DICHIARAZIONE

Relatore: Elvio G. Russi

Come da nuova regolamentazione della Commissione Nazionale per la Formazione Continua del Ministero della Salute, è richiesta la trasparenza delle fonti di finanziamento e dei rapporti con soggetti portatori di interessi commerciali in campo sanitario.

- Posizione di dipendente in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Consulenza ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazione ad Advisory Board **(Merck Serono)**
- Titolarietà di brevetti in compartecipazione ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazioni azionarie in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Altro

XXIV CONGRESSO NAZIONALE
AIRO2014
Associazione Italiana Radioterapia Oncologica
Padova, 8-11 novembre

What is the optimal supportive care of patients undergoing chemo-radiotherapy (CRT) for head and neck cancer (HNC)? An AIOM-AIRO-AIOCC consensus

E. G. Russi, G. Numico,P. Bossi,V. Desanctis,MG Ghi, N. Denaro, A. Mirabile, A. Gava, F. Moretto, C. Ripamoniti, M. Buglione, M. Airoldi, B. Murphy, J.A. Langendijk, J.B. Vermorken, J. Ruber-Durlacher. L. Licitra

IMPORTANZA TERAPIA DI SUPPORTO

1. Riduzione delle **tossicità acute**
2. **R**iduzione della **morbidità e mortalità da late effect**
3. Incremento **compliance e dose intensity con conseguente** miglioramento **sopravvivenza**
4. Riduzione dei **costi**
5. **Omogeneità negli studi clinici**

Chemo-radiation mortality

Non randomized trials

Trial	Centre	#	Mortality
Argiris 2002	Chicago	324	9.3%
Nguyen 2004	Dallas	55	9,1%
Adelstein 2006	Cleveland	222	14%
Merlano 2008	Cuneo	155	6.4%

1) RIDUZIONE TOSSICITA' ACUTE

Toxic death

STUDIO	TRATTAMENTO	MORTALITA' DA TX
Brizel NEJM 1998	HFRT +/- cddp5FU	2%
Calais JNCI 1999	RT - cddpRT	1-2%
Adelstein JCO 2003	RT – RTcddp – RTcddp5fu	2-3%
Argiris CCR 2004	CTRT (5 trials)	5.5%
Adelstein JCO 2006	RT+cddp5FU	1%
Pfister JCO 2006	RT+cddp+cet	9%
Bonner 2006	RT +/- cet	No toxic death
Givens ArchOto 2009	IMRT + CT	2-4%
Lefebvre JNCI 2009	Seq/alt RTcddp	3-6%

Toxic death = death resulting from treatment within 30 days of treatment completion

IMPORTANZA TERAPIA DI SUPPORTO

1) Riduzione delle **tossicità acute**
2) Riduzione della **morbidità e mortalità da late effects**
3) Incremento **compliance e dose intensity**
4) Riduzione dei **costi**
5) **Omogeneità negli studi clinici**
6) Miglioramento **sopravvivenza**

2) Riduzione tossicità tardive

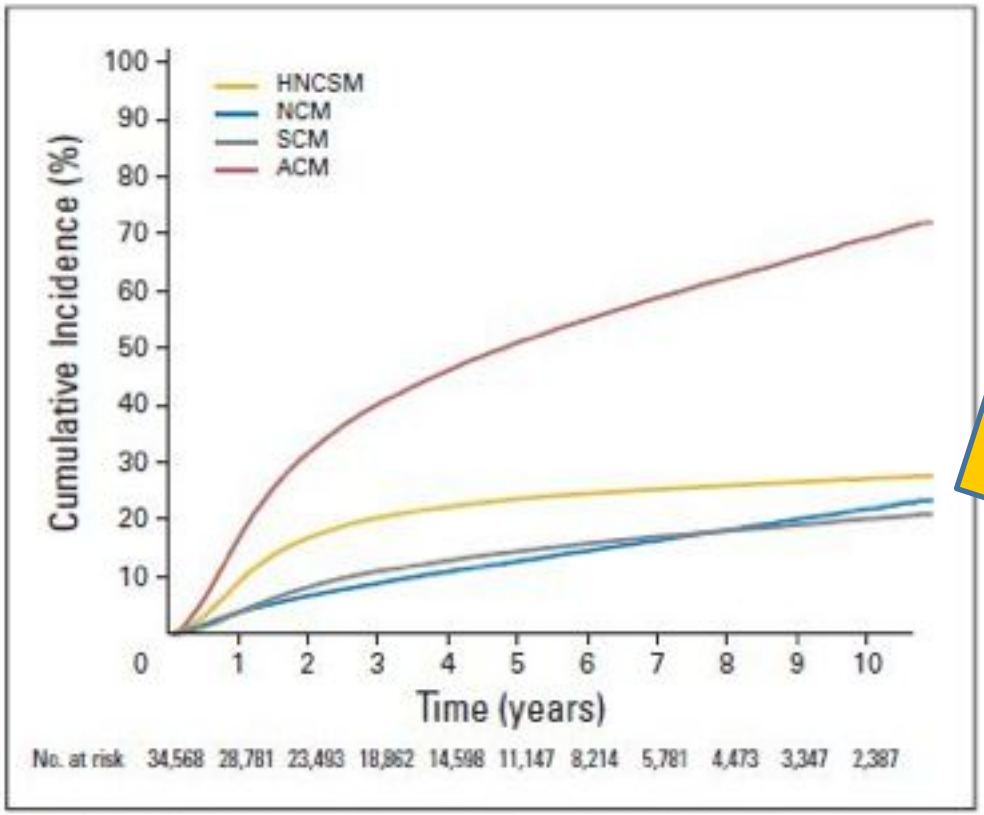


Fig 1. Cumulative incidences of competing causes of death in patients with head and neck cancer. ACM, all-cause mortality; HNCSM, head and neck cancer–specific mortality; NCM, noncancer mortality; SCM, second cancer mortality.

Non cancer mortality

Mell, Journal of Clinical Oncology 2010

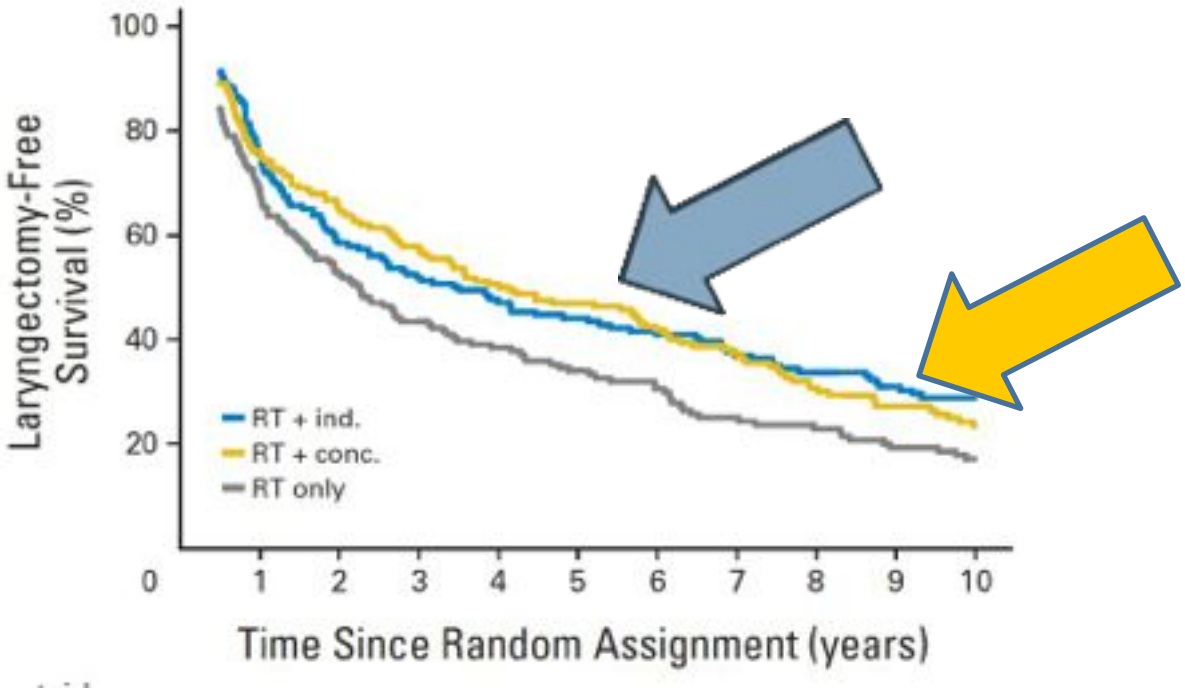
Riduzione tossicità tardive

VOLUME 31 · NUMBER 7 · MARCH 1 2013

JOURNAL OF CLINICAL ONCOLOGY ORIGINAL REPORT

Long-Term Results of RTOG 91-11: A Comparison of Three Nonsurgical Treatment Strategies to Preserve the Larynx in Patients With Locally Advanced Larynx Cancer

Arlene A. Forastiere, Qiang Zhang, Randal S. Weber, Moshe H. Maor, Helmuth Goepfert, Thomas F. Pajak, William Morrison, Bonnie Glisson, Andy Trotti, John A. Ridge, Wade Thorstad, Henry Wagner, John F. Ensley, and Jay S. Cooper



IMPORTANZA TERAPIA DI SUPPORTO

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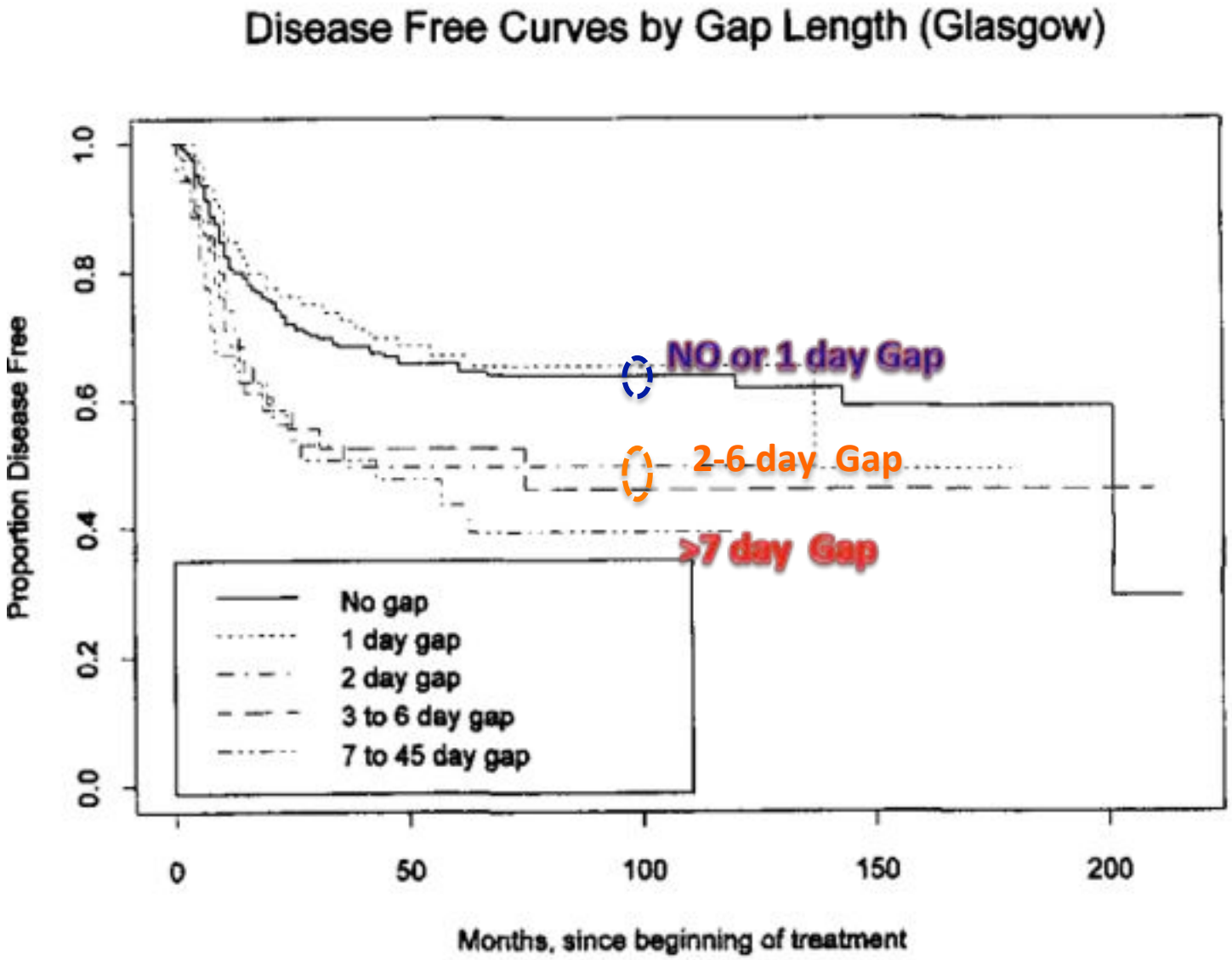
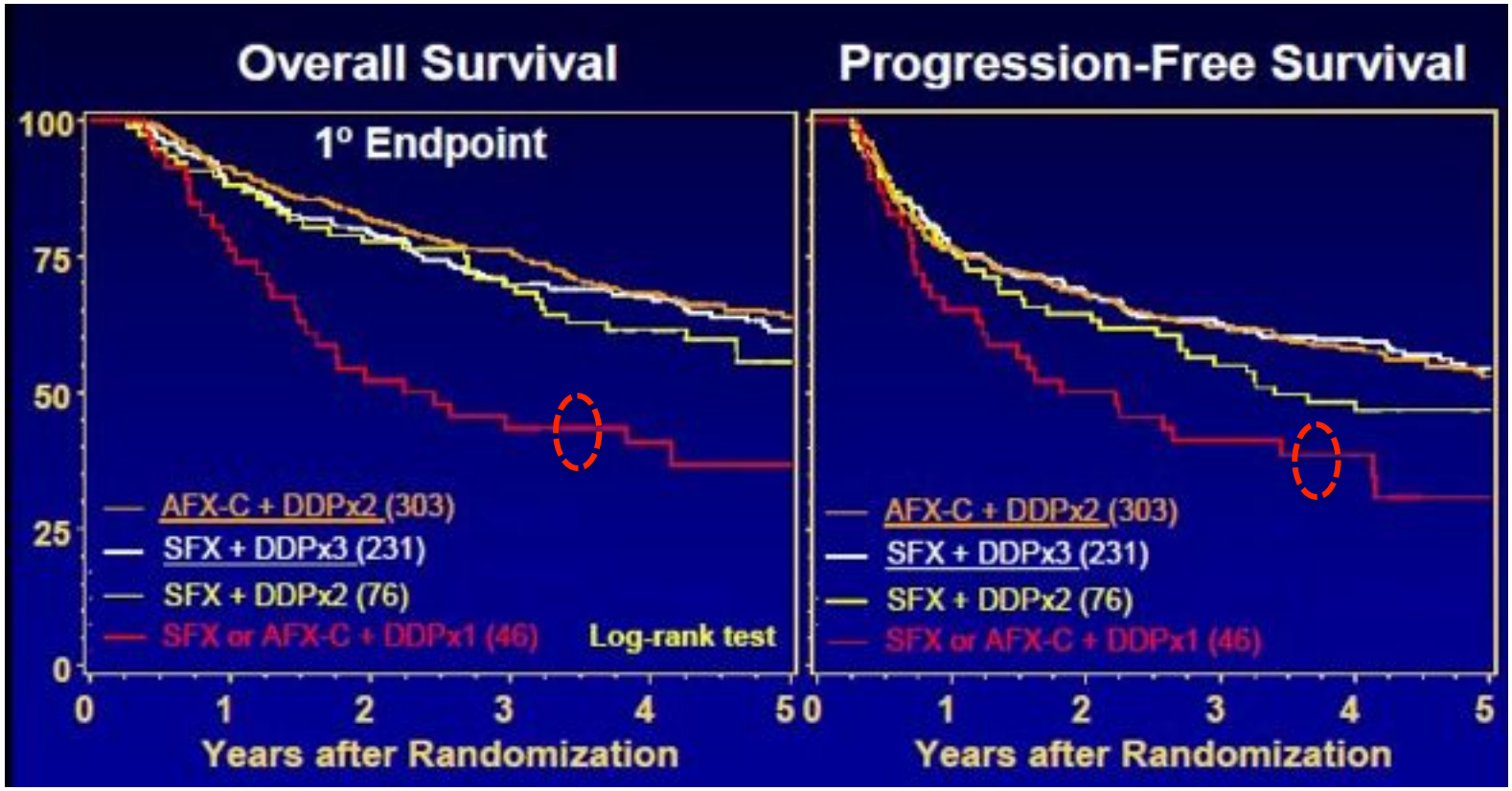
The protraction of RT reduces survival



Robertson C, IJROBP 1998

CT dosage and survival



	HR OS	HR PFS
P x 3	1,0	1,0
P x 2	1,17	1,31
P x 1	1,52	1,56

Ang K, RTOG 0129, ASCO 2010

IMPORTANZA TERAPIA DI SUPPORTO

1. Riduzione delle **tossicità acute**
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3. Incremento **compliance e dose intensity con conseguente** miglioramento **sopravvivenza**
4. Riduzione dei **costi**
5. **Omogeneità negli studi clinici**

4) Riduzione dei costi

Evaluating the Supportive Care Costs of Severe Radiochemotherapy-Induced Mucositis and Pharyngitis

Results From a Northwestern University Costs of Cancer Program Pilot Study With Head and Neck and Nonsmall Cell Lung Cancer Patients Who Received Care at a County Hospital, a Veterans Administration Hospital, or a Comprehensive Cancer Care Center

Nonzee N, Cancer 2008

I costi

Sources of Direct Medical Cost	Median Cost (Range), $					
	Patients With HNC, n=99			Patients With NSCLC, n=40		
	Without Mucositis/ Pharyngitis, N=29	With Mucositis/ Pharyngitis, N=70	Incremental Cost for Patients With Mucositis/ Pharyngitis, n=99	Without Mucositis/ Pharyngitis, n=25	With Mucositis/ Pharyngitis, n=15	Incremental Cost for Patients With Mucositis/ Pharyngitis, n=40
Inpatient hospitalization	7000 (0-28,000)	21,000 (3850-42,000)	14,000*	7000 (2800-19,600)	18,200 (0-37,800)	11,200
Tests and procedures	924 (651-2833)	3150 (887-10,139)	2226*	3756 (790-7022)	4536 (2623-11,022)	780
Imaging procedures	3510 (2457-6746)	5602 (3582-13,616)	2092*	10,102 (4807-16,031)	14,248 (8438-23,974)	4146
Clinic visits	960 (660-1530)	1470 (885-1920)	510	1320 (720-2880)	2280 (1200-3540)	960
Mucositis/pharyngitis-related medication†	105 (14-299)	196 (77-432)	90	11 (0-134)	14 (0-205)	3
Laboratory diagnostic tests	463 (221-715)	553 (314-887)	90	517 (262-971)	725 (451-1028)	208
Total	18,512 (7312-39,030)	35,756 (17,952-70,210)	17,244*	21,187 (14,787-62,108)	46,246 (28,565-68,700)	25,060

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4. Riduzione dei **costi**
5. **Omogeneità negli studi clinici**

5) Rendere omogeneo il trattamento di supporto negli studi clinici

Consensus-based standards for best supportive care in clinical trials in advanced cancer

S Yousuf Zafar, David C Currow, Nathan Cherny, Florian Strasser, Robin Fowler, Amy P Abernethy

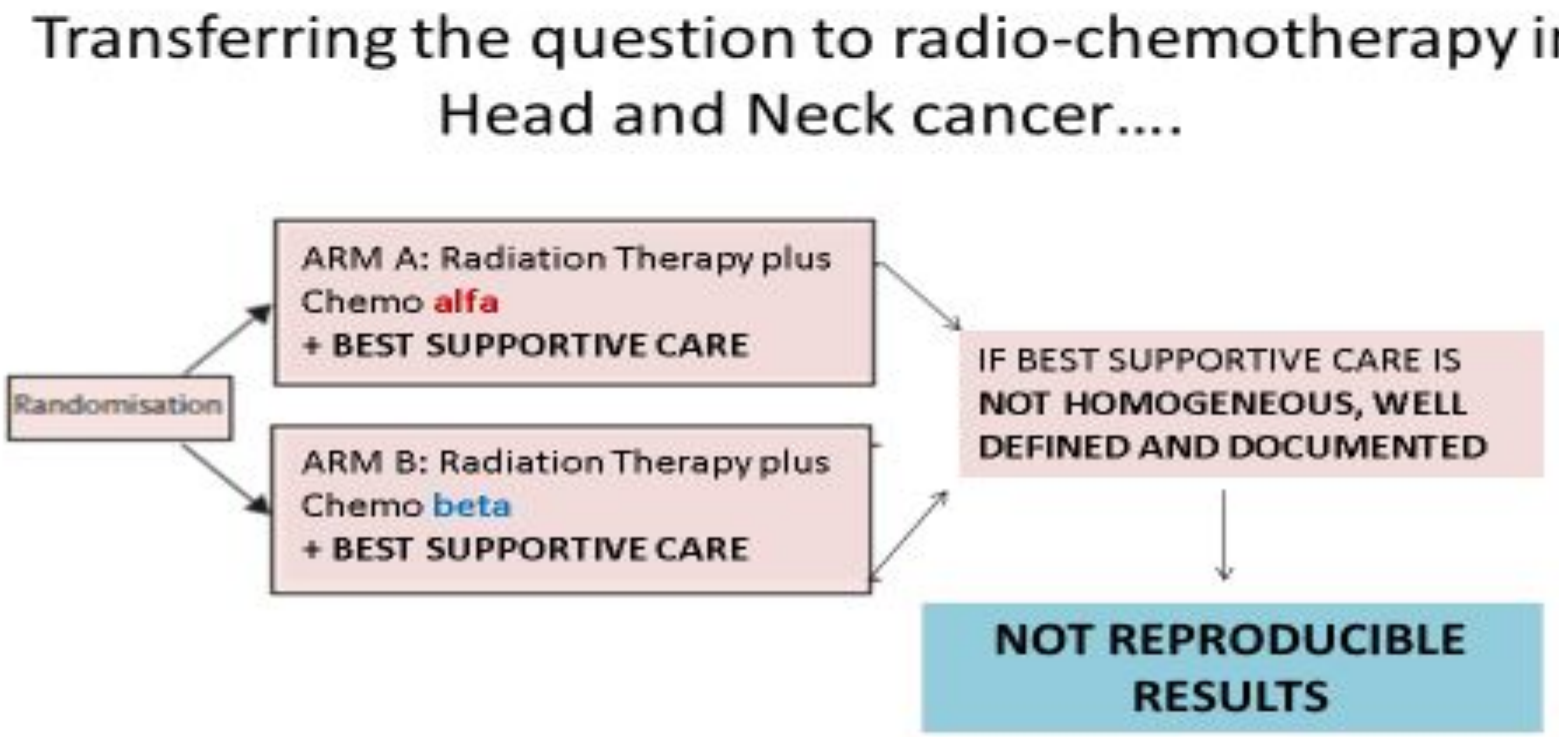
Best supportive care is poorly defined in clinical trials, and a standard framework for delivery of such care is needed, using best available evidence and allowing replication of studies. We convened a panel of 36 experts to develop consensus statements via the Delphi method. The first round included open-ended questions; subsequent rounds sought to develop consensus-based standards. Consensus was assessed by use of a 5-point Likert agreement scale; more than 70% of panellists had to give a score of 5 to meet a-priori levels of consensus. The panel identified four key domains of best supportive care in clinical trials: multidisciplinary care; supportive care documentation; symptom assessment; and symptom management. Consensus was reached on 11 statements within these four domains. For example, 24 (96%) panellists recommended that the intervals between symptom assessments should be identical for control and experimental groups. Availability of resources was cited as a challenge to implementation of best supportive care standards.

Lancet Oncol 2012; 13: e77–82

Division of Medical Oncology, Department of Medicine, Duke University Medical Center, Durham, NC, USA (S Y Zafar MD, R Fowler MDIv, A P Abernethy M.D); Discipline of Palliative and Supportive Services, Flinders University, Bedford Park, SA, Australia (Prof D C Currow BMed),

Lancet Oncology 2012

Rendere omogeneo il trattamento di supporto negli studi clinici



Quale terapia di supporto?

Consensus conference on supportive care
in concurrent chemo-radiation of head and neck cancers

Consensus conference on supportive care
in concurrent chemo-radiation of head and neck cancers

Sviluppata da più di **40 esperti con approccio multidisciplinare** (AIOM, AIRO, AIOCC)

Utilizzata **metodologia ASCO**:

a) revisione sistematica letteratura

b) costruzione consenso con metodo di Delphi (3 rounds)

c) revisione esterna e approvazione

Consensus conference on supportive care
in concurrent chemo-radiation of head and neck cancers

Daris Ferrari
Fabio Trippa
Giuseppe Sanguineti
Lisa Licitra
Paolo Bossi
Vitaliana De Sanctis
Anna Merlotti
Antonio Schindler
Daniela Alterio
Fausto Chiesa
Marco Merlano
Massimo Spadola
Nerina Denaro
Nicole Pizzorni
Orietta Caspiani
Sergio Riso
Valeria Zurlo
Antonello Lombardo
Francesco Moretto
Marco Benasso
Mario Grosso
Monica Rampino
Ombretta Ciotti
Fabiola Paiar
Graziella Pinotti
Maria Grazia Ghi
Salvatore Grisanti
Agostino Paccagnella
Alessandro Gava
Carla Ripamonti
Cecilia Gavazzi
Francesco Caponigro
Francesco Valduga
Giovanni Pavanato
Jessica Lops
Maria Cossu Rocca
Maria Soloperto
Almalina Bacigalupo
Aurora Mirabile
Elvio Russi
Fulvio Crippa
Gianmauro Numico
Andrea Bolner
Enzo Ruggeri
Giuseppe Azzarello
Mario Airoldi
Alessandra Majorana
Corrado Paganelli
Ester Orlandi
Federico Di Rosario
Giorgio Gastaldi
Lucia Vassalli
Michela Buglione
Piero Nicolai
Roberta Cavagnini
Robero Maroldi
Stefano A. Salgarello
Stefano Magrini

Le società scientifiche
AIOM
AIRO
AIOCC

Consensus conference on supportive care
in concurrent chemo-radiation of head and neck cancers

Comitato scientifico:

G Numico, **E Russi**, P Bossi, L Licitra

Facilitatori per singolo topic:

M Airoldi**, V De Sanctis**, A Mirabile, N Denaro, MG Ghi, C Ripamonti, **A Gava, F Moretto, M Buglione**

Revisori esterni:

J Vermorken, **H Langendijk**, B Murphy, J Raber-Durlacher

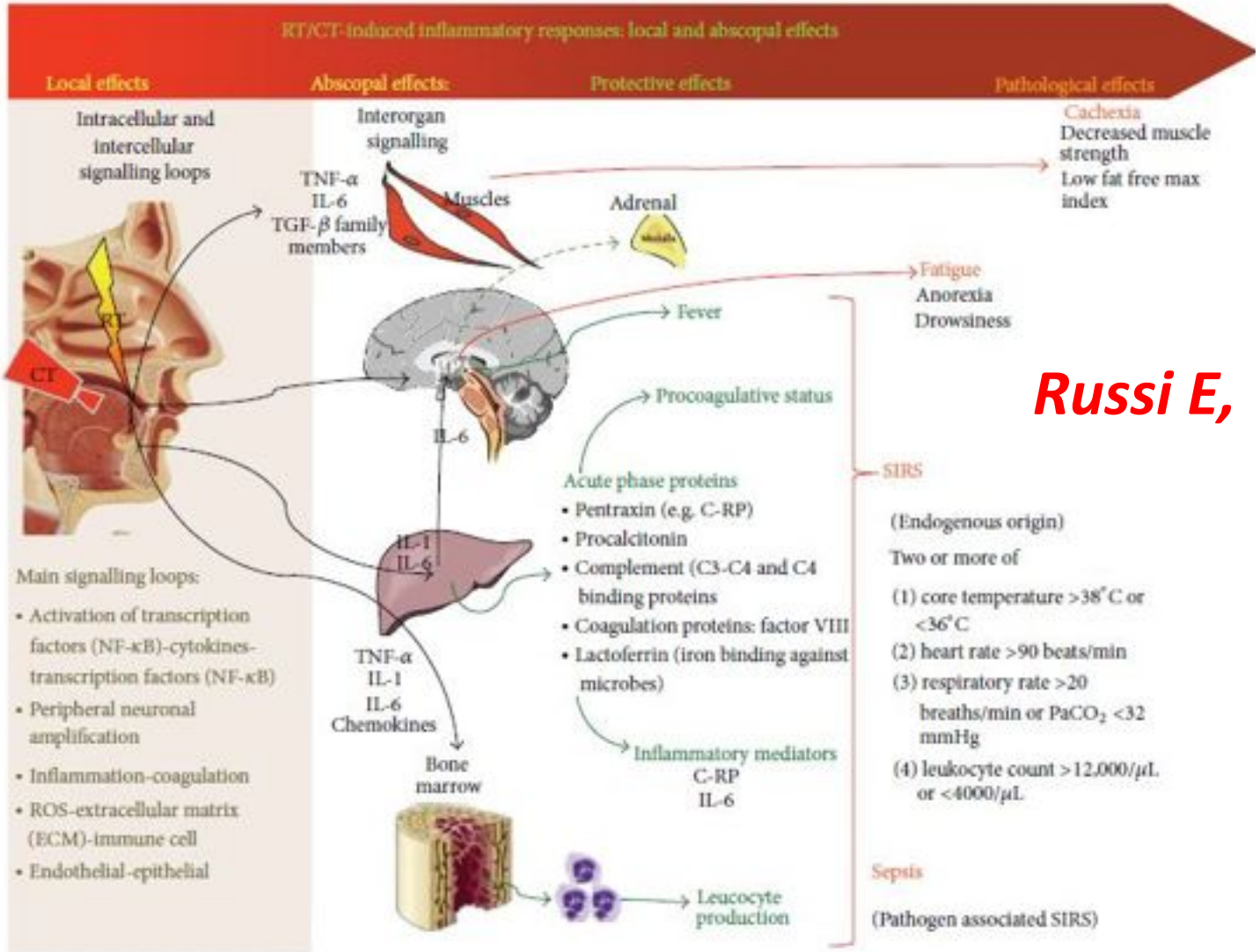
TOPICS

1. ***MUCOSITE (V. Desanctis)***
2. ***DISFAGIA (N. Denaro)***
3. TOSSICITA' EMATOLOGICA (M.G. GHI)
4. **INFEZIONI (A. Mirabile)**
5. NUTRIZIONE/IDRATAZIONE (A. Gava)
6. DOLORE (C. Ripamonti)
7. **TOSSICITA' CUTANEA (F. Moretto)**
8. ***PROBLEMATICHE DENTARIE (M. Buglione)***

Consensus conference on supportive care
in concurrent chemo-radiation of head and neck cancers

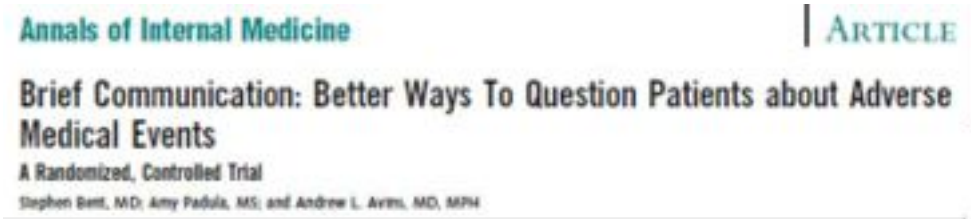
Take-home messages dal consenso ottenuto

Considera le tossicità non singolarmente ma come un unicum



Russi E, 2014

Valuta tossicità con i PRO


Annals of Internal Medicine | ARTICLE

Brief Communication: Better Ways To Question Patients about Adverse Medical Events

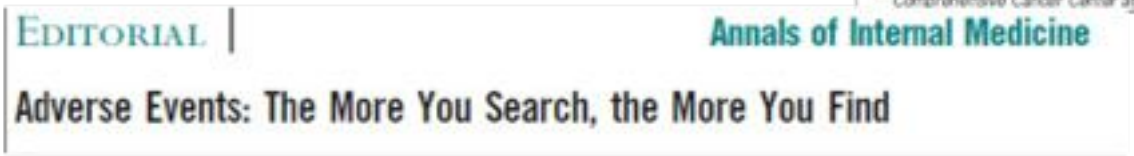
A Randomized, Controlled Trial

Stephen Bent, MD; Amy Padula, MS; and Andrew L. Avins, MD, MPH

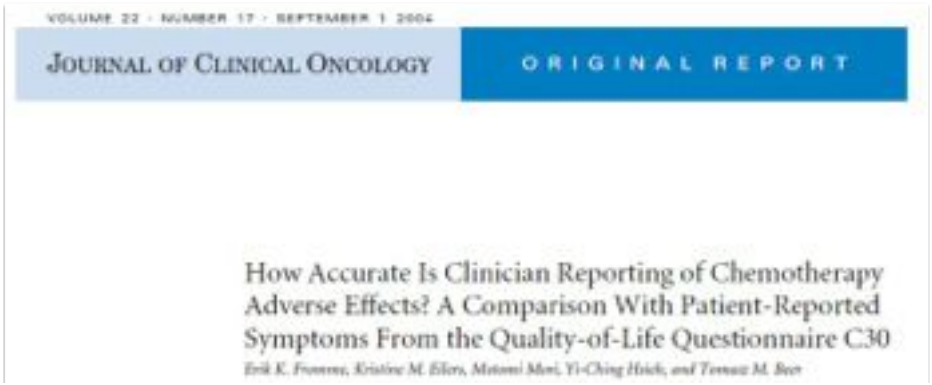

JOURNAL OF CLINICAL ONCOLOGY | EDITORIAL


Using Patient-Reported Outcomes in Clinical Practice: A Promising Approach?

Claire F. Snyder, Johns Hopkins School of Medicine, Johns Hopkins Bloomberg School of Public Health; Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Baltimore, MD


EDITORIAL | Annals of Internal Medicine

Adverse Events: The More You Search, the More You Find


VOLUME 22 · NUMBER 17 · SEPTEMBER 1 2004

JOURNAL OF CLINICAL ONCOLOGY | ORIGINAL REPORT

How Accurate Is Clinician Reporting of Chemotherapy Adverse Effects? A Comparison With Patient-Reported Symptoms From the Quality-of-Life Questionnaire C30

Erik K. Fromme, Kristine M. Eilers, Mutsumi Mori, Yi-Ching Hsieh, and Tomasz M. Beer


VOLUME 25 · NUMBER 22 · NOVEMBER 10 2007

JOURNAL OF CLINICAL ONCOLOGY | REVIEW ARTICLE

Patient-Reported Outcomes and the Evolution of Adverse Event Reporting in Oncology

Andy Trotti, A. Dimitrios Colevas, Ann Setser, and Ethan Basch

Mucosite

→Identifica il paziente a rischio

Chapter	Item	Phase	Description	Whom is it in charge of?
Mucositis	2.	Pre treatment	Main clinical factors linked to possible increased risk are: poor oral hygiene, periodontal disease, sharp/rough irritating dental surfaces, persistent tobacco or alcohol use, xerostomia, low body mass index (BMI < 18.5), unintentional weight loss before therapy (i.e. >5% weight loss over prior 1 month or > 10% in the last 6 months) immunosuppression (due to comorbidities or to the use of immunosuppressive drugs) female sex.	Oncology Physician Nurse Dentist

→ Oral care make the difference

Chapter	Item	Phase	Description	Whom is it in charge of?
Mucositis	4.	Pre treatment	Oral care has been often recommended to reduce the incidence and severity of oral mucositis. The control of the pre-existing periodontal and dental disease and a pre-treatment professional dental cleaning may allow a better control of oral mucositis. It is recommended that a qualified oral health care team be integrated in a multidisciplinary approach on the basis of well-defined protocols from the pre-treatments, treatment and the follow-up.	Oncology Physician Nurse Dentist Patient

Disfagia

→Valuta pz regolarmente e consulta specialista

Chapter	Item	Phase	Description	Whom is it in charge of?
Swallowing Dysfunction	1.	Pre-therapy / Therapy / follow-up	It is suggested that a patient-rated scale evaluating subjective dysphagia and its impact on QoL be administered to all patients, before treatment starts, at the time treatment ends and regularly during follow up. M.D. Anderson Dysphagia inventory (MDADI) should be preferred because is more specific and much shorter than other commonly used scales (e.g. EORTC (QLQ H&N35), FACT-H&N, EAT-10, SWAL-QOL)	Oncology Physician - Nurse
Swallowing Dysfunction	2.	Pre-treatment	All patients need to be clinically evaluated in order to search for signs and symptoms that herald dysphagia and/or inhalation and/or aspiration (e.g. "Murphy's trigger symptoms", 3-ounce water swallow test, recent history of recurrent pneumonia etc.) at baseline, during and after treatment.	Oncology Physician - Nurse

→ Mantieni attiva la deglutizione

Chapter	Item	Phase	Description	Whom is it in charge of?
Swallowing Dysfunction	11.	Therapy	Patients may benefit from strategies aimed at the prevention of swallowing dysfunction after curative CH-RT such as preventative swallowing exercises during treatment. Swallowing exercises should be prescribed and supervised by a swallowing expert; Two types of exercises can be suggested for patients with dysphagia, both of which at the beginning, during and after treatment: indirect (e.g. exercises to strengthen swallowing muscles) and direct (e.g. exercises to be performed while swallowing):	Oncology Physician - Nurse - Swallowing Expert
Swallowing Dysfunction	12.	Therapy	If enteral nutrition is adopted, patients should be encouraged to continue to swallow and to wean from artificial nutrition as quickly and safely as is feasible, regardless of the method (e.g. nasogastric tube, percutaneous gastrostomy, and parenteral nutrition):	Oncology Physician - Nurse - Swallowing Expert - Nutritionist

Infezioni

→ Ricerca la SIRS, valuta l'infezione e tratta presto

Semptic syndrome	5.		The Systemic Inflammatory Response Syndrome (SIRS) is defined as a clinical condition in which at least two or more of the following criteria occur: • Leucocytes > 12.000/mmc or < 4.000/mmc • T°C > 38.3°C or < 36°C • Heart rate > 90/min • Respiratory rate > 20/min or PaCO2 < 32 mmHg	Oncology Physician - Nurse

→ Usa antibiotici ad ampio spettro

Chapter	Item	Phase	Description	Whom is it in charge of?
Semptic syndrome	16.		For suspected or confirmed sepsis (SIRS+infection) empiric antibiotic therapy should be start considering both anti Gram+ and anti Gram-. It should be attempt to provide antimicrobial activity against the most likely pathogens based upon the potential source of infection searched on the basis of each HNCP's presenting illness.	oncology physician - nurse - infectious diseases specialist
Semptic syndrome	18.		Considering the very high rate of infection sustained by multi- and pan- resistant microorganisms in HNCPs as well as in the general population, when local guide lines are not available, it is suggested the treatment with broad spectrum, potent antibiotics active against enterobacteriaceae and meticyllin resistant Staphilococcus aureus be started.	oncology physician - nurse - infectious diseases specialist
Semptic syndrome	19.		In the presence of sepsis following an oral cavity infection, the treatmen might consider the introduction of an antifungal agent associated with an anti-GRAM+ antibiotic.	oncology physician - nurse -

Infezioni

→ Cosa fare in caso di sepsi + insufficienza d'organo

Semptic syndrome	23.		In case of severe sepsis (sepsis + organ failure) supportive therapy using the "Early Goal Directed Therapy" (EGDT) scheme should be applied as soon as possible: oxygen administration, hydration with crystalloids, and targeting a Svo2 of 70%	Oncology Physician - Nurse – Intensive-care physician
Semptic syndrome	24.		The patient should be rapidly referred to an intensive care unit (ICU): when the endpoints of EGDT cannot be reached (O2 sat > 90% or PaO2>60 mmHg; PA>90 mmHg or Lactic acid≤4 mmol/l; blood glucose levels<180 mg/dL; haematocrit>30%) or the organ failures do not reverse through usual supportive measures.	Oncology Physician - Nurse – Intensive-care physician

Dermatite

→ Igiene preventiva è cruciale

Dermatitis	4.	Treatment	Preventive Hygienic recommendations: • Washing with lukewarm water and a mild soap (pH-neutral or non alkaline soap) can be used as routine care for all patients receiving radiation therapy. • Shaving with a sharp, throwaway multiblade wet razor or with non-traumatizing electric razor. • Avoid tapes and adhesives. • A moisturizing cream based on urea or anionic polar phospholipoid is advised • It is not advisable to use cream or other skin products from 1 to 4 hours before treatment to avoid a "build-up" effect. • Trolamine, Calendula Cream, Aloe Vera are not recommended either in prophylaxis or in the treatment of skin toxicity.	Oncology Physician - Nurse - Patient

→ Limita steroidi e usa medicazioni

Dermatitis	6.	Treatment	Topical steroidal agents • The use of corticosteroid creams for itching or irritation should be limited, because they can cause thinning of the skin and bacterial infections. • The use of corticosteroid creams in the prevention of skin reactions should be limited because they can cause thinning of the skin and bacterial infections.	Oncology Physician-Nurse
Dermatitis	7.	Treatment	Dressing and advanced medications • Even though there is an insufficient evidence to support a recommendation for using dressings or advanced medications, they can be used to protect irradiated skin from trauma or, in the case of wet desquamation, in order to control pain, bleeding, and exudates. • Protection of ulcerated parts can be made with hydrocolloid films after cleaning the skin. The ultrathin films can be maintained during radiation. This dressing should be removed when it is saturated with exudate. • Hydrofibers, calcium alginate dressing, and polyurethane or silicone foams could be used when exudate is very abundant. No evidence exists to support one product against another. • When crusts or crustous exudation are present, the debridement of crusts may help to reduce the risk for superinfection and bleeding and may help with	Oncology Physician - Nurse

Tossicità ematologica

→ Neutropenia febbrile è sempre ad alto rischio

Hematological toxicity	1.	General statement	Febrile neutropenia patients during CRT should be always considered at high risk for complications. According to all the various identified risk factors, febrile neutropenic HNC patients should be considered at high risk for complications requiring hospitalization and prompt start of antibiotic intravenous therapy. Phase III trials in HNC should be directed to identify a possible subgroup of patients at lower risk for complications or death.	

→ Limita uso di fattori di crescita

Hematological toxicity	1.	Treatment	Primary prophylactic G-CSF is not routinely indicated during TPF induction chemotherapy nor in patients undergoing CRT. The addition of antimicrobial therapy to prophylactic G-CSF is not indicated in afebrile neutropenic patients.	
Hematological toxicity	2.	Treatment	The use of G-CSF during concurrent CRT should be avoided as it may adversely affect outcome.	
Hematological toxicity	3.	Treatment	Treatment with G-CSF as adjunct to antibiotic therapy in FN patients should not be used routinely. Therapeutic use of G-CSF could be considered in life-threatening cases (severe sepsis and septic shock) at the clinician's discretion.	
Hematological toxicity	1.	Treatment	There are conflicting results of possible detrimental effects of Erythropoiesis Stimulating Agents (ESA) use during curative radiation therapy of HNC. According to NCCN, EORTC and ASCO guidelines, red blood cell transfusions should be preferably used.	
Hematological toxicity	2.	Treatment	There is not a defined cut-off hemoglobin level for transfusion during CRT; however, RBCTs are suggested with an haemoglobin level < 9 g/dL.	

Dolore

→ Terapia sistemica

Pain	5.	Treatment	• Treatment of painful mucositis may benefit from topical and systemic drugs. • However, the use of an opioid-based systemic pain control program is almost always necessary for pain relief. • Aggressive measures to prevent and treat opioid-induced side effects is critical in order to optimize patient compliance with pain regimens.	Oncology Physician
Pain	7.	Treatment	Systemic drugs: • The WHO analgesic ladder describes various levels of systemic therapy for use in pain management. It is not necessary to step up the ladder, instead, the level of systemic therapy utilized should match the level of pain experienced by the patient. • Patients often experience difficulty with swallowing during and after surgery or radiation-based treatments. Under these circumstances, transdermal fentanyl can provide consistent and effective pain relief. • An effective pain regimen should include a fixed and breakthrough medication with an appropriate dose and schedule for each • Odynophagia should be considered breakthrough pain to be treated with appropriate breakthrough medication dosing. Preventive administrations of breakthrough pain medication a half hour before eating may improve swallow function. • Transmucosal intranasal route administration of fentanyl is a rationale approach to odynophagia treatment.	Oncology Physician

→ Terapia topica

Pain	6.	Treatment	• Topical coating agents may reduce local mucosal sensitivity. • Topical anaesthetics (e.g. Lidocaine 2%) alone or as mixture mouthwashes may be effective but with a short duration of effect (15-30 min). • Topical morphine is effective for relieving pain with extended duration (4-6 hours) and it is probably more effective than topical lidocaine. • Topical fentanyl prepared as lozenges is not effective and its use should be avoided. • Topical capsaicin may desensitize pts prior to the onset of mucositis but it is poorly tolerated and has no place in clinical practice. • Even if mouthwashes of doxepin (tricyclic antidepressant) 0.5% have shown to reduce pain for 4 hours or longer, there is no wide application in clinical practice, because no confirmation trials have been published yet.	Oncology Physician - Nurse

Nutrizione

→ Screening nutrizionale

Nutrition	3.	Pre-treatment - Treatment	• A validated nutrition screening tool should be used for identifying malnutrition risk in cancer patients (NRS-2002, MNA, MST,MUST). • Nutrition assessment should be based on clinical anthropometric and biochemical parameters. Moderate-severe malnutrition is defined as the presence of unintentional weight loss i.e. 5% weight loss over prior 1 month or > 10% in over 6 months. • Patient-Generated Subjective Global Assessment (PG-SGA) is also recommended to be used.	Oncology Physician – Nurse – Nutritionist

→ Quando iniziare nutrizione enterale?

Nutrition	4.	Treatment	Prophylactic tube feeding should be considered before starting any treatment in: • patients with severe weight loss prior to treatment, i.e. 5% weight loss over prior 1 month, or 10% weight loss over 6 months; • patients with ongoing dehydration or dysphagia, anorexia, or pain interfering with the ability to eat/drink adequately that can not be corrected with short-term intervention; • patients with significant comorbidities that may be aggravated by poor tolerance of dehydration, lack of caloric intake; including oral/dental disease • patients with documented aspiration; • patients for whom long-term swallowing disorders are likely (see for suggestions the total score proposed e.g. by Langendijk et al.)	Oncology Physician – Nutritionist
Nutrition	5.	Treatment	• Optimal method of tube feeding (nasogastric versus prophylactic or non prophylactic gastrostomy) remains unclear; however, if tube feeding is planned for more than 30 days, gastrostomy is indicated. • The parenteral nutrition should be used only if the bowel is not working or there are serious contraindications to the placement of a device for enteral nutrition.	Oncology Physician – Nurse – Nutritionist

Problemi odontoiatrici

→ L'importanza della valutazione preterapia

Dental problems - Ostoradionecrosis (ORN)	2.	Pre-treatment / prevention	It is recommended that patients undergo a dental examination, including a full periodontal evaluation and documentation.. Any required treatment including extraction of diseased teeth and periodontal management should be completed before the start of radiotherapy. Preradiation dental extraction should be limited to high radiation dose sites of bone, and in an individual with dental conditions including periodontal disease that increases the risk of necrosis. The need for extraction should take patient compliance into account, stage of the tumour, time needed for dental care. Before starting radiotherapy, panoramic X-ray examination and any supplementary intraoral X-ray examination necessary should be completed as part of the comprehensive dental evaluation.	Oncology Physician - Nurse - Dentist - Patient

→Follow up: prevenzione high risk pts - interventi

Dental problems - Ostoradionecrosis (ORN)	7.	Follow up	After radiotherapy, dental caries risk is increased. This can be prevented by practising good oral hygiene and daily application of a neutral preparation of 1.0% sodium fluoride gel by means of custom-made fluoride carriers. In addition daily fluoride applications should be considered in high risk patients after radiotherapy. Preventive protocols must be continued on a lifelong basis (if hyposalivation persists). There is evidence suggesting that conventional glass ionomer restorations perform more poorly than resin- modified glass ionomer, composite resin, and amalgam restorations in patients who have been treated with radiotherapy.	Dentist - Patient
Dental problems - Ostoradionecrosis (ORN)	8.	Follow up	After radiotherapy, the risk of periodontal attachment loss is increased. This may be due to direct effects from radiation and/or alterations in the oral environment, including oral microbial shifts and dietary changes. Regular dental check ups geared to a patient's individual needs are necessary. Assessment of the periodontal condition and the level of oral hygiene should be part of these evaluations. Regular professional may be indicated.. Any evidence of progressive periodontal disease should be treated rigorously as soon as possible.	Dentist – Patient
Dental problems - Ostoradionecrosis (ORN)	9.	Follow up	Following post-radiotherapy extractions, improved healing of extraction sites depends on an atraumatic surgical technique and may be enhanced by measures used in treatment of ORN, such as the administration of Hyperbaric Oxygen. Other measures may be helpful, including the used of pentoxfyline and Vitamin E.	Oncology Physician – Dentist

NEXT STEPS

→ **COSTRUZIONE DI UN ALGORITMO PER IL GRUPPO MULTIDISCIPLINARE: check list della terapia di supporto in CTRT**

→ **TRADUZIONE DEGLI STATEMENTS E PUBBLICAZIONE SUL SITO SOCIETA' SCIENTIFICHE**

→ **AGGIORNAMENTO PERIODICO**

Grazie!

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