69

ernia inguinale nel 1990.

Nel 2008 diagnosi di Leucemia Mieloide Cronica, da allora in terapia con imatinib

## An patologica prossima

dal 2019 rialzo del PSA, progressivo incremento di disuria e nicturia, nel dicembre 2020 effettua RM prostata mdc 11/12/2020 ed Agobiopsia prostatica 22/12/2020: adenocarcinoma acinare infiltrante della prostata Gleason score 4+4 :

PET PSMA 19/01/2021: patologica ipercaptazione del radiofarmaco nel lobo dx e a livello scheletrico in corrispondenza dell'osso acetabolare destro e dell'osso sacro in S4

Inizia ADT il 26/01/2021

Giugno 2021 inizia trattamento radiante su prostata per una DTF di 70.2 Gy in 26 Frazioni, termina a Luglio 2021

Il PSA rimane indosabile fino a Dicembre 2021, quando effettua nuovo re-staging con PSMA per rialzo del PSA a 2.38 (nadir 0.02)

PET PSMA del 23/12/2021: Comparsa di area intensamente ipermetabolica di pertinenza ossea nell'acetabolo sinistro, di significato patologico.

In considerazione del quadro Oligo mCRPC, si propone terapia di I linea con Abiraterone nell'ambito dello studio ARTO, il paziente viene randomizzato nel braccio TRATTAMENTO. Inizia abiraterone con PSA 6 ng/ml l'11/01 2022 ed inizia SBRT su acetabolo sinistro in data 9/02/2022 (35 Gy in 5 sedute) , risposta biochimica con PSA 0.9 ng/ml a Giugno 2022

Per PSA 6.87 ad Agosto 2022 viene ri-stadiato con PET PSMA:

rilievo di multiple aree ad elevato metabolismo a carico dell'osso pubico dx, della tuberosità ischiatica sinistra e del sacro. Scomparso il precedente reperto acetabolare sinistro

STATUS BRCA 1/2: Wild tipe

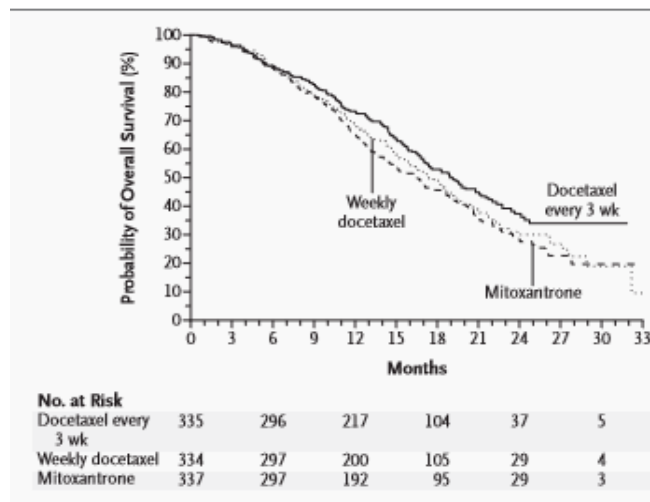
Inizia chemioterapia con Docetaxel+Denosumab in data 07/10/2022. Terapia complicata da episodio di neutropenia febbrile. Per tale motivo è stato deciso di rimodulare la schedula di trattamento a schedula bisettimanale (50 mg m2 ogni 15 gg)

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

## Docetaxel plus Prednisone or Mitoxantrone plus Prednisone for Advanced Prostate Cancer

Ian F. Tannock, M.D., Ph.D., Ronald de Wit, M.D., William R. Berry, M.D.,  
Jozsef Horti, M.D., Anna Pluzanska, M.D., Kim N. Chi, M.D.,  
Stephane Oudard, M.D., Christine Théodore, M.D.,  
Nicholas D. James, M.D., Ph.D., Ingela Turesson, M.D., Ph.D.,  
Mark A. Rosenthal, M.D., Ph.D., and Mario A. Eisenberger, M.D.,  
for the TAX 327 Investigators



1006 men with metastatic hormone-refractory prostate cancer received 5 mg of prednisone twice daily and were randomly assigned to receive Mitoxantrone or Docetaxel 75 mg/mq

Men in the group given docetaxel every three weeks had a hazard ratio for death of 0.76 (95 percent confidence interval, 0.62 to 0.94;  $P=0.009$  by the stratified log-rank test)

2-weekly versus 3-weekly docetaxel to treat castration-resistant advanced prostate cancer: a randomised, phase 3 trial



	2-weekly docetaxel (n=170)		3-weekly docetaxel (n=176)	
	Grade 1-2	Grade 3-4	Grade 1-2	Grade 3-4
<b>Haematological</b>				
Neutropenia	40 (24%)	61 (36%)	6 (3%)	93 (53%)
Leucopenia	49 (29%)	22 (13%)	36 (20%)	51 (29%)
Anaemia	144 (85%)	1 (1%)	142 (81%)	1 (1%)
Thrombocytopenia	20 (12%)	1 (1%)	20 (11%)	0
Febrile neutropenia	0	6 (4%)	0	25 (14%)

361 CRPC chemo-naive Patients were randomized to receive Docetaxel 75 mg/m<sup>2</sup> q21 or 50 mg/m<sup>2</sup> q15.

The 2-weekly administration was associated with significantly longer TTF than was 3-weekly administration (5.6 months, 95% CI 5.0-6.2 vs 4.9 months, 4.5-5.4; hazard ratio 1.3, 95% CI 1.1-1.6, p=0.014).

Grade 3-4 adverse events occurred more frequently in the 3-weekly than in the 2-weekly administration group, including neutropenia (93 [53%] vs 61 [36%]), leucopenia (51 [29%] vs 22 [13%]), and febrile neutropenia (25 [14%] vs six [4%]). Neutropenic infections were reported more frequently in patients who received docetaxel every 3 weeks (43 [24%] vs 11 [6%], p=0.002).

*Kellokumpu-Lehtinen, Lancet Oncol 2013*

## Docetaxel side effects

Adverse Event	Docetaxel Every 3 Wk (N=332)	Weekly Docetaxel (N=330)	Mitoxantrone Every 3 Wk (N=335)
	percent		
Grade 3 or 4 anemia	5	5	2
Grade 3 or 4 thrombocytopenia	1	0	1
Grade 3 or 4 neutropenia	32*	2†	22
Febrile neutropenia	3	0	2
Impaired LVEF‡	10†	8†	22
Major decrease	1†	2*	7
Fatigue	53†	49†	35
Grade 3 or 4	5	5	5
Alopecia	65†	50†	13
Nausea, vomiting, or both	42	41	38
Diarrhea	32†	34†	10
Nail changes	30†	37†	7
Sensory neuropathy	30†	24†	7
Anorexia	17	21*	14
Change in taste	18†	24†	7
Stomatitis	20†	17†	8
Myalgia	14	14	13
Dyspnea	15*	14*	9
Tearing	10†	21†	1
Peripheral edema	19†	12†	1
Epistaxis	6	17†	2
≥1 Serious adverse event	26	29	20
Treatment-related death	0.3	0.3	1

Tannock et al, N Engl J Med 2004;351:1502-12.

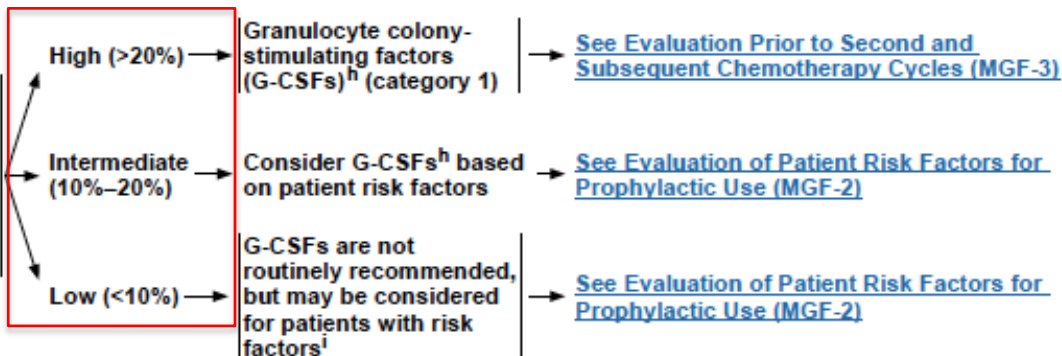
Event	Grade 3	Grade 4	Grade 5
	no. of patients (%)		
Allergic reaction	7 (1.8)	1 (0.3)	0
Fatigue	16 (4.1)	0	0
Diarrhea	4 (1.0)	0	0
Stomatitis	2 (0.5)	0	0
Neuropathy, motor	2 (0.5)	0	0
Neuropathy, sensory	2 (0.5)	0	0
Thromboembolism	1 (0.3)	2 (0.5)	0
Sudden death	0	0	1 (0.3)
Anemia	4 (1.0)	1 (0.3)	0
Thrombocytopenia	0	1 (0.3)	0
Neutropenia	12 (3.1)	35 (9.0)	0
Febrile neutropenia	15 (3.8)	9 (2.3)	0
Infection with neutropenia	5 (1.3)	4 (1.0)	0
Any event	65 (16.7)	49 (12.6)	1 (0.3)

Sweeney et al, N Engl J Med 2015;373:737-46

## Neutropenia

National  
Comprehensive  
Cancer  
Network®NCCN Guidelines Version 2.2023  
Hematopoietic Growth Factors[NCCN Guidelines Index](#)  
[Table of Contents](#)  
[Discussion](#)EVALUATION  
PRIOR TO FIRST  
CHEMOTHERAPY  
CYCLE<sup>a,b</sup>RISK ASSESSMENT<sup>d</sup>  
FOR FEBRILE  
NEUTROPENIA<sup>e</sup>OVERALL FEBRILE  
NEUTROPENIA  
RISKPROPHYLACTIC USE OF G-CSFs FOR FEBRILE NEUTROPENIA  
CURATIVE/ADJUVANT OR PALLIATIVE SETTING<sup>g</sup>Evaluation of  
risk for febrile  
neutropenia  
following  
chemotherapy  
in adult patients  
with solid tumors  
and non-myeloid  
malignancies<sup>c</sup>

- Disease
- Chemotherapy regimen
  - › High-dose therapy
  - › Dose-dense therapy<sup>f</sup>
  - › Standard-dose therapy
- Patient risk factors
- Treatment intent (curative vs. palliative)



## Neutropenia


**NCCN Guidelines Version 2.2023**  
**Hematopoietic Growth Factors**
[NCCN Guidelines Index](#)  
[Table of Contents](#)  
[Discussion](#)
**EXAMPLES OF DISEASE SETTINGS AND CHEMOTHERAPY REGIMENS WITH AN**

- *This list is not comprehensive*
- Regimens recommended in the
- The type of chemotherapy regimen
- [Neutropenia \(MGF-2\)](#).
- The exact risk includes agent
- In general, dose-dense regimen

**Occult Primary - Adenocarcinoma**  
 • Gemcitabine/docetaxel<sup>40</sup>

- Breast Cancer**
- Docetaxel<sup>a,41,42</sup>
  - AC (doxorubicin, cyclophosphamide + sequential docetaxel (taxane only))<sup>a,43</sup>
  - Paclitaxel every 21 days<sup>a,44</sup>

- Cervical Cancer**
- Cisplatin/topotecan<sup>45-47</sup>
  - Paclitaxel/cisplatin<sup>a,47</sup>
  - Topotecan<sup>48</sup>
  - Irinotecan<sup>49</sup>

- Colorectal Cancer**
- FOLFIRINOX (fluorouracil, leucovorin, irinotecan, oxaliplatin, irinotecan)<sup>e,50-52</sup>

**Assess patient risk factors<sup>i,j,k</sup>:**

- Prior chemotherapy or radiation therapy
- Persistent neutropenia
- Bone marrow involvement by tumor
- Recent surgery and/or open wounds
- Liver dysfunction (bilirubin >2.0)
- Renal dysfunction (creatinine clearance <50)
- Age >65 years receiving full chemotherapy dose intensity

No risk factors → Observe

 ≥1 risk factor → Consider G-CSFs<sup>h</sup>

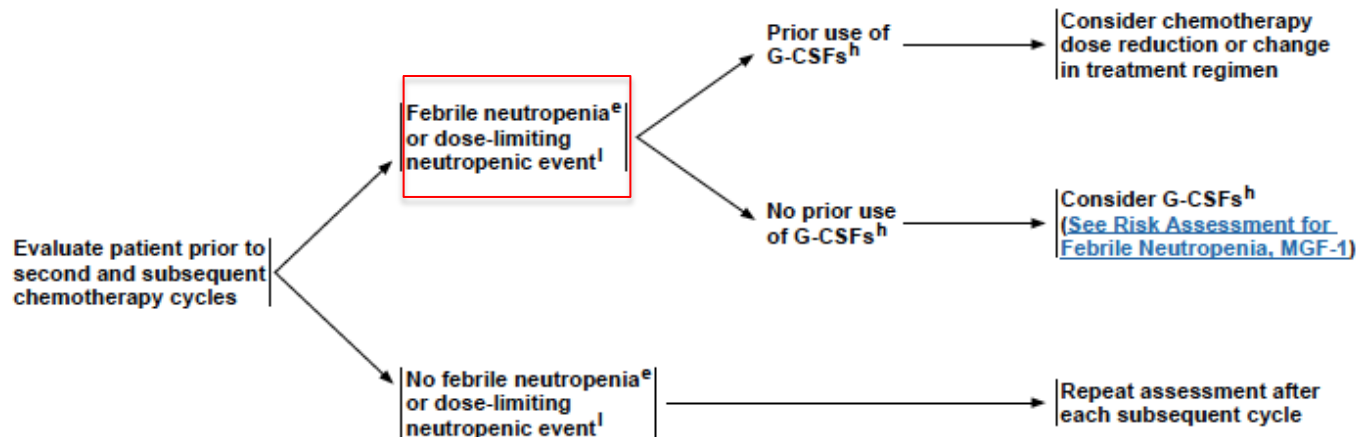


# Febrile Neutropenia

single temperature:  $\geq 38.3^{\circ}\text{C}$  orally or  $\geq 38.0^{\circ}\text{C}$  over 1 h

AND

neutropenia:  $< 500$  neutrophils/mcL or  $< 1000$  neutrophils/mcL and a predicted decline to  $\leq 500$  neutrophils/mcL over the next 48 h.



# Febre Neutropenia

## MASCC Scoring Index

### Characteristic/Score

- The burden of illness: no or mild symptoms: 5
- The burden of illness: none or mild: 5
- The burden of illness: moderate symptoms: 3
- The burden of illness: severe symptoms: 0
- No hypotension (systolic BP greater than 90 mmHg): 5
- No chronic obstructive pulmonary disease: 4

### Type of Cancer

- Solid tumor: 4
- Lymphoma with previous fungal infection: 4
- Hematologic with previous fungal infection: 4
- No dehydration: 4
- Outpatient status (at the onset of fever): 3
- Age less than 60 years: 2

## The Clinical Index of Stable Febrile Neutropenia Score

### Characteristics/Score

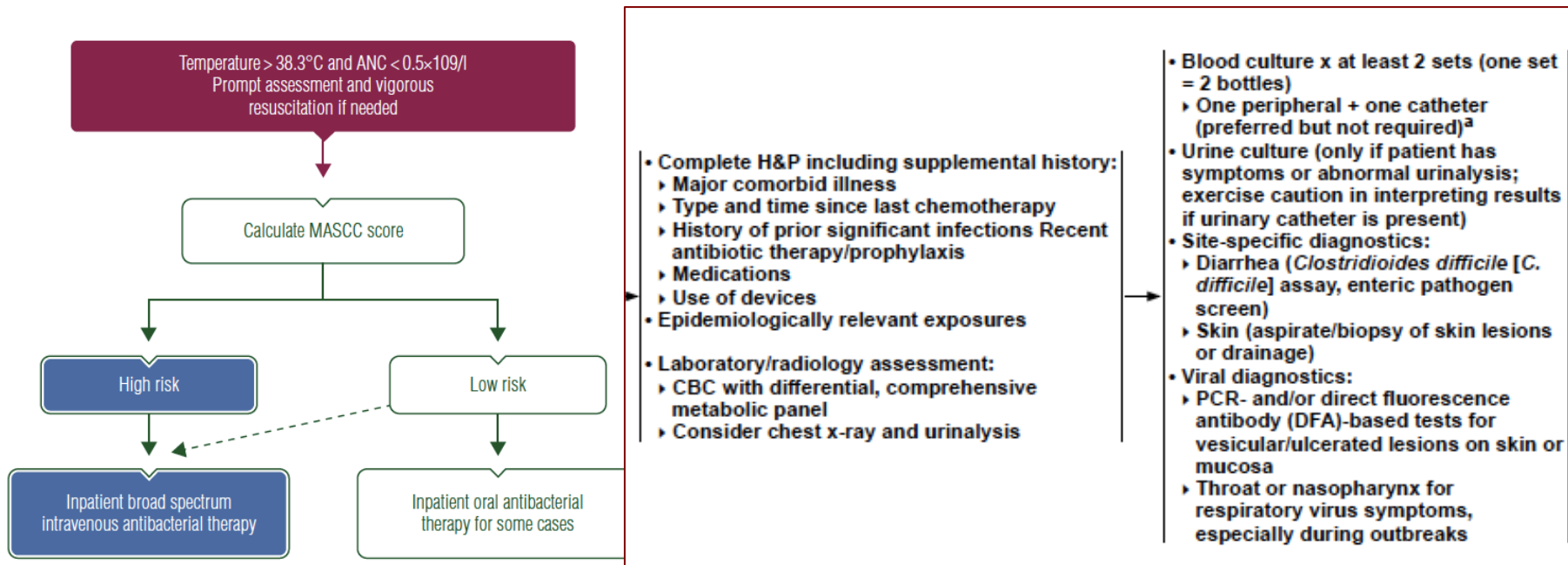
- ECOG performance status (greater than 2): 2
- Chronic obstructive pulmonary disease (COPD): 1
- Stree-induced hyperglycemia: 2
- Chronic cardiovascular disease: 1
- Monocytes less than 200 per mcL: 1
- Grade greater than or equal to 2 mucositis: 1
- Interpretation

### CISNE/Recommendation

- 0-2: Consider outpatient management with oral antibiotics
- Greater than or equal to 3: Inpatient management

<https://www.ncbi.nlm.nih.gov/books/NBK541102/>

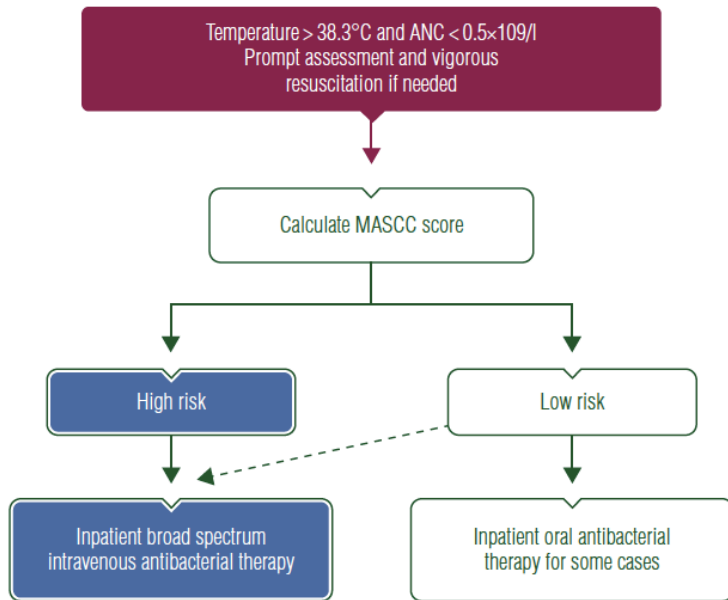
## Febbrile Neutropenia



ESMO Guidelines, Ann Oncol (2016) 27 (suppl 5): v111-v118

NCCN v2, 2023/

# Febbrile Neutropenia



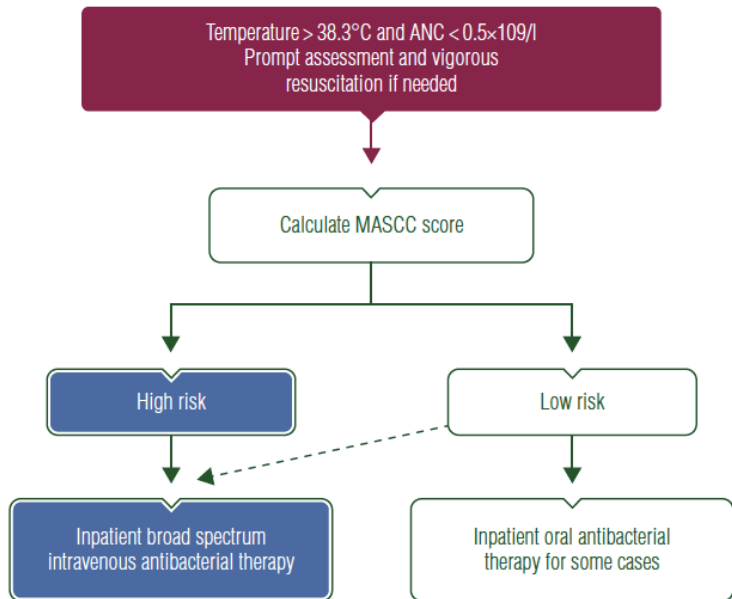
ESMO Guidelines, Ann Oncol (2016) 27 (suppl 5): v111-v118

NCCN v2, 2023/

## OUTPATIENT THERAPY FOR PATIENTS AT LOW RISK TREATMENT OPTIONS

- Intravenous (IV) antibiotics at home
- Daily long-acting IV agent ± oral therapy
  - › Home or office
- Oral therapy only<sup>d</sup>:
  - › Ciprofloxacin plus amoxicillin/clavulanate<sup>e</sup> (category 1)
  - › Levofloxacin
  - › Moxifloxacin<sup>f</sup> (category 1)

## Febbrile Neutropenia



ESMO Guidelines, Ann Oncol (2016) 27 (suppl 5): v111-v118

NCCN v2, 2023/

INITIAL INPATIENT EMPIRIC THERAPY FOR UNCOMPLICATED FEVER AND NEUTROPENIA<sup>9</sup>

## Initial antibiotic therapy should be based on:

- Infection risk assessment (FEV-2)
- Broad-spectrum coverage including antipseudomonal activity
- Colonization with or prior infection with multidrug-resistant organisms (MDROs)<sup>h</sup>
- Site of infection
- Local antibiotic susceptibility patterns
- Organ dysfunction/drug allergy
- Previous antibiotic therapy

IV antibiotic therapy<sup>i</sup>




- Typically monotherapy
  - Cefepime (category 1)
  - Imipenem/cilastatin (category 1)
  - Meropenem (category 1)
  - Piperacillin/tazobactam (category 1)
  - Ceftazidime<sup>j</sup> (category 2B)
- IV combination therapy could be considered where antimicrobial resistance is suspected
- Patients with high risk of anaphylaxis, consider ID/allergy consultation<sup>k</sup>

- Consider oral antibiotic therapy for select patients at low risk:
  - Ciprofloxacin + amoxicillin/clavulanate (category 1)<sup>e</sup>
  - Moxifloxacin<sup>f</sup> (category 1)
  - Levofloxacin
- Oral antibiotic regimen not recommended if patient received prior quinolone prophylaxis

## Geriatric Assessment With Management Improves Survival in Older Adults With Advanced Cancer

JCO Oncol Pract 00:1-3

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Clinical Oncology

Grant R. Williams, MD, MSPH<sup>1,2</sup> ; Darryl Outlaw<sup>2</sup> ; Smith Giri, MD, MHS<sup>1,2</sup> 

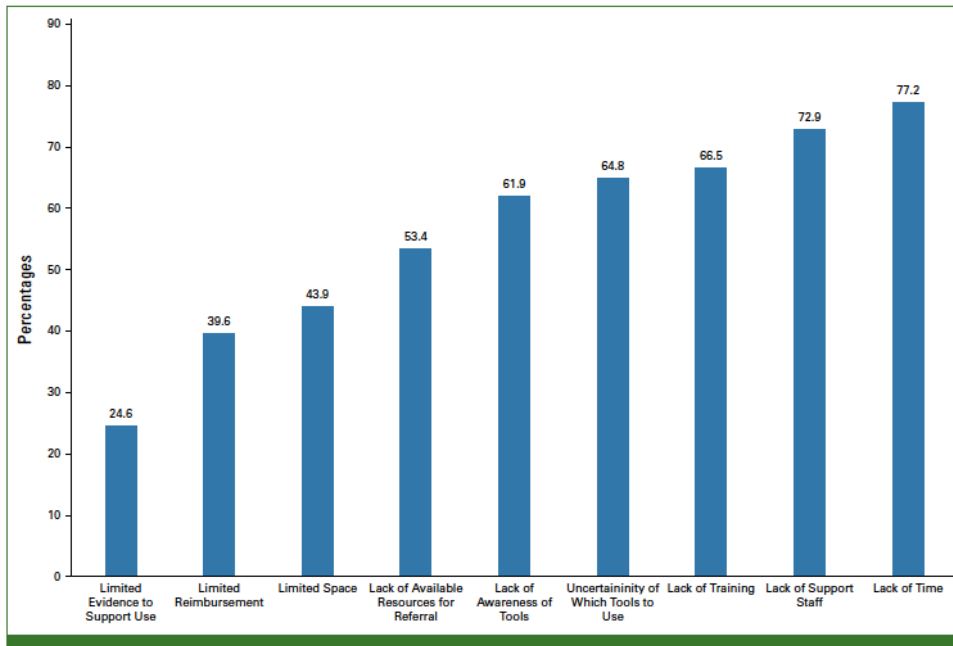
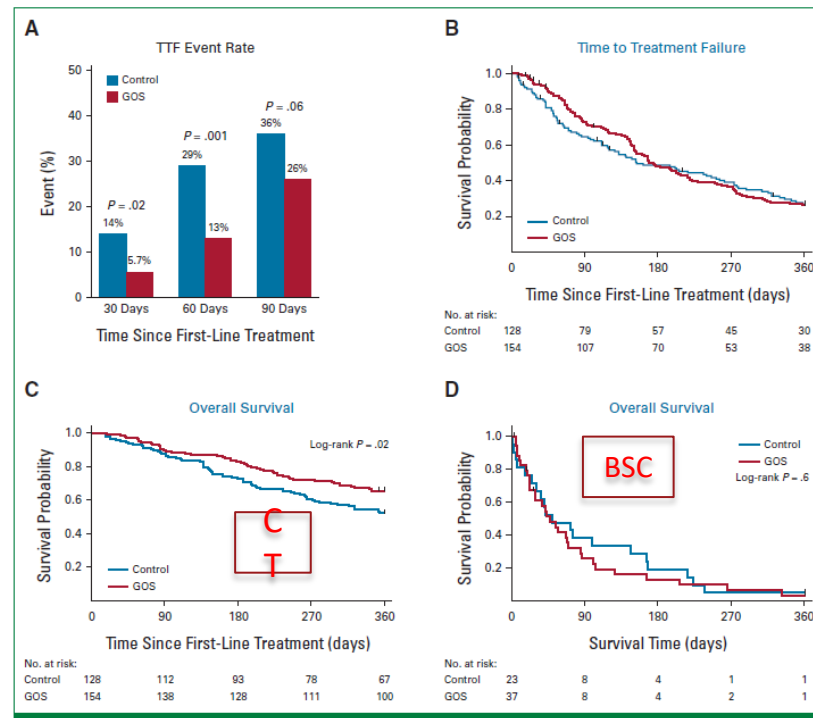


FIG 2. Common barriers to performing geriatric assessments.<sup>15</sup>

Original Reports | Care Delivery



## Survival in Older Japanese Adults With Advanced Cancer Before and After Implementation of a Geriatric Oncology Service

Tomohiro F. Nishijima, MD, PhD<sup>1,2,3</sup> ; Mototsugu Shimokawa, PhD<sup>4,5</sup> ; Masato Komoda, MD, PhD<sup>2</sup> ; Fumiyasu Hanamura, MD, PhD<sup>2</sup>; Yuta Okumura, MD, PhD<sup>2</sup> ; Masaru Morita, MD, PhD<sup>6</sup>; Yasushi Toh, MD, PhD<sup>6</sup> ; Taito Esaki, MD, PhD<sup>2</sup>; and Hyman B. Muss, MD<sup>3</sup> DOI <https://doi.org/10.1200/JCO.22.00842>

**FIG 1.** Survival outcomes. (A) TTF event rates for patients treated with first-line chemotherapy. (B) KMC of TTF for patients treated with first-line chemotherapy. (C) KMC of OS for patients treated with first-line chemotherapy. (D) KMC of OS for patients receiving BSC alone. BSC, best supportive care; GOS, geriatric oncology service; KMC, Kaplan-Meier curve; OS, overall survival; TTF, time to treatment failure.



## Evaluation of geriatric assessment and management on the toxic effects of cancer treatment (GAP70+): a cluster-randomised study

Lancet 2021; 398: 1894-904

Supriya G Mohile, Mostafa R Mohamed, Huiwen Xu, Eva Culakova, Kah Poh Loh, Allison Magnuson, Marie A Flannery, Spencer Obrecht, Nikesha Gilmore, Erika Ramsdale, Richard F Dunne, Tanya Wildes, Sandy Plumb, Amita Patil, Megan Wells, Lisa Lowenstein, Michelle Janelins, Karen Mustian, Judith O Hopkins, Jeffrey Berenberg, Navin Anthony, William Dale

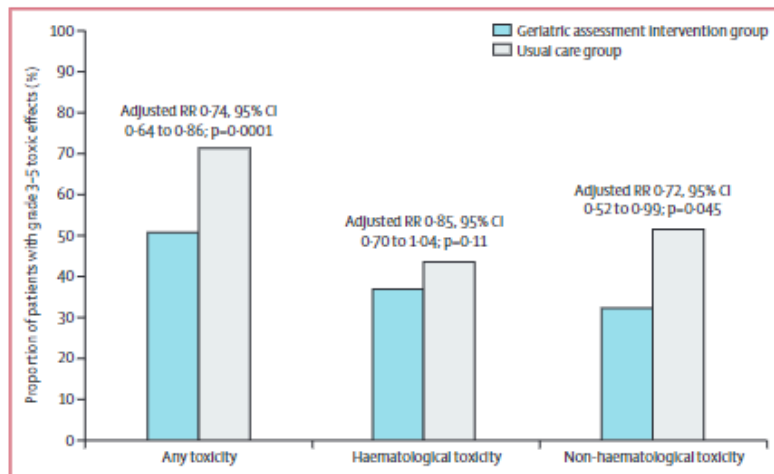


Figure 2: Prevalence of any grade 3-5 Common Terminology Criteria for Adverse Events toxic effects over 3 months

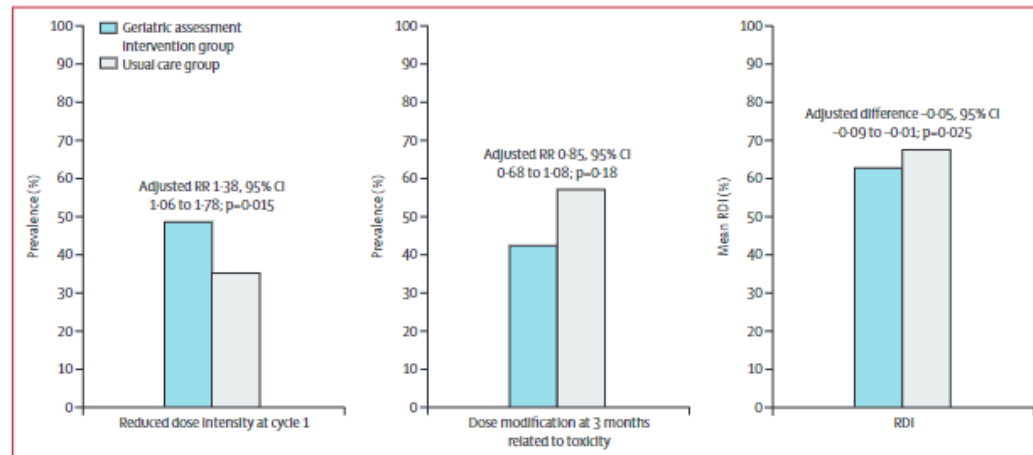
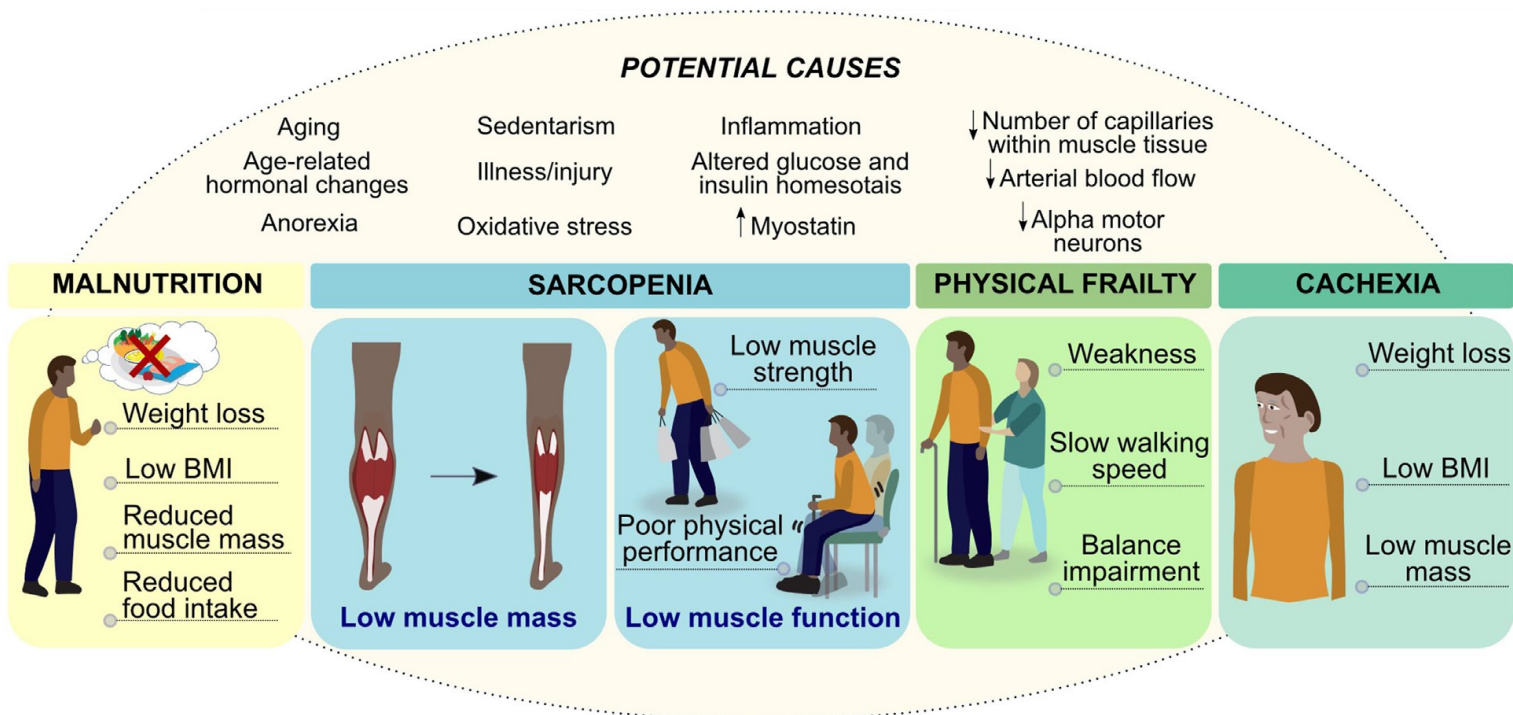


Figure 3: Treatment intensity by study group (A) Prevalence of reduced treatment intensity at cycle 1. (B) Prevalence of dose modifications over 3 months. (C) RDI over 3 months. RDI-relative dose intensity.

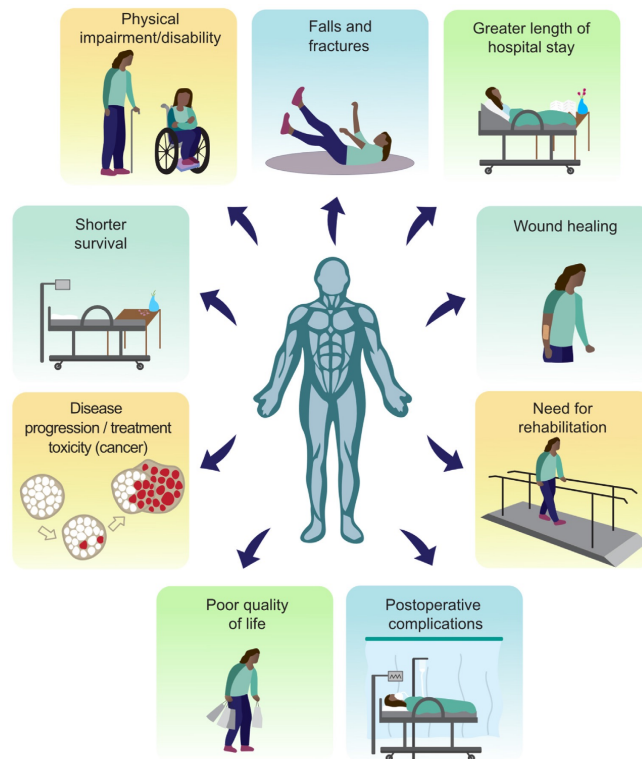
Courtesy of G.F.Colloca, OncoGeriatric Team Leader-Gemelli ART





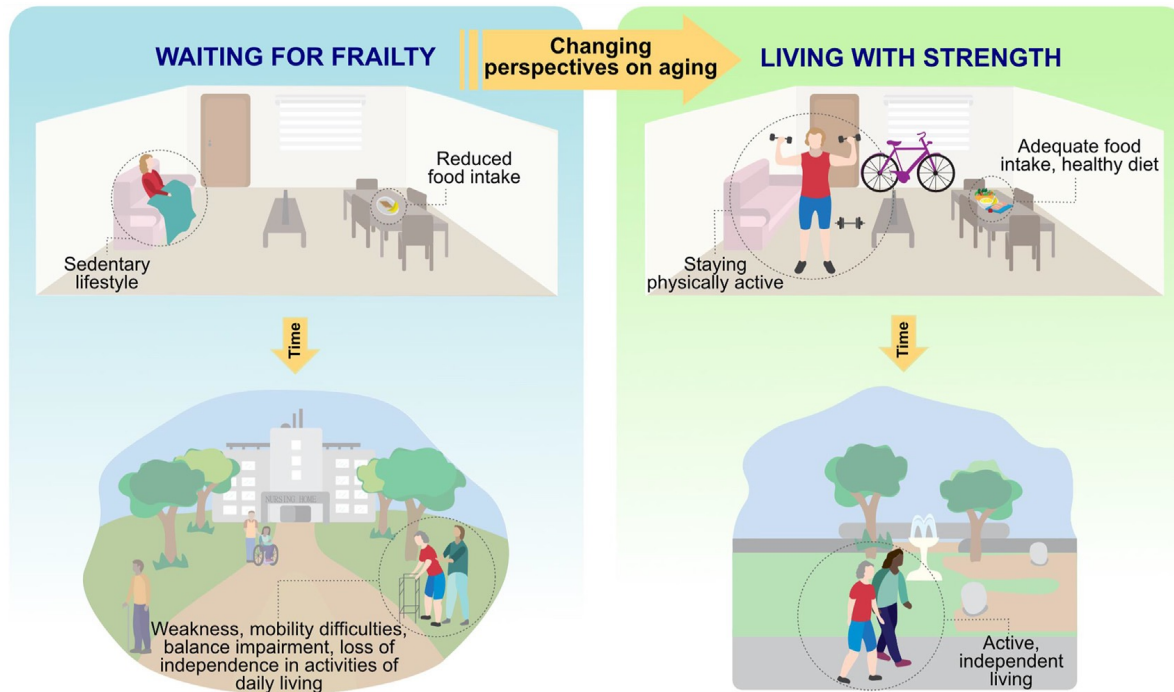
Courtesy of G.F.Colloca, OncoGeriatric Team Leader-Gemelli ART

Prado et al, Clinical Nutrition 41 (2022) 2244e2263



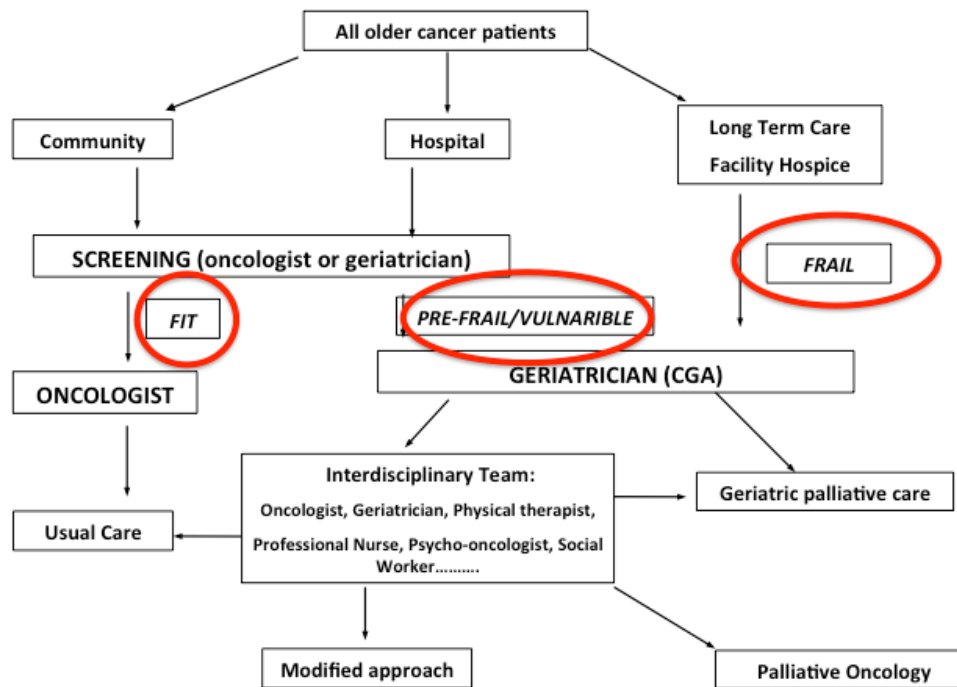
Courtesy of G.F.Colloca, OncoGeriatric Team Leader-Gemelli ART

Prado et al, Clinical Nutrition 41 (2022) 2244e2263



Courtesy of G.F.Colloca, OncoGeriatric Team Leader-Gemelli ART

Prado et al, Clinical Nutrition 41 (2022) 2244e2263



Courtesy of G.F.Colloca, OncoGeriatric Team Leader-Gemelli ART

Balducci L, Colloca G et al. *Surg Oncol.* 2010 Sep;19(3):117-23

Per rialzo del PSA (47 ng/ml vs 19 ng/ml al nadir) a Gennaio 2023 effettua PET PSMA: persistenza delle aree ad intenso ipermetabolismo, incrementate in estensione e grado di uptake rispetto al precedente controllo, localizzate in sede scheletrica e attualmente in sede sacrali bilaterali, multiple acetabolari sn, coccige ileo pubica dx, multiple ischio sinistro

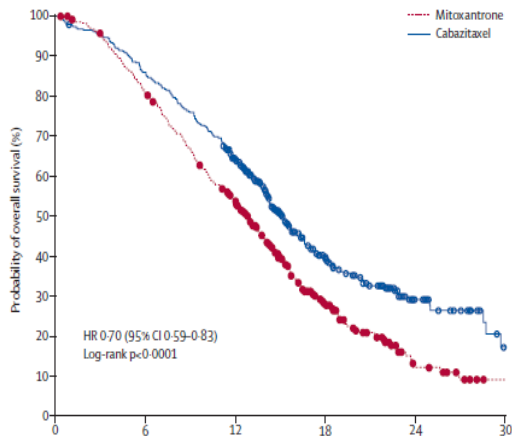
Inizia terapia con Cabazitaxel a Gennaio 2023 con profilassi g-CSF di cui effettua 6 cicli, terminati a Maggio 2023 per nuova progressione di terapia

## Articles ■

### Prednisone plus cabazitaxel or mitoxantrone for metastatic castration-resistant prostate cancer progressing after docetaxel treatment: a randomised open-label trial



Johann Sebastian de Bono, Stéphane Oudard, Mustafa Ozguroglu, Steinbjørn Hansen, Jean-Pascal Machiels, Ivo Kocak, Gwenaelle Gravis, Istvan Bodrogi, Mary J Mackenzie, Liji Shen, Martin Roessner, Sunil Gupta, A Oliver Sartor, for the TROPIC Investigators\*



Open-label randomised phase 3 trial in men with metastatic castration-resistant prostate cancer who had received previous hormone therapy, but whose disease had progressed during or after treatment with a docetaxel-containing regimen.

Participants were treated with 10 mg oral prednisone daily, and were randomly assigned to receive either 12 mg/m<sup>2</sup> mitoxantrone intravenously over 15–30 min or 25 mg/m<sup>2</sup> cabazitaxel intravenously over 1 h every 3 weeks.

The hazard ratio for death of men treated with cabazitaxel compared with those taking mitoxantrone was 0.70 (95% CI 0.59–0.83,  $p < 0.0001$ )

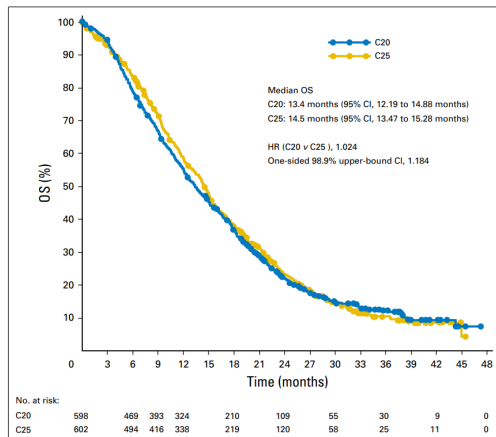
VOLUME 35 · NUMBER 28 · OCTOBER 1, 2017

JOURNAL OF CLINICAL ONCOLOGY

ORIGINAL REPORT



Phase III Study Comparing a Reduced Dose of Cabazitaxel (20 mg/m<sup>2</sup>) and the Currently Approved Dose (25 mg/m<sup>2</sup>) in Postdocetaxel Patients With Metastatic Castration-Resistant Prostate Cancer—PROSELICA



1200 patients were randomly assigned to Cabazitaxel 20 or 25 mg/m<sup>2</sup>

Median OS was 13.4 months for C20 and 14.5 months for C25 (HR, 1.024).

Rates of grade 3 or 4 treatment-emergent adverse events were 39.7% for C20 and 54.5% for C25

The efficacy of cabazitaxel in postdocetaxel patients with mCRPC was confirmed

# FDA approves lower dose of cabazitaxel for prostate cancer

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On September 14, 2017, the U.S. Food and Drug Administration approved a lower dose of cabazitaxel (20 mg/m<sup>2</sup> every 3 weeks) (JEVTANA, Sanofi-Aventis) in combination with prednisone for the treatment of patients with metastatic castration-resistant prostate cancer previously treated with a docetaxel-containing treatment regimen. Cabazitaxel (25 mg/m<sup>2</sup> every 3 weeks) was approved for this indication in 2010.

The recommended dose of cabazitaxel is 20 mg/m<sup>2</sup> administered every three weeks as a one-hour intravenous infusion in combination with oral prednisone 10 mg administered daily. A dose of 25 mg/m<sup>2</sup> can be used in select patients at the discretion of the treating healthcare provider.



## Cabazitaxel side effects

	Mitoxantrone (n=371)		Cabazitaxel (n=371)	
	All grades	Grade ≥3	All grades	Grade ≥3
<b>Haematological†</b>				
Neutropenia	325 (88%)	215 (58%)	347 (94%)	303 (82%)
Febrile neutropenia	..	5 (1%)	..	28 (8%)
Leukopenia	343 (92%)	157 (42%)	355 (96%)	253 (68%)
Anaemia	302 (81%)	18 (5%)	361 (97%)	39 (11%)
Thrombocytopenia	160 (43%)	6 (2%)	176 (47%)	15 (4%)
<b>Non-haematological</b>				
Diarrhoea	39 (11%)	1 (<1%)	173 (47%)	23 (6%)
Fatigue	102 (27%)	11 (3%)	136 (37%)	18 (5%)
Asthenia	46 (12%)	9 (2%)	76 (20%)	17 (5%)
Back pain	45 (12%)	11 (3%)	60 (16%)	14 (4%)
Nausea	85 (23%)	1 (<1%)	127 (34%)	7 (2%)
Vomiting	38 (10%)	0	84 (23%)	7 (2%)
Haematuria	14 (4%)	2 (1%)	62 (17%)	7 (2%)
Abdominal pain	13 (4%)	0	43 (12%)	7 (2%)
Pain in extremity	27 (7%)	4 (1%)	30 (8%)	6 (2%)
Dyspnoea	17 (5%)	3 (1%)	44 (12%)	5 (1%)
Constipation	57 (15%)	2 (1%)	76 (20%)	4 (1%)
Pyrexia	23 (6%)	1 (<1%)	45 (12%)	4 (1%)
Arthralgia	31 (8%)	4 (1%)	39 (11%)	4 (1%)
Urinary-tract infection	11 (3%)	3 (1%)	27 (7%)	4 (1%)
Pain	18 (5%)	7 (2%)	20 (5%)	4 (1%)
Bone pain	19 (5%)	9 (2%)	19 (5%)	3 (1%)

De Bono 2010, TROPIC, Lancet 2010; 376: 1147–54

**Table 5. Clinically Relevant TEAEs Possibly Related to Treatment and Hematologic Laboratory Abnormalities**

TEAE	C20 (n = 580)*		C25 (n = 595)*	
	All Grades	Grade ≥ 3	All Grades	Grade ≥ 3
<b>Nonhematologic TEAEs, No. (%)</b>				
Any TEAE	529 (91.2)	230 (39.7)	559 (93.9)	324 (54.5)
Diarrhea	178 (30.7)	8 (1.4)	237 (39.8)	24 (4.0)
Fatigue	143 (24.7)	15 (2.6)	161 (27.1)	22 (3.7)
Hematuria	82 (14.1)	11 (1.9)	124 (20.8)	25 (4.2)
Peripheral sensory neuropathy	38 (6.6)	0	63 (10.6)	4 (0.7)
Alopecia	15 (2.6)	0	36 (6.1)	0
Febrile neutropenia	12 (2.1)	12 (2.1)	55 (9.2)	55 (9.2)
Lacrimation increased	2 (0.3)	0	4 (0.7)	0
Nail disorder	2 (0.3)	0	2 (0.3)	0
Peripheral motor neuropathy	1 (0.2)	0	1 (0.2)	0
<b>Hematologic TEAEs based on laboratory abnormalities, No./total No. (%)</b>				
Anemia	576/577 (99.8)	57/577 (9.9)	588/590 (99.7)	81/590 (13.7)
Leukopenia	461/577 (79.9)	167/577 (28.9)	560/590 (94.9)	351/590 (59.5)
Neutropenia	384/577 (66.6)	241/577 (41.8)	522/589 (88.6)	432/589 (73.3)
Thrombocytopenia	202/577 (35.0)	15/577 (2.6)	251/590 (42.5)	25/590 (4.2)

Abbreviations: C20, cabazitaxel 20 mg/m<sup>2</sup> plus prednisone; C25, cabazitaxel 25 mg/m<sup>2</sup> plus prednisone; TEAE, treatment-emergent adverse event.  
\*Patients who received at least one dose of cabazitaxel (safety population).

Eisenberger 2017, J Clin Oncol 35:3198-3206

PREMEDICAZIONE <sup>(20)</sup>

da somministrare per via endovenosa almeno 30 minuti prima di ciascuna dose di cabazitaxel

- **Antistaminici** (desclorfeniramina 5 mg o difenidramina 25 mg o antistaminico equivalente)
- **Corticosteroidi** (desametasone 8 mg o steroide equivalente)
- **H<sub>2</sub>-antagonisti** (ranitidina o equivalente)

- Profilassi antiemetica (orale o endovenosa) raccomandata secondo necessità
- Adeguata idratazione del paziente assicurata per prevenire complicazioni come l'insufficienza renale



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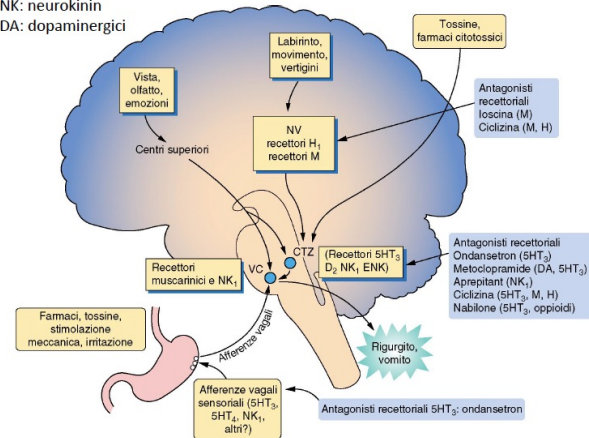
### NCCN Guidelines Version 2.2023 Antiemesis

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#### EMETOGENIC POTENTIAL OF PARENTERAL ANTICANCER AGENTS

LEVEL	AGENT			
Low emetic risk (10%–30% frequency of emesis) <sup>a,c</sup>	<ul style="list-style-type: none"> <li>• Ado-trastuzumab emtansine</li> <li>• Aldesleukin <math>\leq 12</math> million IU/m<sup>2</sup></li> <li>• Amifostine <math>\leq 300</math> mg/m<sup>2</sup></li> <li>• Amivantamab-vmjw</li> <li>• Arsenic trioxide</li> <li>• Axicabtagene ciloleucel<sup>d</sup></li> <li>• Azacitidine</li> <li>• Belinostat</li> <li>• Brexucabtagene autoleucel<sup>d</sup></li> <li>• Brentuximab vedotin</li> <li>• Cabazitaxel</li> <li>• Carfilzomib</li> <li>• Cilta cabtagene autoleucel<sup>d</sup></li> <li>• Copanlisib</li> <li>• Cytarabine (low dose) 100 mg/m<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Docetaxel</li> <li>• Doxorubicin (liposomal)</li> <li>• Enfortumab vedotin-ejfv</li> <li>• Eribulin</li> <li>• Etoposide</li> <li>• 5-Fluorouracil (5-FU)</li> <li>• Floxuridine</li> <li>• Gemcitabine</li> <li>• Gemtuzumab ozogamicin</li> <li>• Idcabtagene vicleucel<sup>d</sup></li> <li>• Inotuzumab ozogamicin</li> <li>• Isatuximab-irfc</li> <li>• Ixabepilone</li> <li>• Lisocabtagene maraleucel<sup>d</sup></li> <li>• Loncastuximab tesirine-lpyl</li> </ul>	<ul style="list-style-type: none"> <li>• Methotrexate <math>&gt;50</math> mg/m<sup>2</sup> – <math>&lt;250</math> mg/m<sup>2</sup></li> <li>• Mitomycin</li> <li>• Mitomycin pyelocalyceal solution</li> <li>• Mitoxantrone</li> <li>• Mogamulizumab-kpkc</li> <li>• Moxetumomab pasudotox-tdfk</li> <li>• Necitumumab</li> <li>• Omacetaxine</li> <li>• Paclitaxel</li> <li>• Paclitaxel-albumin</li> </ul>	<ul style="list-style-type: none"> <li>• Pemetrexed</li> <li>• Pentostatin</li> <li>• Polatuzumab vedotin-piig</li> <li>• Pralatrexate</li> <li>• Tafasitamab-cxix</li> <li>• Tagraxofusp-erzs</li> <li>• Talimogene laherparepvec</li> <li>• Tebentafusp-tebn</li> <li>• Thiotepe</li> <li>• Tisagenlecleucel<sup>d</sup></li> <li>• Tisotumab vedotin-tftv</li> <li>• Topotecan</li> <li>• Ziv-aflibercept</li> </ul>
Minimal emetic risk ( $<10\%$ frequency of emesis) <sup>a,c</sup>	<ul style="list-style-type: none"> <li>• Alemtuzumab</li> <li>• Asparaginase<sup>e</sup></li> <li>• Atezolizumab</li> <li>• Avelumab</li> <li>• Belantamab mafodotin-blmf</li> <li>• Bevacizumab</li> <li>• Bleomycin</li> <li>• Blinatumomab</li> <li>• Bortezomib</li> <li>• Cemiplimab-rwlc</li> <li>• Cetuximab</li> <li>• Cladribine</li> </ul>	<ul style="list-style-type: none"> <li>• Cytarabine <math>&lt;100</math> mg/m<sup>2</sup></li> <li>• Daratumumab</li> <li>• Daratumumab and hyaluronidase-fihj</li> <li>• Decitabine</li> <li>• Dexrazoxane</li> <li>• Dostarlimab-gxly</li> <li>• Durvalumab</li> <li>• Eliotuzumab</li> <li>• Fludarabine</li> <li>• Ipilimumab</li> <li>• Luspatercept-aamt</li> </ul>	<ul style="list-style-type: none"> <li>• Margetuximab-cmkb</li> <li>• Methotrexate <math>\leq 50</math> mg/m<sup>2</sup></li> <li>• Nelarabine</li> <li>• Nivolumab</li> <li>• Nivolumab/relatlimab-rmbw</li> <li>• Obinutuzumab</li> <li>• Ofatumumab</li> <li>• Panitumumab</li> <li>• Pembrolizumab</li> <li>• Pertuzumab</li> <li>• Pertuzumab/trastuzumab and hyaluronidase-zzxf</li> <li>• Ramucirumab</li> </ul>	<ul style="list-style-type: none"> <li>• Rituximab</li> <li>• Rituximab and hyaluronidase</li> <li>• Siltuximab</li> <li>• Sirolimus-albumin</li> <li>• Tecisitamab-cqyv</li> <li>• Temezirolimus</li> <li>• Trastuzumab</li> <li>• Trastuzumab and hyaluronidase-oyyk</li> <li>• Tremelimumab-actl</li> <li>• Valrubicin</li> <li>• Vinblastine</li> <li>• Vincristine</li> <li>• Vincristine (liposomal)</li> <li>• Vinorelbine</li> </ul>

NK: neurokinin  
DA: dopaminergici



Adapted with permission from: Hesketh PJ, Kris MG, Grunberg SM, et al. Proposal for classifying the acute emetogenicity of cancer chemotherapy. *J Clin Oncol* 1997;15:103-109.  
Grunberg SM, Warr D, Gralla RJ, et al. Evaluation of new antiemetic agents and definition of antineoplastic agent emetogenicity—state of the art. *Support Care Cancer* 2011;19:S43-S47.

## Anti-Emesis

**Table 3.** Antiemetic Dosing for Adults by Chemotherapy Risk Category (continued)

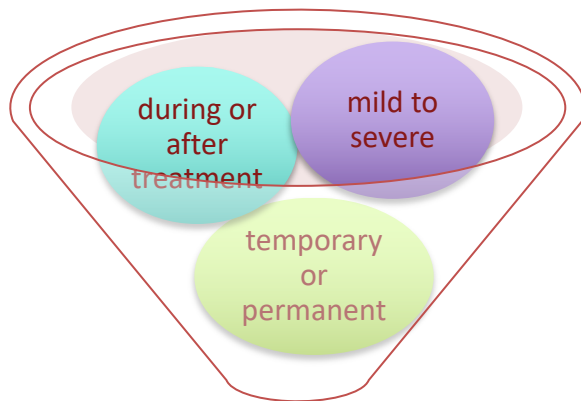
Emetic Risk Category	Dose on Day of Chemotherapy	Dose on Subsequent Days
Low <sup>1</sup>		
5-HT <sub>3</sub> receptor antagonist		
Granisetron	2 mg oral or 1 mg or 0.01 mg/kg IV or 1 transdermal patch or 10 mg subcutaneous	
Ondansetron	8 mg oral twice daily or 8 mg oral dissolving tablet twice daily or 8 mg oral soluble film twice daily or 8 mg or 0.15 mg/kg IV	
Palonosetron	0.50 mg oral or 0.25 mg IV	
Dolasetron	100 mg oral only	
Tropisetron	5 mg oral or 5 mg IV	
Ramosetron	0.3 mg IV	
Dexamethasone	8 mg oral or IV	

Hesketh2017, ASCOGuidelines, J Clin Oncol 35:3240-3261

## Peripheral Neuropathy

Peripheral neuropathy is damage to the peripheral nerves.

These are the nerves located away from the centre of the body, such as in the hands and feet; nerve cells are not easily repaired or replaced once they are badly damaged.



In more severe cases, the symptoms of peripheral neuropathy can greatly affect a person's quality of life.

Particularly taxanes (e.g. docetaxel, paclitaxel), platinum drugs (e.g. carboplatin, cisplatin, oxaliplatin) and vinca alkaloids (e.g. vincristine), thalidomide, bortezomib and brentuximab vedotin



# Peripheral Neuropathy

## ADJUVANT ANALGESICS FOR NEUROPATHIC PAIN (ANTIDEPRESSANTS, ANTICONVULSANTS, AND TOPICAL AGENTS)

### Principles of Adjuvant Analgesic Use

- Antidepressants and anticonvulsants are first-line adjuvant analgesics for the treatment of cancer-related neuropathic pain.
- These drugs can also be used in combination with opioids, for patients whose pain is otherwise inadequately controlled.
- The use of adjuvant analgesics in the cancer population is often based on guidelines or experience derived from data for the treatment of pain not caused by cancer (non-malignant pain).
- Effective use is predicated on an assessment that clarifies the nature of the pain as most adjuvant analgesics are more likely to be effective in management of neuropathic pain.
- As with opioids, response to adjuvant analgesics may vary according to the etiology of neuropathic pain and the individual patient. Failure to control pain with one agent in a particular class does not mean the entire class of medications will not work.
- Drug selection may be influenced by other symptoms and comorbidities. For example, a sedating drug may be useful in a patient in whom insomnia is a problem.
- Patient education should emphasize the trial and error nature of the treatment so patients do not get discouraged.
- Doses should be increased until the analgesic effect is achieved, adverse effects become unmanageable, or the conventional maximal dose is reached.
- For information on cannabinoids and medical marijuana/cannabis, [see Discussion](#).



## NEUROPATHIC PAIN TREATMENT PATHWAY

### Pharmacological Management

For neuropathic pain offer a choice of either:  
Amitriptyline, Duloxetine, Gabapentin or Pregabalin  
as initial treatment.

**Review at 6-8 weeks.**

If the initial treatment is not effective or is not  
tolerated, offer one of the remaining 3 drugs, and  
consider switching again if the second drug tried  
is also not effective or not tolerated

Has there been a significant decrease in pain AND  
substantial increase in physical function?

### Non-pharmacological treatment options

- Address common psychological co-morbidities (e.g. anxiety/depression), consider referring/signposting to psychological therapies such as cognitive behavioural therapy \*
- If sleep is disturbed discuss sleep restoration strategies \*
- Physiotherapy
- Interventional approaches such as surgery

For trigeminal neuralgia offer  
Carbamazepine  
Review at 6-8 weeks.

## NEUROPATHIC PAIN TREATMENT PATHWAY

NO RELIEF

### Other pharmacological treatment options to consider:

**Nortriptyline** – only use if amitriptyline effective but not tolerating side effects; off-label indication. Review at 6-8 weeks.

**Tramadol** - Consider tramadol only if acute rescue therapy is needed. Review after 4 weeks.

**Capsaicin 0.075% cream** – for localised pain due to post herpetic neuralgia.

\***Lidocaine 5% medicated plasters**- for localised neuropathic pain due to post herpetic neuralgia (PHN). **Specialist pain team recommendation only.**

Has there been a significant decrease in pain AND substantial increase in physical function?

Refer patient to specialist at any stage – where the diagnosis is in doubt or patient is not responding to treatment.

Maintain on medication and dose that is working.

Review regularly





## ONYCHODYSTROPHY

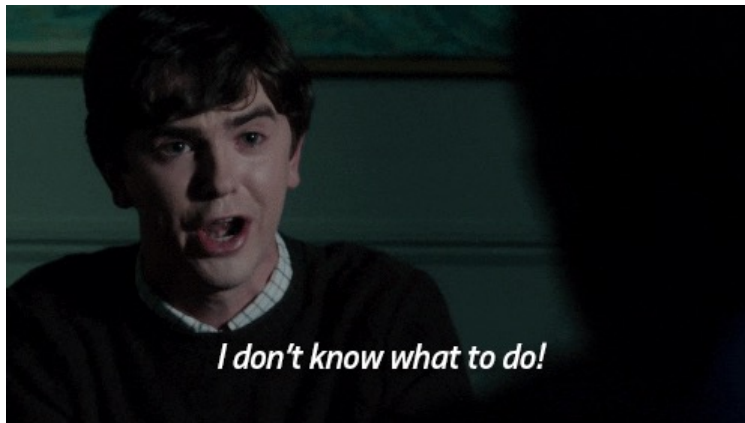


- Prevention and Care
- Hydration
- Treat Mycosis & infections



Attualmente sta effettuando terapia con Lu-PSMA all'estero

Alternative terapeutiche alla PD???





PROSTATE CANCER - ADVANCED

## Carboplatin in metastatic castrate resistant prostate cancer: A retrospective study of heavily pretreated patients (COMPACT).



[Lara Pemberton](#), [Connor Allen](#), [Eleanor Handel](#), [Andrew James Weickhardt](#), [Ben Tran](#), [Megan Crumbaker](#), [Jeremy David Shapiro](#), [Gail P. Risbridger](#), [David William Pook](#)

Retrospective multicentre study of the use of Carboplatin in advanced CRPC patients in Australia.

51 patients received Carboplatin:

Median overall survival was 29.4 weeks (IQR 11.7 weeks).

6 (11.8%) patients had a PSA response  $\geq 50\%$ .

The median time to PSA progression on Carboplatin was 67 days (range 15-418).

Our findings demonstrate that in heavily pre-treated CRPC, Carboplatin has a modest benefit in a minority of patients with a low rate of toxicity in the advanced prostate cancer population.