# Highlights in Supportive Care Oncology

Highlights 2021

*MASCC®/ ISOO®*

# Highlights in Supportive Care Oncology

**Highlights 2021**


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# Febrile Neutropenia

## Sepsis Management
**Cooksley T. *et al.*** - MASCC® 2021 - Febrile Neutropenia Session

## Guidelines Reminder
**Rapoport E. *et al.*** - MASCC® 2021 - Febrile Neutropenia Session

## Filgrastim IV *vs* SC: is there any difference?
**Pon D. *et al.*** - MASCC® 2021 - Febrile Neutropenia Session

# Parallel Session: Febrile Neutropenia: The Patient Journey

*Cooksley T. et al. - MASCC® 2021 - Febrile Neutropenia Session*

*Rapoport E. et al. - MASCC® 2021 - Febrile Neutropenia Session*

# Sepsis Management

## Treating sepsis : the latest evidence

**✓Antibiotics**
Early administration

**✓Fluids**
Several liters initially
- ✓ Colloids
- ✓ Crystalloid
- ✗ Starches
- ✗ High chloride

**✓Vasopressors**
1-6 hours after onset
- ✓ Norepinephrine
- ✓ Epinephrine
- ✓ Vasopressin
- ✗ Dopamine
- ✗ Phenylephrine

**✓Enteral feeding**

**✓Insulin therapy**

**✗ Deep sedation**

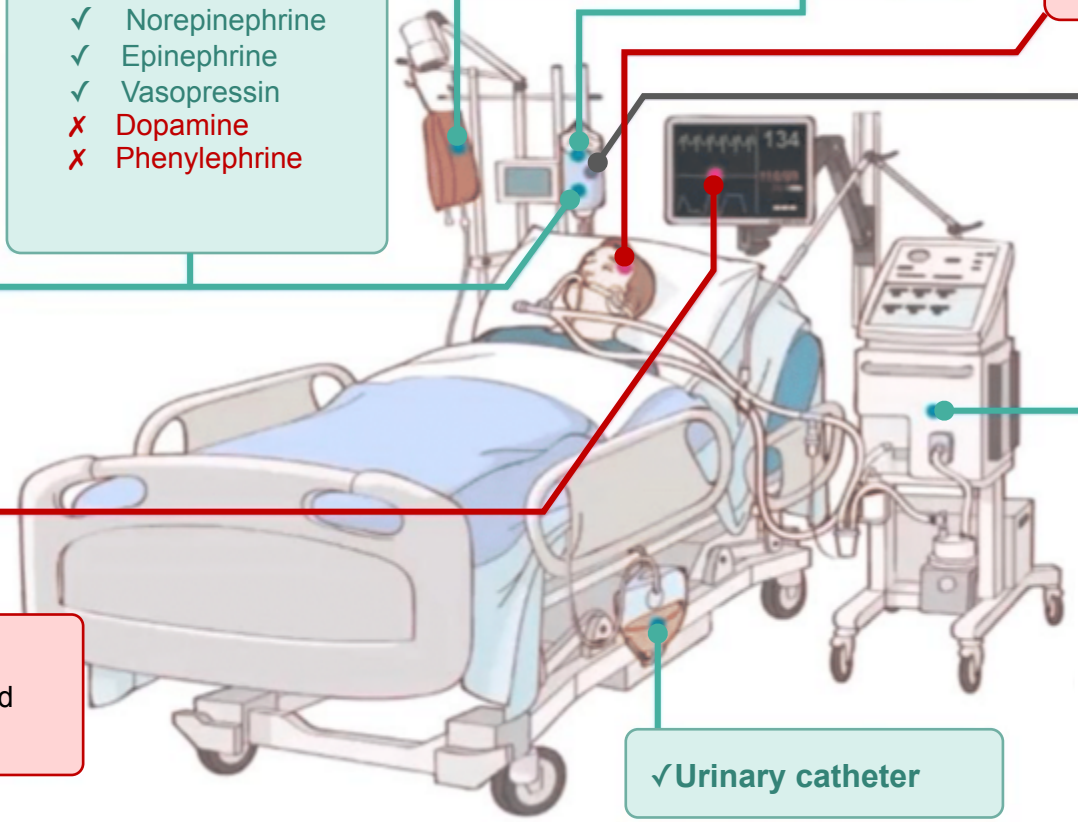
**? Molecular targeted therapies**

**✓Lung protective ventilation**

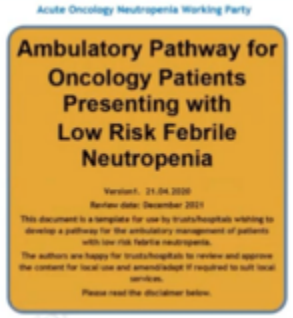
**✗ Goal oriented therapy**

**✗ EGDT**
Early goal directed therapy

**✓Urinary catheter**



# UK Low Risk Febrile Neutropenia Pathway *(adapted figures from Tim Cooksley presentation at MASCC 2021)*




MASCC Score ≥ 21 : Complete ambulatory low risk FN pathway checklist :

- Patient > 18 yrs old
- Patient has a solid tumor
- History of temperature ≥ 37°5 or ≤ 36°0
- Patient has received systemic anti-cancer therapy
- Patient has absolute neutrophil count (ANC) < 1.0x10$^{9}$/L
- First dose of empirical intravenous antibiotic therapy administered
- Patient has ready access to an Emergency Department

The patient should be observed for an agreed minimum period of time to ensure clinical stability. We recommend a minimum of 4 hours

MASCC Score < 21:

↓

Inpatient Management of neutropenic sepsis

↑

Patients condition worsens, reassess NEWS2 and sepsis Red Flag

If patient remains stable

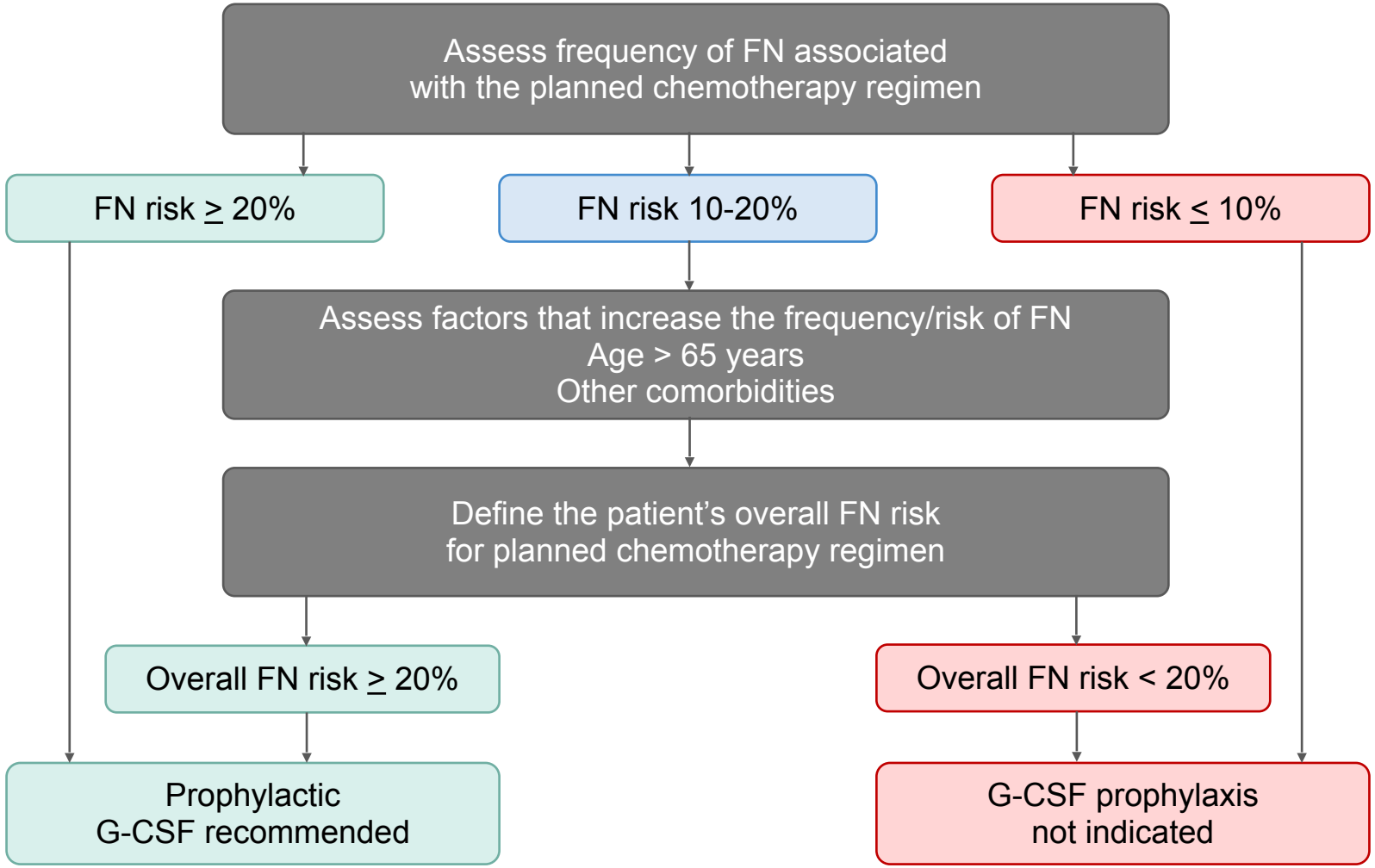
If the patient's condition worsens

- Commence **oral** antimicrobial therapy with amoxicillin/clavulanic acid and ciprofloxacin. Consider local sensitivity and resistance.
- Advise the patient to complete any prophylactic G-CSF previously prescribed but do not start G-CSF
- Provide additional support treatment as indicated

- Update the Acute Oncology Team of assessment and entry onto low risk ambulatory pathway to ensure appropriate follow up and management
- Ensure patient's appointment for review by telephone or in an ambulatory setting (within 48 hours recommended)
- Ensure patient's access to 24h specialist oncology telephone advice line
- Ensure patient's knowledge on signs and symptoms that should trigger medical assessment and when they should return to the hospital

- Review the patient by telephone or in an ambulatory setting to access clinical progress (48h recommended)
  - Repeat full blood count if appropriate
  - Review results of initial cultures
  - Consider rationalising antimicrobiasis
  - Inform patient's treating oncology team

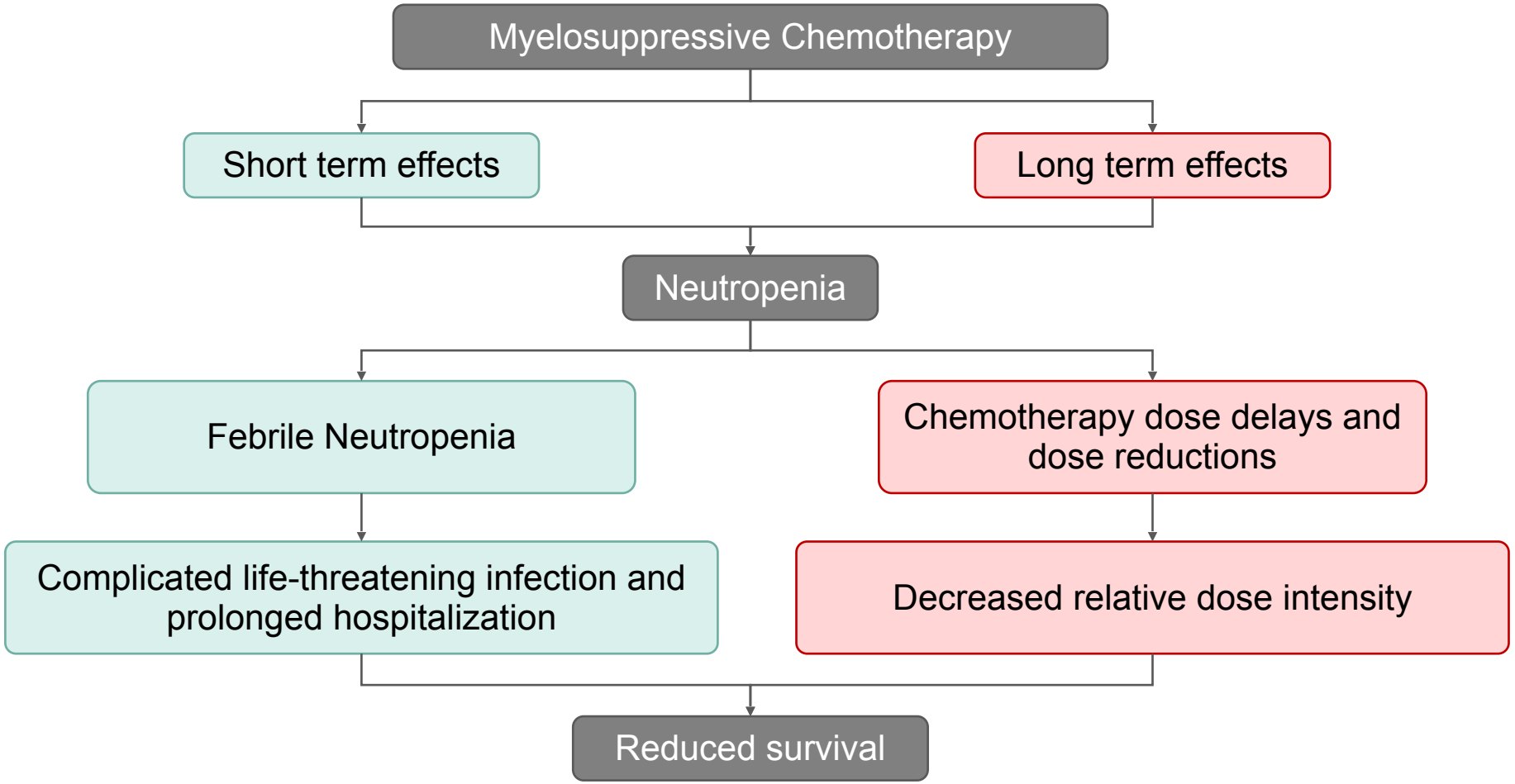
# ESMO guidelines / G-CSF primary prophylaxis






*Rapoport E. - MASCC® 2021 – Febrile Neutropenia Session ; Klastersky J et al. Management of febrile neutropaenia : ESMO Clinical Practice Guidelines. Ann Oncol 2016;27(suppl 5) : v111–v118.*

# Complications of Myelosuppressive Cancer Chemotherapy






*Rapoport E. - MASCC® 2021 – Febrile Neutropenia Session ; Kuderer N. et al – Cancer 2006 ; Christella I. et al. J Clin Oncol 2007; Bosly A. et al. Ann Hematol 2007*

# Summary Febrile Neutropenia (FN)

- FN requires rigorous initial work-up
- Early IV antibiotics and source control is main goal of treatment
- Excellent supportive care is needed
- Outpatient management of low risk FN is safe and feasible
- Local pathways and innovative for delivery are required
- Predictive risk tools are helpful
- Prophylactic GCSF use decreases FN complications
- Pegfilgrastim and its biosimilars are recommended in the context of Covid-19 pandemic
- Use G-CSF in order to avoid FN mortality

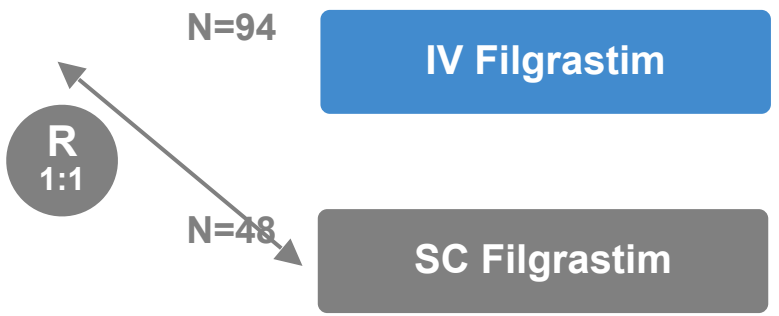
# Parallel Session: Febrile Neutropenia: The Patient Journey

*Pon D. et al. - MASCC® 2021 - Febrile Neutropenia Session*

# IV *vs* SC Filgrastim: is there any difference?

**Retrospective study**

- Auto HSCT
- BEAM regimen,
- Patients to receive ≥ 1 dose filgrastim (start D+5)



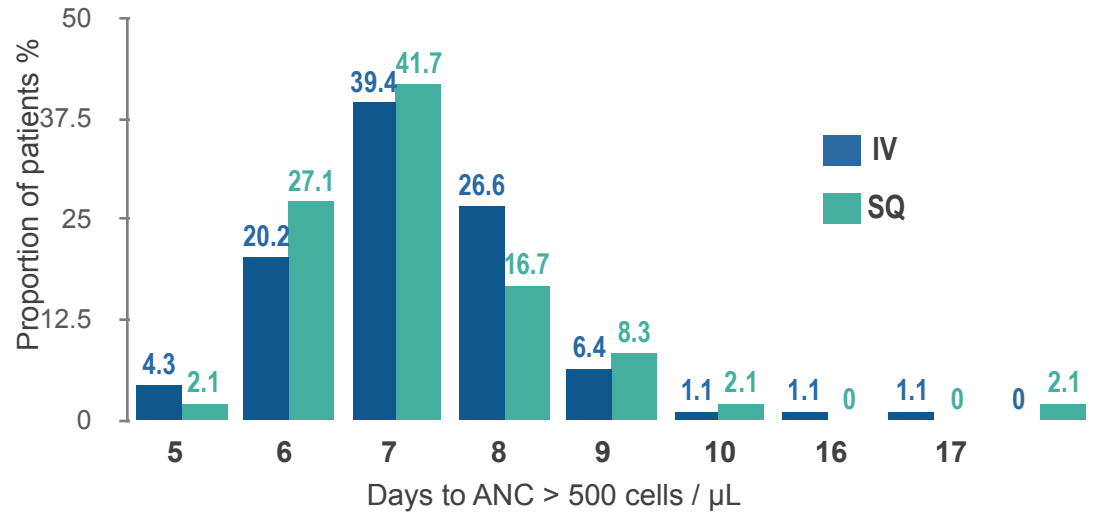

**Primary objective:**

- Time to ANC > 500 cells/mm$^3$

**Secondary objectives:**

- Duration of antibiotic coverage
- Hospital length of stay
- 30-day mortality

## Number of days to ANC > 500




## Global Results

| | IV (n=94) | SC (n=48) | *P-value* |
|---|---|---|---|
| **Days to ANC > 500, mean +/- SD** | **6.31 ± 1.88** | **6.29 ± 1.47** | **0.93** |
| Duration of Gram negative antibiotioc coverage, mean days +/- SD | **9.9 ± 4.3** | **11.3 ± 5.7** | **0.20** |
| Length of hospital stay, mean days +/- SD | **23.5 ± 4.2** | **22.7 ± 3.1** | **0.24** |
| 30-day mortality, N (%) | **2 (2.1)** | **0 (0)** | **0.54** |

IV: Intra-venous
SC: Sub Cutaneous
ANC: Absolute Neutrophil count

**No differences between IV and SC G-CSF route**

# Survivorship and late effects

## Plenary: from definitions to patients' needs

**Chan R, Davies A, Nekhlyudov L, Casas A.** Survivorship Plenary Session

## The skin is a great sentinel

**Carlesimo M.** *et al.* - MASCC® 2021 et al. Parallel Session: Oral and Dermatologic Toxicity of Immunotherapy Oral Proffered Paper 4

## The place of acupuncture

**Mao J .** *et al.;* MASCC® 2021 – Parallel Session - J.Lacey Implementing Integrative Therapies

## Integrative oncology

**Lacey J.** *et al.;* MASCC® 2021 – Parallel Session- Implementing Integrative Therapies

## Self management, survival and care organisation

**Howell D**. *et al.* - MASCC® 2021 – Parallel Session: What Happens After Your Patient Leaves the Consulting Room - Oral Proffered Paper 1

# **Survivorship:**
# The plenary of the definitions to the needs of the patients

*Chan R.* et al. *- MASCC® 2021 - Parallel Session: Cancer Survivorship - What Do We Mean?*

*Davies A. - MASCC® 2021 – Survivorship Plenary Session*

# SURVIVORSHIP: MASCC® definition

**The survivorship study group considers survivorship to span the time between diagnosis and the end of life. Its mission encompasses realization of the fullest potential of cancer survivors in all spheres of life. Accordingly, its areas of effort include:**

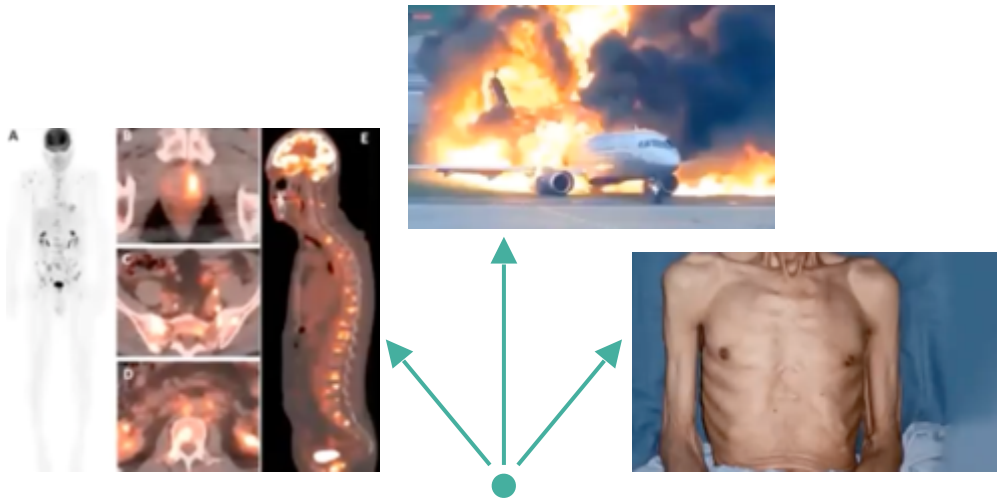
- Prevention of new or recurrent cancer,
- Surveillance for new or recurring cancer,
- Interventions for prevention and management of cancer symptoms and treatment side effects (including pre-habilitation and rehabilitation),
- Coordination between specialists and primary care providers to ensure that all survivor needs are met

**" Survivorship"** overlaps with **"supportive care", "palliative care" and "LIFE"**

The definition needs to be functional and address MASCC®'s mission; inclusiveness and priorities (research and education)

# SURVIVORSHIP: MASCC® definition

## "The time between diagnosis and the end of life"



NCI definition: **« One who remains alive and continues to function during and after overcoming a serious hardship or life-threatening disease. In cancer, a person is considered to be a survivor from the time of diagnosis until the end of life »**

***Aversion, discomfort, indifference, reluctance, acceptance*** *(Wee et al. 2021)*

Undergoing Treatment: **43.8% agree, 56.2% disagree**
Completed treatment: **79.5% agree, 20.5% disagree**

Living with & beyond

OR?

**The Right to be Forgotten (ECO 2021)**

# SEASONS of SURVIVORSHIP: MASCC® definition

**Phases** → **Be Inclusive but Specific**

- **Acute:** Patients/Survivors at first diagnosis or relapse, who require acute intervention
- **Chronic:** Patients/Survivors with cancer slowly progresses or alternates between remission and relapse with acceptable QOL
- **Long Term:** Patients/Survivors in clinical remission for long periods of time or for their entire life, who remain at risk for distant relapse or second tumor and who potentially can experience late treatment medical and psychosocial sequelae
- **Cured:** disease free Patients/Survivors whose cancer specific mortality and life expectancy years after diagnosis equals that of sex and age matched members of the general population

*Surbone, Tralongo. JCO 2016; 34: 3372-3374*

# SURVIVORSHIP: Patient's Perspective

- I consider myself as a Person living with cancer,
- Treatment is over, Now What ?
- Processing the changes you have experienced and becoming more comfortable with your "New Normal" will help you adapt over time

**The "New Normal Life"**

# Late Effects in Oncotherapy :
The great sentinel

*Carlesimo M. et al. - MASCC® 2021 – EPP 4 – Parallel session*

# Late Effects in Oncotherapy

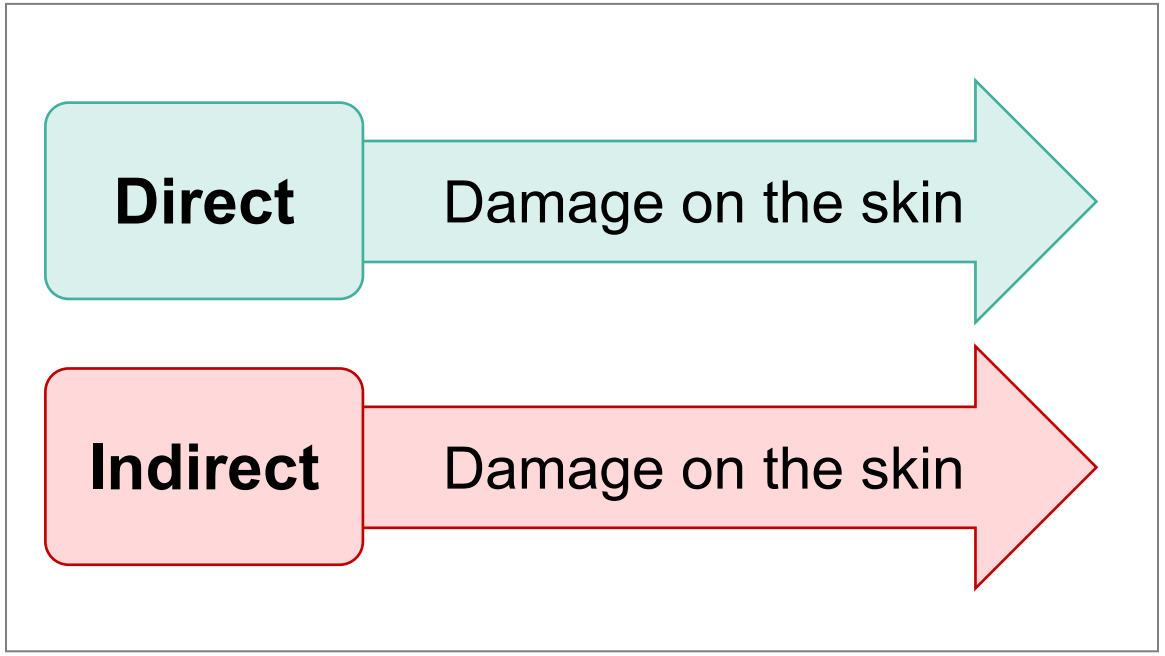
## The great sentinel

- Acute skin toxicity of oncotherapy is well known
- Another spectrum of cutaneous side-effects is emerging: **late effects**
  - Atrophy
  - Loss of strength
  - Loss of flexibility
  - Teleangectasia
  - Reduced skin elasticity
  - Skin fragility – Purpura – Panicolopathy
  - Hyper/hypo-pigmentation
  - Loss and/or alterations of skin appendages
  - Androgenetic like alopecia
  - Vulvar crurosis

# Late Effects in Oncotherapy

## The great sentinel

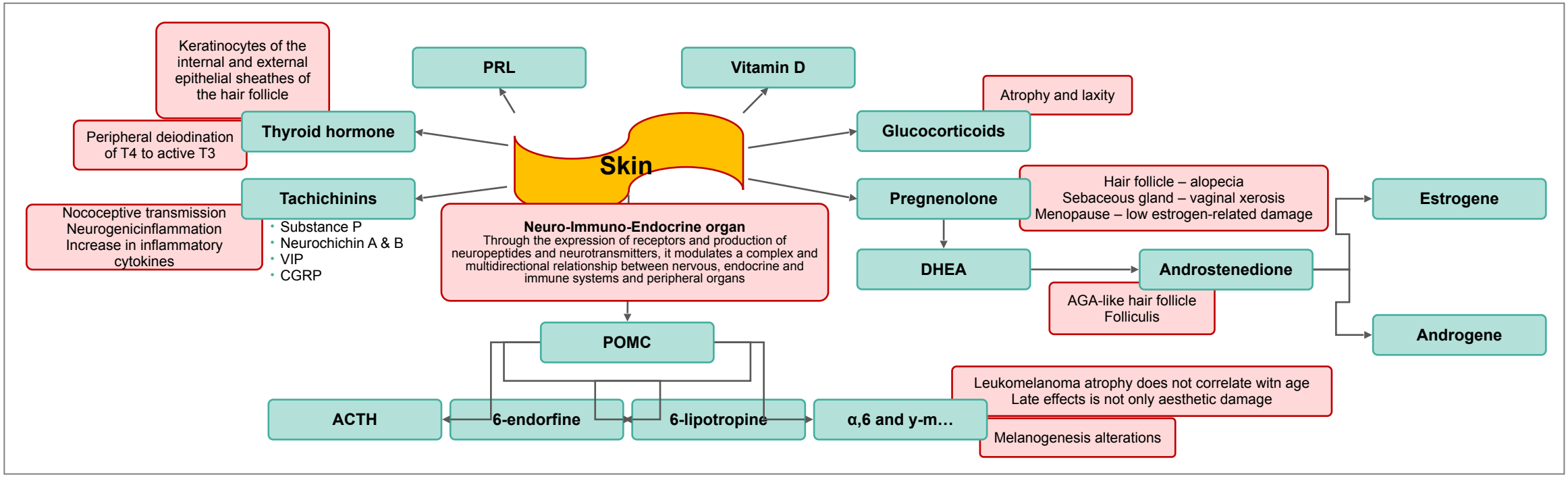
- Where do late effects come from ?



# Late Effects in Oncotherapy

## The great sentinel

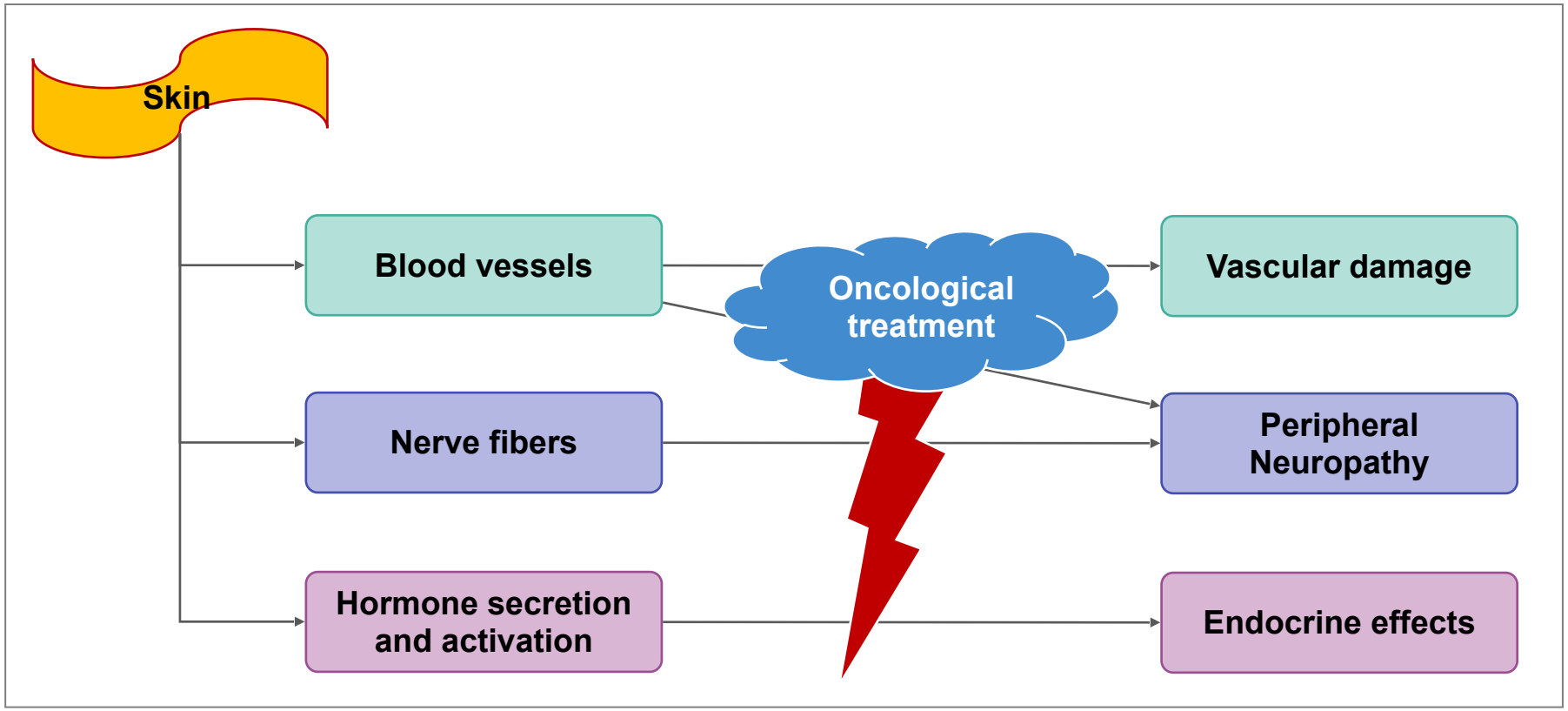
- Direct damage on the skin
  - Metabolic function
    - Presence of enzymatic structures typical of the metabolic pathways of carbohydrates, lipids, proteins and some trace elements
  - Endocrine function
    - Specific hormone receptor expression, hormone synthesis and catabolism through specific enzymes present



# Late Effects in Oncotherapy

## The great sentinel

- Indirect damage on the skin

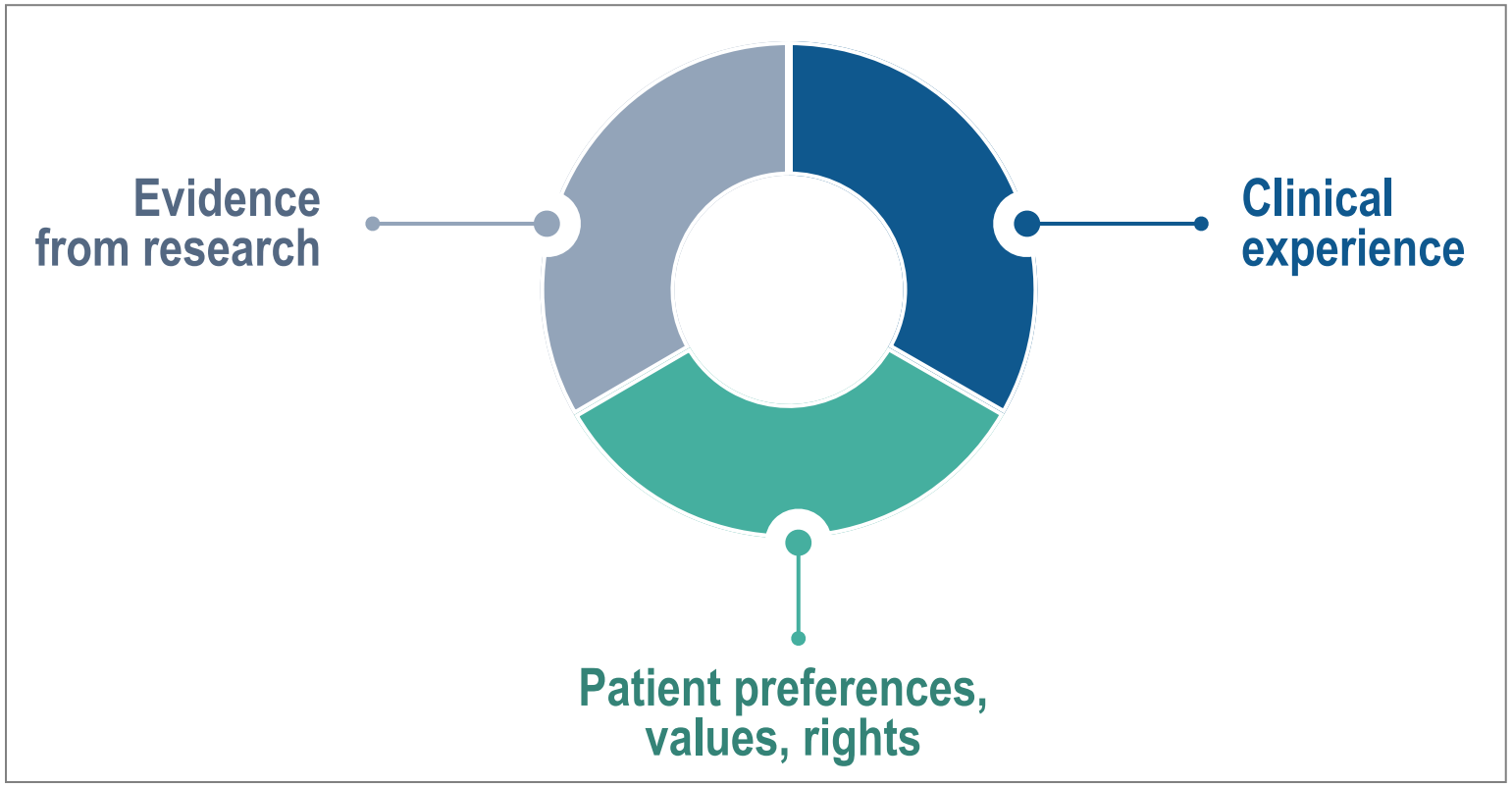


# Complementary Practices: Acupuncture Update

*Mao. JL.* et al. *- MASCC® 2021 - Parallel Session: Implementing Integrative Therapies for Supportive Care in Clinical Practice: Lessons Learned and Future Directions*

# Integrative Medecine: Acupuncture

- The integration of the best available research evidence with our clinical expertise and our patients' values and circumstances

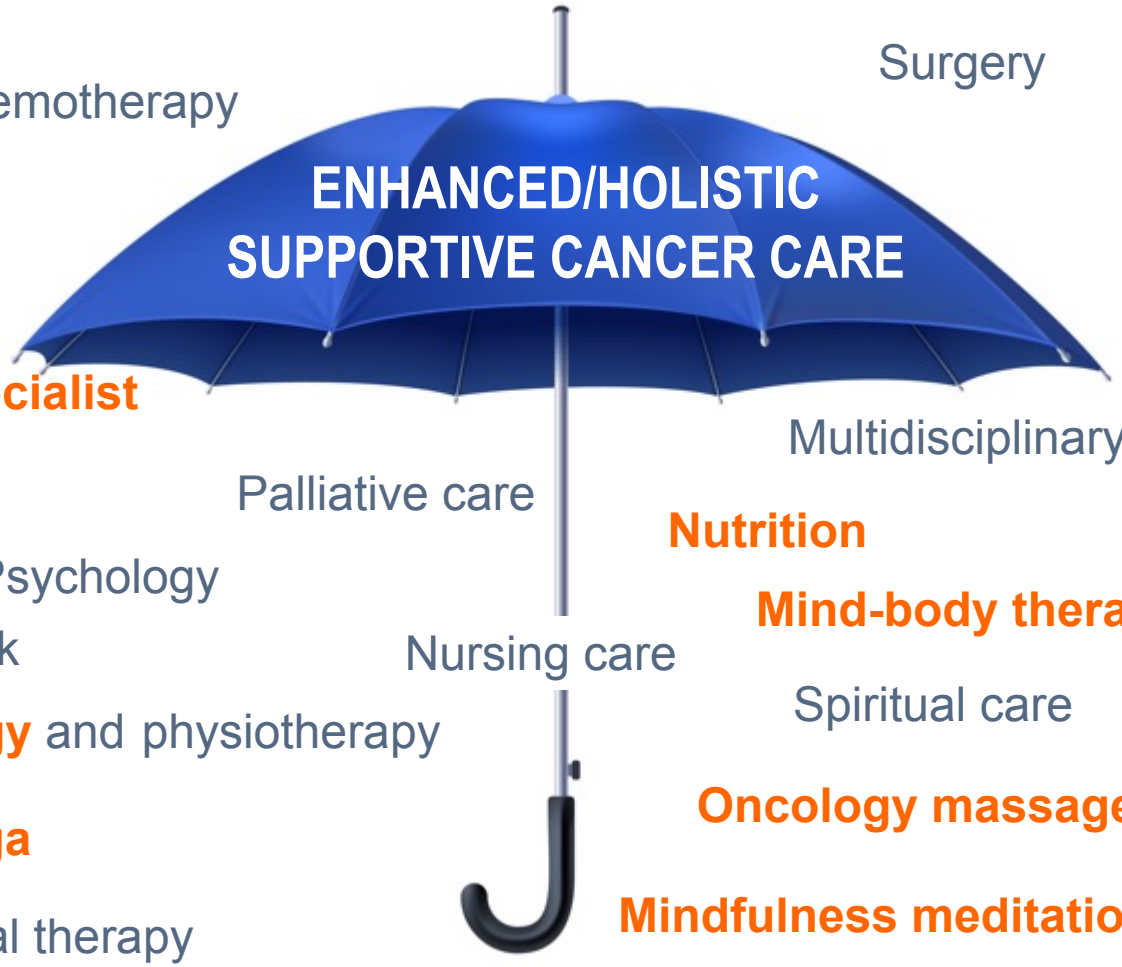


# Integrative Oncology :
## Survivorship

*Lacey J . et al.; MASCC® 2021 – PS - Implementing Integrative Therapies*

# Integrative Oncology: Survivorship

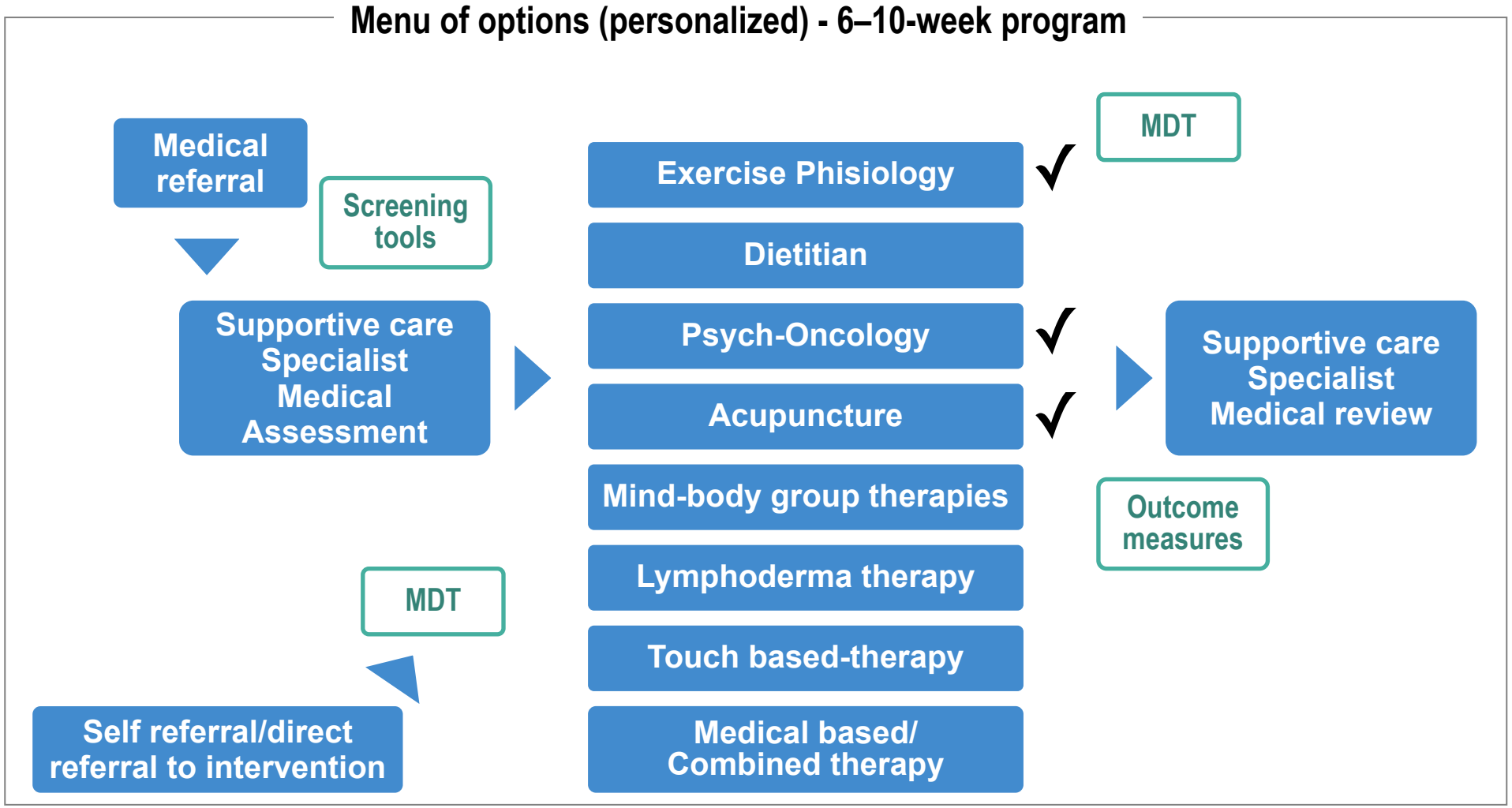
# Integrative Oncology: Survivorship




Radiotherapy
Chemotherapy
Surgery
Targeted therapy
Immunotherapy
**Integrative Oncology/SC Specialist**
Psychiatry
Multidisciplinary medical care
**Exercise**
Palliative care
**Nutrition**
**Survivorship Programs**
**Art therapy**
Psychology
**Mind-body therapies**
**Reflexology**
**Acupuncture**
Social work
Nursing care
Spiritual care
**Exercise physiology** and physiotherapy
**Selected Herbs and supplements**
**Oncology massage**
**Medical Cannabis**
**Yoga**
Occupational therapy
**Mindfulness meditation**
**Music therapy**
**Qi Gong**
**Lymphoedema therapy**

# Integrative Oncology: A model

## Our enhanced supportive care model



# Self management, survival and care organisation

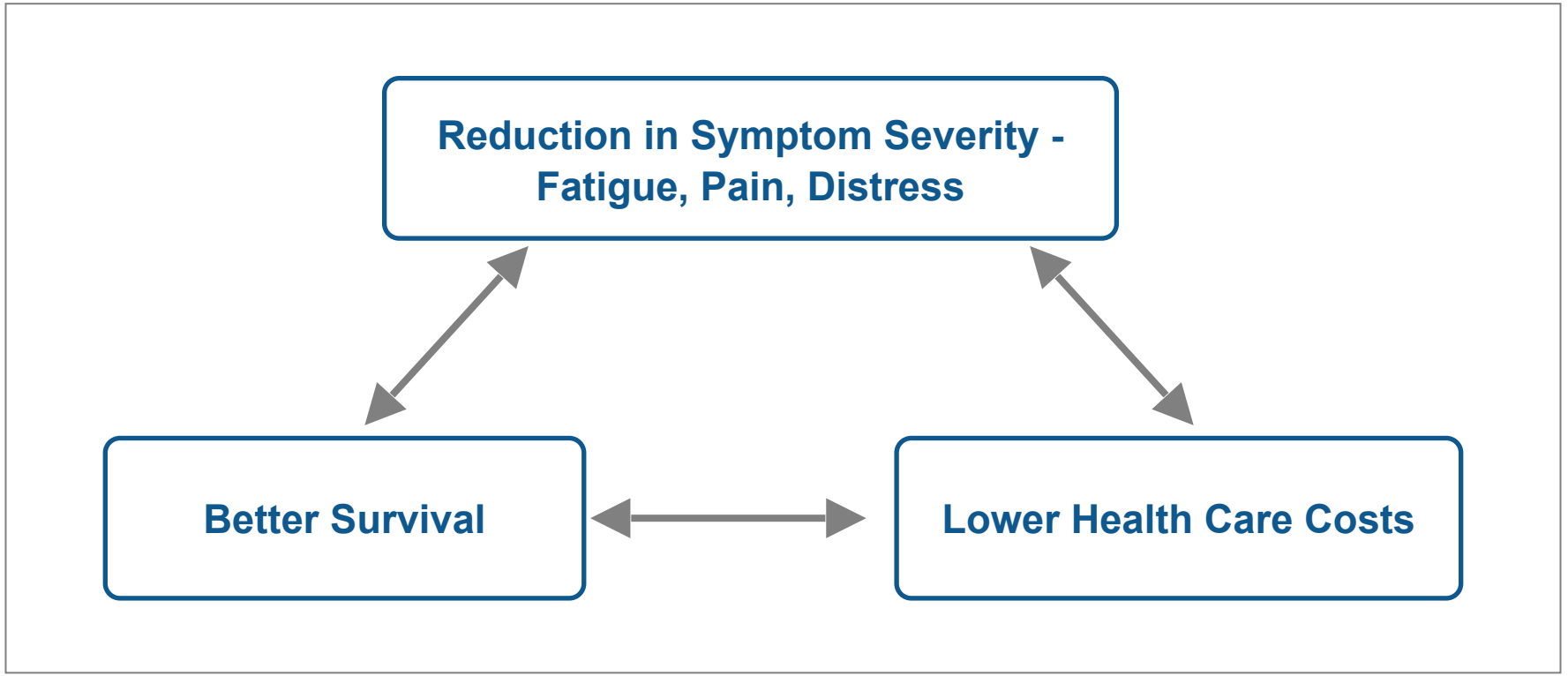
*Howell D.* et al. *- MASCC® 2021 –Parallel Session: What Happens After Your Patient Leaves the Consulting Room - Self-Management in Cancer, Why i*
*Matters and How Do We Make It Work?* Oral Proffered Paper 1

# Building of self-efficacy and core skills for effective self-management

| Problem Solving | Decision-Making | Behavioral Self-Monitoring & Tailoring | Setting Goals Action Planning | Partnering with Healthcare Providers | Risk Reduction |
|---|---|---|---|---|---|
| Structured problem solving | Knowledge & clarification | Self-monitoring of disease & symptoms, recognize recurrence | Measurable goals and actions | Therapeutic alliance-effective & participatory communication | Healthy lifestyle behaviors to reduce late effect risks |
| Coping and stress management strategies | Deliberative weighing of options | Adjusting behaviors in response to self-monitoring | Problem solving Barriers to action | Navigating transition & fear of recurrence | Managing multi-comordid treatment effects |

**Core skill building is bi-directional and iterative to promote mastering learning of skills**

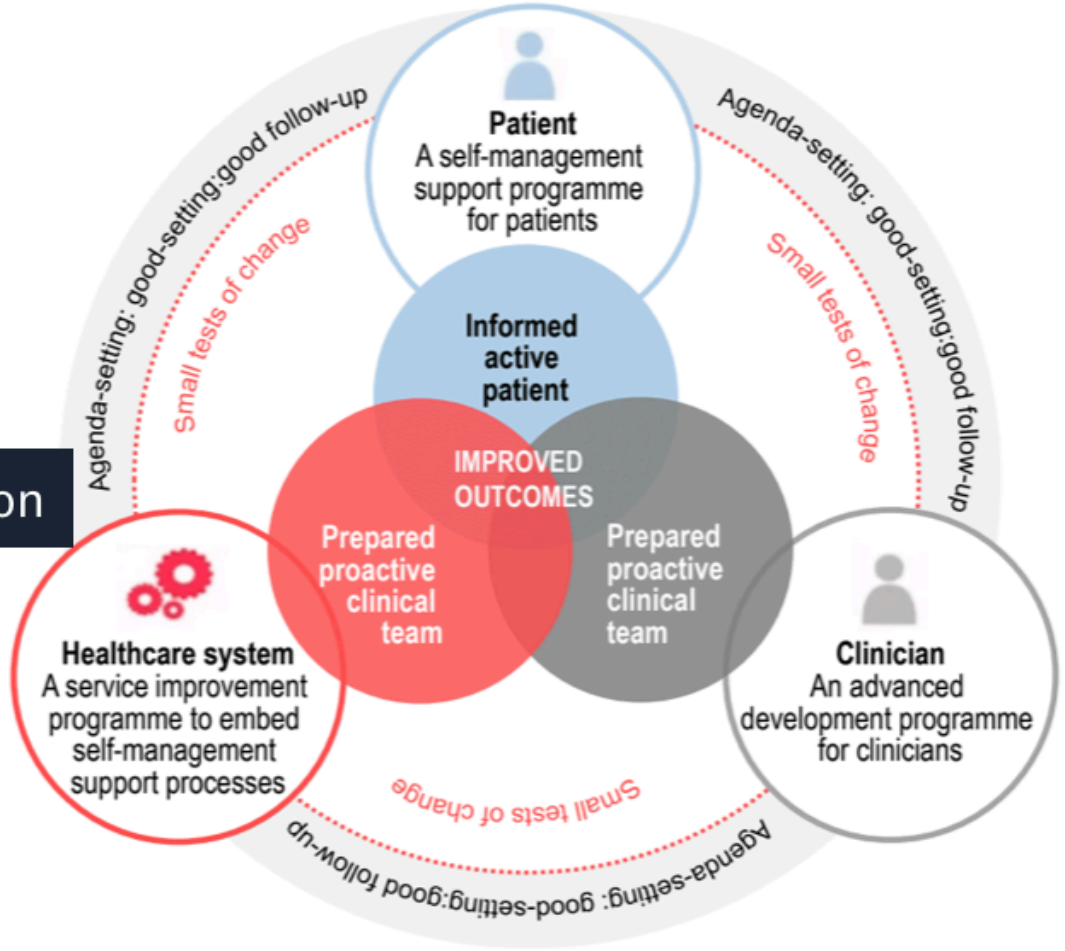
# Self-management support = Better health outcomes




Howell et al. Supportive care in cancer2017;25(4):1323-1355. Boland, L et al. Support Care Cancer 2018;26:1585-1595; Kim et al. OncoL Nurs Forum 2017;44(6): 719-728.
Cuthbert et al. Psycho-Oncology 2019. Friedenreich. Physical Activity and Mortality in Cancer Survivors: A systematic review and Meta-Analysis. JNCI Cancer Spectr. 2019 Oct 17;4(1): Barker BMJ Quality & Safety, 2018; Demark-Wahnefried CA Cancer J Clin 2015; 65:1-54

# Implementing SMS requires whole system change

## Co-creating health: a self-management support programme



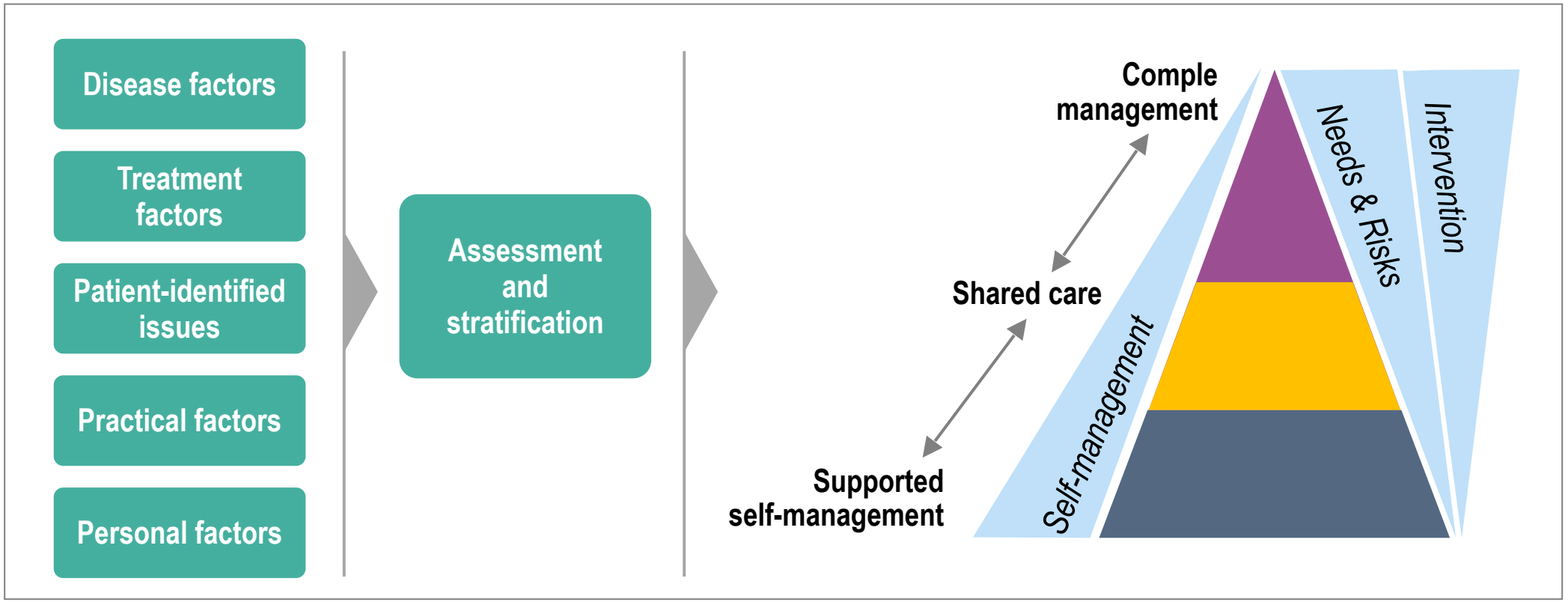

Select an area to comment on

SMS: Self-Management Support

The Health Foundation. Ideas into action: person-centred cre in practice. The Health Foundation, 2014. www.health.org.uk/sites/default/les/IdeasIntoActionPersonCentredCareIn Practice.pdf

# Promising practices: embedding SMS into risk-based survivorship care

## Stratified/personalized pathway (based on UK model)




SMS: Self-Management Support

Innovation to implementation : stratified pathways of care for people living with or beyond cancer. NHS improvement, 2015. Alfano et al. Building personalized cancer follow-up care pathways in the united States: Lessons learned from implementation in England, Northern Ireland, and Australia, Am Soc Clin Oncol Educ Book. 2019 Jan; 39:625-639

# Every cancer phase is a "teachable" moment for behavior change

| Prevention | Screening | Diagnosis | Treatment | Survivorship | Palliative / End-of-Life |
|---|---|---|---|---|---|
| Behaviors<br>Diet<br>Exercise<br>Sun risks<br>Alcohol<br>Smoking<br>Chemo-prevention | Adhere to screening schedules<br>Genetics<br>Recognize cancer signs & symptoms | Precision<br>Medicine<br>Decisions<br>&<br>Treatment decision-making | Self-Monitoring<br>Recognize/ manage side-effects<br>Titrate medications<br>Adjust health behaviors | Manage long-term effects<br>Mitigate late effect risks-healthy lifestyle behaviors<br>Cope with fears of recurrence | Treatment decisions<br>Manage declining function<br>Manage symptoms, Negotiate and cope with loss & grief |

**Cross cutting issues-Person-centered communication, Navigating transition & fragmented care sectors, Uncertainty/Psychosocial burden, Disrupted biography and Vocational goals**

# Thrombosis and Cancer

## Anticoagulants – Bleeding and EMA Pharmacovigilance

**Elalamy I *et al.*** - MASCC® 2021 - Long-Term VTE-Related Complications in Cancer Patients

## Prognostic relevance of PE at diagnosis

**Muñoz Guglielmetti D *et al.*** - MASCC® 2021 - Long-Term VTE-Related Complications in Cancer Patients

## PrediCAre : Identifying the risk of thromboembolic recurrence

**Scotté F. *et al.*** - MASCC® 2021 - Long-Term VTE-Related Complications in Cancer Patients

# Anticoagulants – Bleeding and EMA Pharmacovigilance: Comparison of anticoagulant toxicities

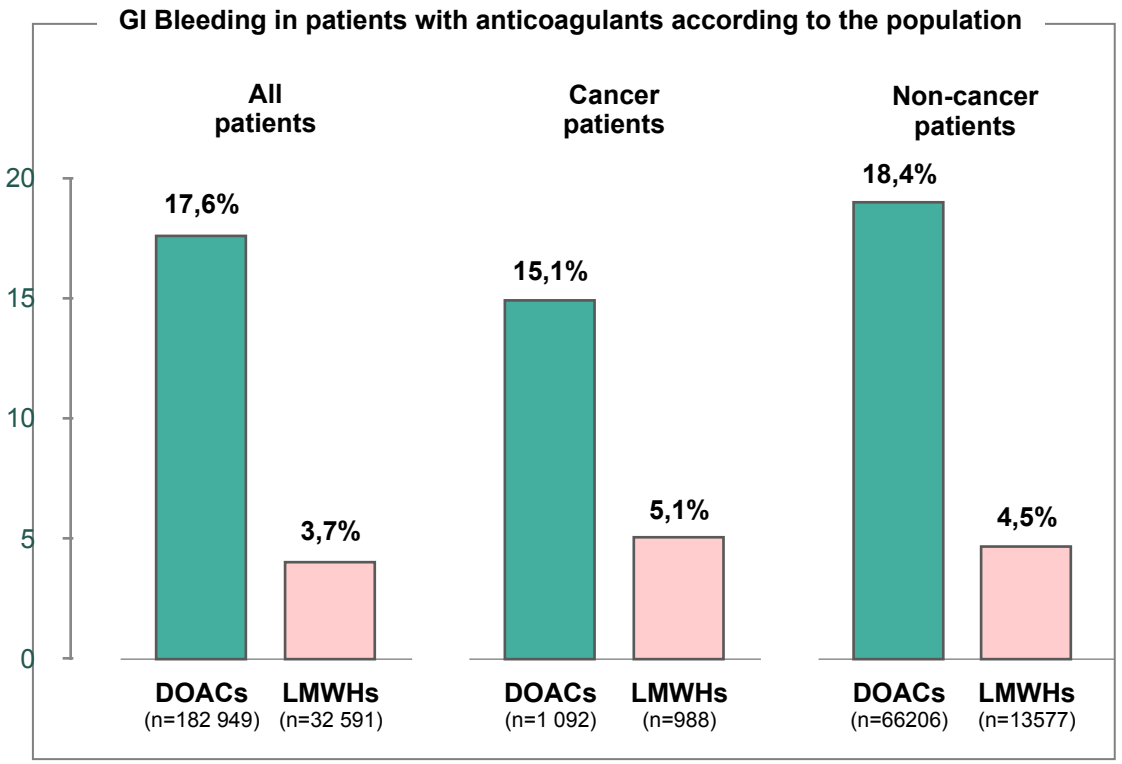
*Elalamy I.* et al. - *MASCC® 2021 - Parallel Session: Long-Term VTE-Related Complications in Cancer Patients Oral Proffered Paper 2*

# Anticoagulants – Bleedings EMA's Pharmacovigilance

## DOACs *vs* LMWHs comparison in all anticoagulation indications (venous and arterial)

- 216 540 cases (2080 cancer patients, 79783 non-cancer - and 134677 unknown status)
- VKA not included
- Cancer patients = patients under anticancer drug
- No data differences between major bleedings and clinically relevant non major bleedings
- No gender influence on bleedings
- LMWHs = 32591 cases
- DOACs = 183949 cases
- GI bleedings common in both cancer (10.3%) and non cancer patients (16.0%) under anticoagulation

# Anticoagulants – Bleedings EMA's Pharmacovigilance




## GI Bleedings in patients with anticoagulants

| | All Patients | | Cancer Patients | | Non-Cancer Patients | |
|---|---|---|---|---|---|---|
| | **DOAC** N=183949 | **LMWHs** N=32591 | **DOAC** N=1092 | **LMWHs** N=988 | **DOAC** N=66206 | **LMWHs** N=13577 |
| **GI Bleedings** | 32411 (17.6%) | 1199 (3.7%) | 165 (15.1%) | 50 (5.1%) | 12197 (18.4%) | 606 (4.5%) |
| **Upper GI Bleedings** | 3959 (2.2%) | 152 (0.5%) | 19 (1.7%) | 14 (1.4%) | 1918 (2.9%) | 84 (0.6%) |
| **Lower GI Bleedings** | 2798 (1.5%) | 61 (0.2%) | 20 (1.8%) | 2 (0.2%) | 1335 (2.0%) | 28 (0.2%) |

**HBPMs seems less harming for GI bleedings than DOACs**

# Assess the prognostic relevance of the "situation" at the time of PE diagnosis.

*Muñoz Guglielmetti* D.et al. - *MASCC® 2021 –Parallel Session: Long-Term VTE-Related Complications in Cancer Patients Oral Proffered Paper 4*

# Assess the Prognostic relevance of the "Setting" at PE Diagnosis

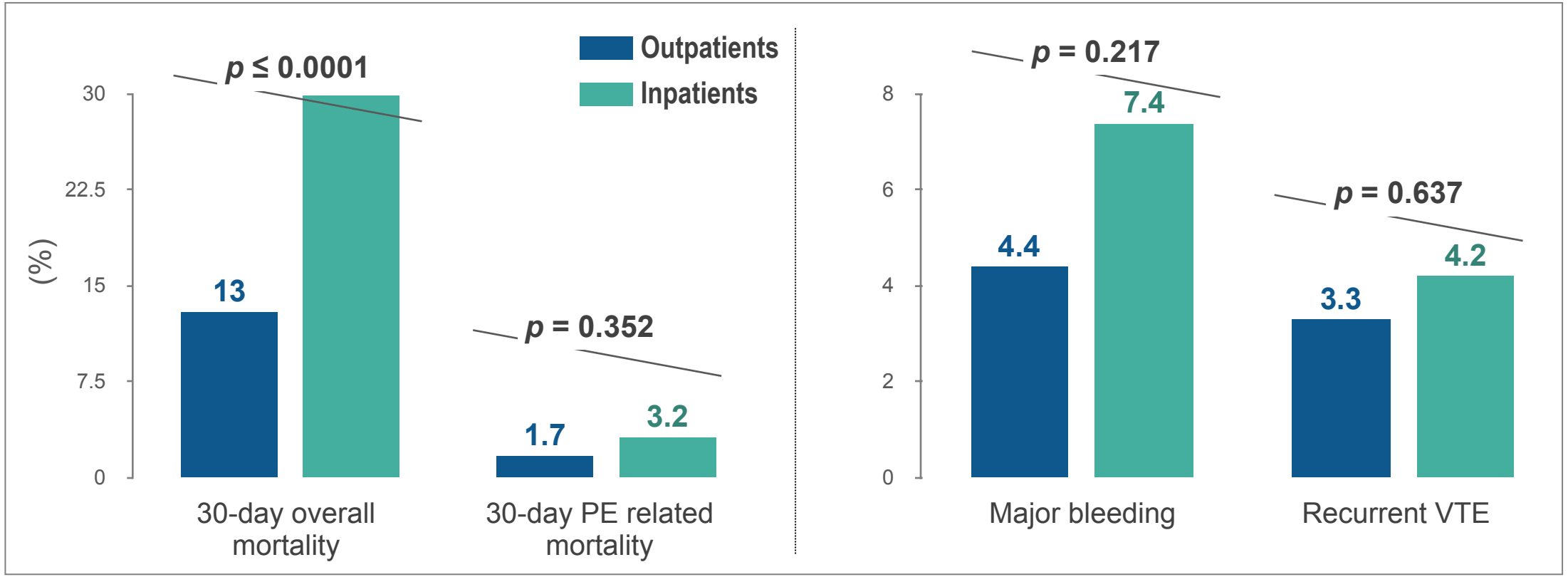
- 617 patients **85%** (522) outpatients *vs* **15%** (95) inpatients

| | Outpatients | Inpatients | *p* value |
|---|---|---|---|
| Classification of PE | | | **0.005** |
| Acute symptomatic | **43.5%** | **58.9%** | |
| Unsuspected | **56.5%** | **41.1%** | |
| SBP < 100 mmHg | **7.1%** | **11.6%** | **0.133** |
| HR > 100 bpm | **23%** | **33.7%** | **0.026** |
| Sp02 < 95% | **28.9%** | **55.8%** | **< 0.005** |
| Concomitant VTE | **19.5%** | **22.1%** | **0.541** |

| | Outpatients | Inpatients | *p* value |
|---|---|---|---|
| Age | **66 (19-91)** | **64 (40-87)** | **0.593** |
| Male | **61%** | **65.3%** | **0.423** |
| ECOG ≥2 | **13.8%** | **43.2%** | **<0.005** |
| Cardiac failure | **9%** | **10.5%** | **0.637** |
| COPD | **22.6%** | **30.5%** | **0.096** |
| Previous VTE | **13.4%** | **10.5%** | **0.442** |
| Chemotherapy | **50.1%** | **32.6%** | **0.002** |
| Primary Tumor | | | **0.180** |

**HBPMs seems less harming for GI bleedings than DOACs**

# Assess the Prognostic relevance of the "Setting" at PE Diagnosis




**Risk Assessment Models should consider unsuspected pulmonary embolism**

# PrediCAre : Identifying the risk of thromboembolic recurrence

*Scotté F.* et al. - *MASCC® 2021 - Parallel Session: Long-Term VTE-Related Complications in Cancer Patients*

# PREDICARE : Identification of recurrent VTE high risk

## Ottawa risk score validation in patients with CAT with curative tinzaparin

- Prospective, observational, multicenter, national (French) cohort study NCT03099031
- Follow-up visits or medical contact at 3- and 6-months post-inclusion
- Primary outcome measure: Incidence of recurrent VTE during 6-months follow-up
- Secondary objectives:  Incidences of major bleeding, HIT and deaths
- Target C-statistic value ≥ 0.70 (and lower limit of 95%CI ≥ 0.65) to externally confirm the predictive value of the Ottawa score

CAT = Cancer-Associated Thromboembolism
HIT= Heparin Induced Thrombocytopenia

# PREDICARE : Identification of recurrent VTE high risk

- 409 Cancer patients enrolled / 104 without 3 months follow-up (deaths)

| Variable | Points |
|---|---|
| Female | **1** |
| Lung cancer | **1** |
| Breast cancer | **-1** |
| TNM stage I | **-2 (-1*)** |
| Previous VTE | **1** |

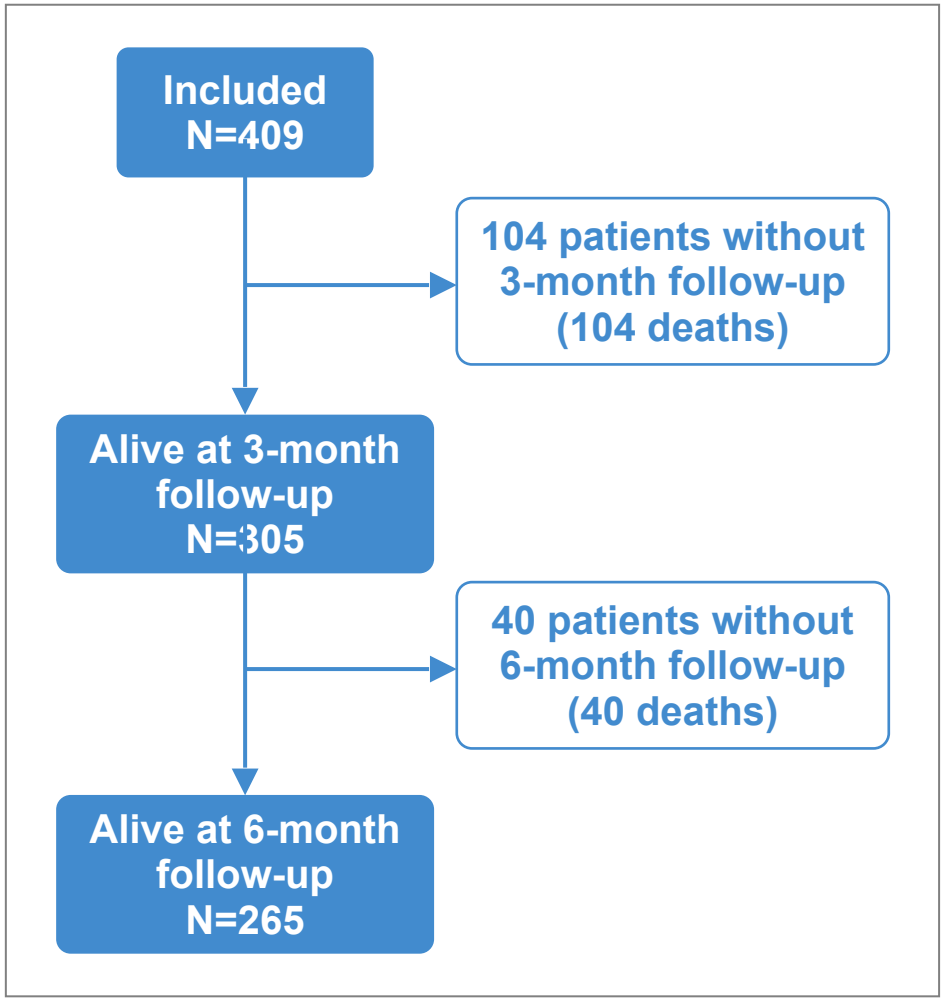
| Original Score | Recurrent VTE Risk |
|---|---|
| Low (≤0) | **4,5%** |
| High (≥1) | **19,7%** |
| **Modified Score*** | |
| Low (≤-1) | **5,1%** |
| Intermediate (0) | **9,9%** |
| High (≥1) | **15,8%** |

* Modified score; hematological malignancy: 0 points

*Louzada et al., Circulation 2012, 26:448-454*

# Results

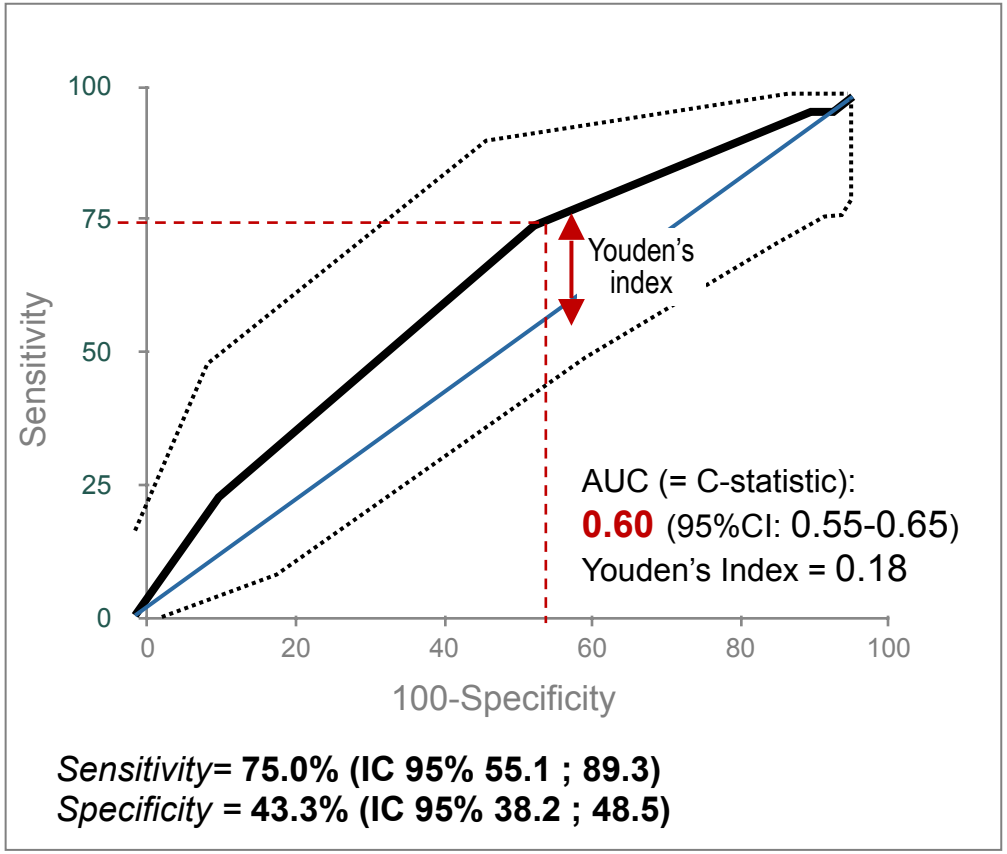
| Main clinical characteristics of patients (cont.) | | |
|---|---|---|
| Qualifying VTE event | PE (with or without DVT) | **247 (60.4%)** |
| | Isolated DVT | **162 (39.6%)** |
| Isolated distal DVT | | **68 (16.6%)** |
| Proximal DVT with or without distal DVT | | **94 (23.0%)** |
| Symptomatic VTE | | **271 (66.3%)** |
| Ottawa score | Low (≤0) | **168 (42%)** |
| | High (≥1) | **232 (58.2%)** |
| Modified Ottawa score | Low (≤-1) | **33 (8.3%)** |
| | Intermediate (=0) | **148 (37.0%)** |
| | High (≥1) | **219 (54.8%)** |



# Results

| Recurrent VTE at 6 months | | |
|---|---|---|
| **Total** (cumulated incidence) | PE (with or without DVT) | **28 (7.3%)*** |
| Fatal PE | | **15** |
| Isolated DVT | | **5** |
| Isolated distal DVT | | **13** |
| Proximal DVT with or without distal DVT | | **4** |
| Symptomatic VTE | | **11** |
| **Ottawa score** | Low (≤0) | **4.2% (1.7-8.4)*** |
| | High (≥1) | **9.1% (6.1-13.6)*** |
| **Modified Ottawa score** | Low (≤1) | **8.9% (2.9-27.4)*** |
| | Intermediate (=0) | **4.4% (1.8-11.2)*** |
| | High (≥1) | **9.2% (6.0-14.1)*** |

Primary Objective AUC > 0.7 unreached




*Sensitivity*= **75.0% (IC 95% 55.1 ; 89.3)**
*Specificity* = **43.3% (IC 95% 38.2 ; 48.5)**

**HBPMs seems less harming for GI bleedings than DOACs**

# Pain / Palliative Care / End of Life

## Ethical dilemma at the end of life

**Tuca A.*et al*.** - MASCC® 2021 - Parallel Session: Making Ends Meet: Ethics of Care at Opposite Ends of the Spectrum Oral Proffered Paper 1

## Causes of death of cured cancer patients

**Koczwara B.*et al.*** - MASCC® 2021 - Parallel Session: President Pick's, Oral Proffered Paper 6

## Levorphanol as a Second Line Opioid

**Reddy A. *et al.*** - MASCC® 2021 - Parallel Session: President Pick's, Oral Proffered Paper 2

# Prevalence of ethical dilemmas in the end-of life process of advancer cancer patients

*Tuca et al. - MASCC® 2021 – OPP1 - Parallel Session: Making Ends Meet: Ethics of Care at Opposite Ends of the Spectrum*

# Ethical dilemmas: conflict in decision including the need to choose between morally acceptable opposing options

## A cross sectional, multicenter study

- **Principal Outcome :** prevalence of ethical dilemmas

**Eligible advanced cancer patients with expected survival ≤ 6 months (N=324)**

| | |
|---|---|
| Hospital | **181 (55.8%)** |
| Palliative Care Home Teams | **71 (22.9%)** |
| Medium-long-term stay units | **44 (13.6%)** |
| Primary Care | **8 (8.6%)** |

| | |
|---|---|
| N without ethical dilemma | **234 (72.2%)** |
| **N with ≥ 1 ethical dilemma** | **90 (27.8%)** |

# Ethical dilemmas: conflict in decision including the need to choose between morally acceptable opposing options

## A cross sectional, multicenter study

| Prevalence of ethical dilemmas by categories | N | % | p |
|---|---|---|---|
| ≥ 1 ethical dilemma | **90** | **27.8%** | |
| Number of ethical dilemma | **117** | **mean 1.3/patient** | |
| **By patient characteristics** | **N** | **%** | **p** |
| Male | **67** | **66.7%** | **<0.002** |
| Chemotherapy | **55** | **61.1%** | **<0.035** |
| Psychological distress | **66** | **73.3%** | **<0.001** |
| Functional impairment | **53** | **59.9%** | **0.091** |

# Ethical dilemmas: conflict in decision including the need to choose between morally acceptable opposing options

## A cross sectional, multicenter study

| Prevalence of ethical dilemmas by categories | N | % |
|---|---|---|
| Conflict associated to information | **51** | **15.7** |
| Therapeutic proportionality, discrepancies | **54** | **16.7** |
| • **Within the family** | **26** | **8.0** |
| • **Between health team and patient or family** | **14** | **4.3** |
| • **Within care team** | **12** | **3.7** |
| • **Respect with withdrawall life-support** | **2** | **0.6** |
| Conflicts associated with expected outcome of clinical trails | **8** | **2.5** |
| Request of euthanasia or medical assisted suicide | **4** | **1.2** |

# **What do Cancer Survivors Die of :** An Australian Population-based Study of Patters of Late Mortality after Cancer.

*Koczwara B. et al. - MASCC® 2021 - OPP 6 - Parallel Session: President's Pick*

# Survivors causes of Death

## South Australian Cancer Registry Data

| Cause of death | Freq | % |
|---|---|---|
| **Overall** | | |
| Ischemic heart disease | **2393** | **15.7** |
| Malignant neoplasm of prostate | **1424** | **9.3** |
| Cerebrovascular disease | **1175** | **7.7** |
| Malignant neoplasm of breast | **1118** | **7.3** |
| Malignant neoplasm of lymphoid, hematopoietic and related tissue | **1078** | **7.07** |
| **Females** | | |
| Malignant neoplasm of breast | **1112** | **17.1** |
| Ischemic heart disease | **940** | **14.5** |
| Cerebrovascular disease | **546** | **8.4** |
| Dementia and Alzheimer disease | **466** | **7.2** |
| Malignant neoplasm of lymphoid, hematopoietic and related tissue | **463** | **7.1** |
| **Males** | | |
| Ischemic heart disease | **1453** | **16.6** |
| Malignant neoplasm of prostate | **1424** | **16.3** |
| Cerebrovascular disease | **629** | **7.2** |
| Malignant neoplasm of lymphoid, hematopoietic and related tissue | **615** | **7.0** |
| Malignant neoplasm of trachea, bronchus and lung | **519** | **5.9** |

# SMRs vary by sex, age at diagnosis and cancer type

## CVD major cause of competing mortality with higher than expected SMR

| Variable | Overall | Cardiovascular disease |
|---|---|---|
| overall | **1.24** | **1.42** |
| sex : male | **1.34** | **1.69** |
| female | **1.11** | **1.17** |
| age at diagnosis (years) | | |
| 0-14 | **16.14** | **-** |
| 15-40 | **5.59** | **61.85** |
| 40-49 | **4.6** | **20.33** |
| 50-59 | **3.48** | **13.12** |
| 60-69 | **2.49** | **4.87** |
| 70-79 | **1.06** | **1.59** |
| ≥80 | **0.48** | **0.57** |
| First cancer site : lung | **2.42** | **3.27** |

**CVD major cause of competing mortality with higher than expected SMR**

CVD= Cardio Vascular disease
SMR= Standardized Mortality Ration

# Levorphanol as a Second Line Opioid in Cancer Patients Presenting to an Outpatient Supportive Care Center: An Open-Label Study

*Reddy A. - MASCC® 2021 - President Pick's, Oral Proffered Paper 2*

# Levorphanol : a new option for opioid rotation ?

## Pharmacology

- « Old drug » approved in US in the 1950s
  - Agonist of opioid receptors mu, kappa and delta
  - NMDA receptor antagonist
  - Serotonin reuptake inhibitor

- Can be used orally, IV and sub-cutaneously
  - Short onset of action PO (30 minutes)
  - Half-life 11 to 16 h, steady state in 3 days

- 6 to 8 times more powerful than morphine

# Levorphanol : a new option for opioid rotation ?

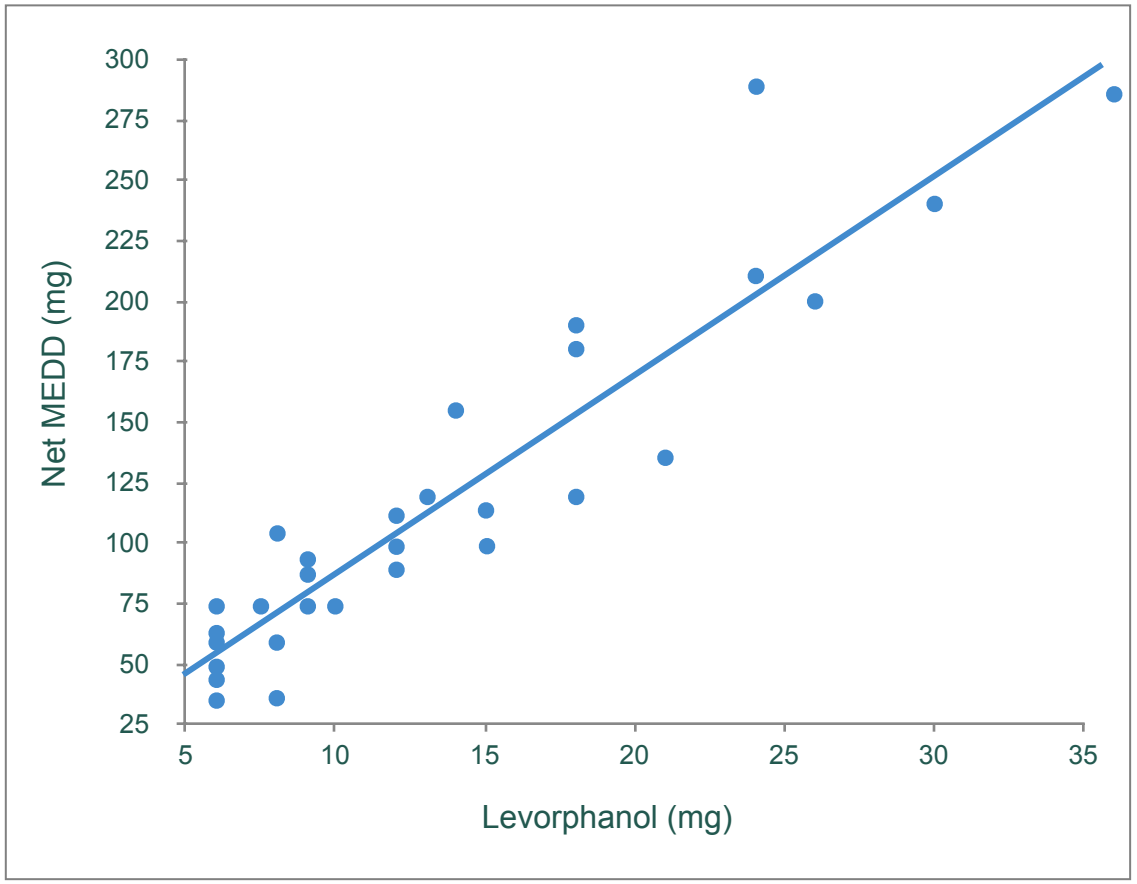
## Pilot study: assess feasibility and define opioid rotation ratio

- 40 patients, adults, already treated by strong opioid
  - Ambulatory patients, follow-up by phone.
- Levorphanol was given orally /8h ATC
  - Initial ratio morphine equivalent daily dose (MEDD)/10
  - Breakthrough pain also treated by Levorphanol.
- Rotation was possible for 33 patients
  - Tolerance was good
- Opioid rotation ratio of 8.5.

# Levorphanol: a new option for opioid rotation?

- There is a strong correlation between MEDD (Morphine Equivalent Daily dose) and daily dose of Levorphanol

- Levorphanol could be an option for opioid rotation
  - Confirmation by prospective randomized trials is required
  - Should be tested in neuropathic pain, according to pharmacological profile




Linear Regression of daily Levorphanol Dose according to MEDD

# Nausea and Vomiting

## Olanzapine vs Metoclopramide and refractory CINV in paediatrics

**Vishwajeeth P*et al.*** - MASCC® 2021 - Parallel Session: Making Ends Meet: Ethics of Care at Opposite Ends of the Spectrum Oral Proffered Paper 1

## The importance of recommendations

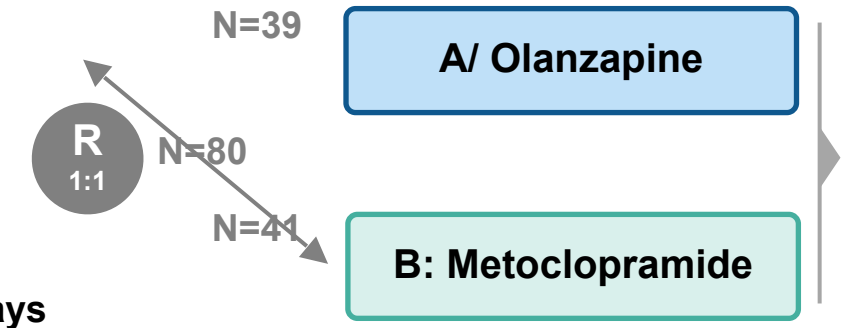
**Koczwara B.*et al.*** - MASCC® 2021 - Parallel Session Fake news and real news Oral Proffered Paper 2

# Chemotherapy Induced Nausea and Vomiting:

*Vishwajeeth P.* et al. - *MASCC® 2021 - Parallel Session Fake news and real news Oral Proffered Paper 2*

# Olanzapine vs Metoclopramide in pediatric breakthrough CINV

**Phase 3 open label**
**Child 5 – 18 years old**
**HEC or MEC**
**Primary prophylaxis NK1A + Setron + Steroids**
**Breakthrough ≥ 1 emesis after antiemetics within 7 days**




**Primary Endpoint:**

CR for vomiting in the first 72h after olanzapine or metoclopramide.

Secondary Endpoints:

Nausea (ESAS),
safety (NCI CTCAE V4.03)

## Drug doses

Olanzapine:
- 10-20 kg: 2.5 mg OD po
- > 20 kg: 5 mg OD po

Metoclopramide:
- 10-35 kg: 0.15mg/kg/dose Q8h po
- > 35 kg/ 14 ys: 10 mg Q8h po

## Grade of Vomiting

| Grade | Severity of vomiting |
|---|---|
| 0 | No vomiting |
| 1 | 1-2 episodes in 24h |
| 2 | 3-5 episodes in 24h |
| 3 | ≥ 6 episodes in 24h, tube feeding, hospitalization |
| 4 | Life threatening consequences, urgent intervention |

*CINV= Chemotherapy Induced Nausea and Vomiting*
*HEC= high emetogenic chemotherapy*
*MEC= Moderate emetogenic chemotherapy*
*OD= Once Daily*
*CR= Complete Response*

# Olanzapine vs Metoclopramide in pediatric breakthrough CINV

## CR for vomiting

| | Olanzapine | Metoclopramide | *P-value* |
|---|---|---|---|
| 0 = CR | **28 (71.8%)** | **16 (38.2%)** | **0.003** |
| Grade 1 | **9 (23%)** | **15 (36.5%)** | |
| Grade 2 | **2 (55.1%)** | **3 (7.3%)** | |
| Grade 3 | **0 (0%)** | **7 (17%)** | |

## CR for nausea

| | Olanzapine | Metoclopramide | *P-value* |
|---|---|---|---|
| 0 = CR | **23 (59%)** | **14 (34.1%)** | **0.022** |
| Grade 1 | **14 (35.8%)** | **24 (58.5%)** | |
| Grade 2 | **2 (5.1%)** | **3 (7.3%)** | |
| Grade 3 | **0 (0%)** | **0 (0%)** | |

## Cross over due to grade 3 or 4 vomiting

| Cross ovefr rates | Olanzapine | Metoclopramide | *P-value* |
|---|---|---|---|
| YES | **0 (0%)** | **7 (17%)** | **0.003** |
| NO | **39 (100%)** | **34 (83%)** | |

**Safety** :
- Drowsiness Olanzapine > p=0.0004

**Olanzapine > Metoclopramide in pediatrics 5 - 18 years**

# Nausea and vomiting: The importance of recommendations

*Aapro M.* et al. - *MASCC® 2021 - Parallel Session*

# Guidelines definition

| Chemotherapy | Acute phase (day 1) | Delayed phase (days 2-5) |
|---|---|---|
| **Non-AC HEC** | 5-$HT_3$ RA + DEX + $NK_1$ RA | DEX or<br>(if APR 125mg for acute:<br>either MCP + DEX or APR + DEX) |
| **AC HEC** | 5-$HT_3$ RA + DEX + $NK_1$ RA | None or<br>(if APR 125mg for acute: DEX or APR) |
| **Carboplatin** | 5-$HT_3$ RA + DEX + $NK_1$ RA | None or<br>(if APR 125mg for acute: APR) |
| **MEC** | 5-$HT_3$ RA + DEX | No routine prophylaxis |

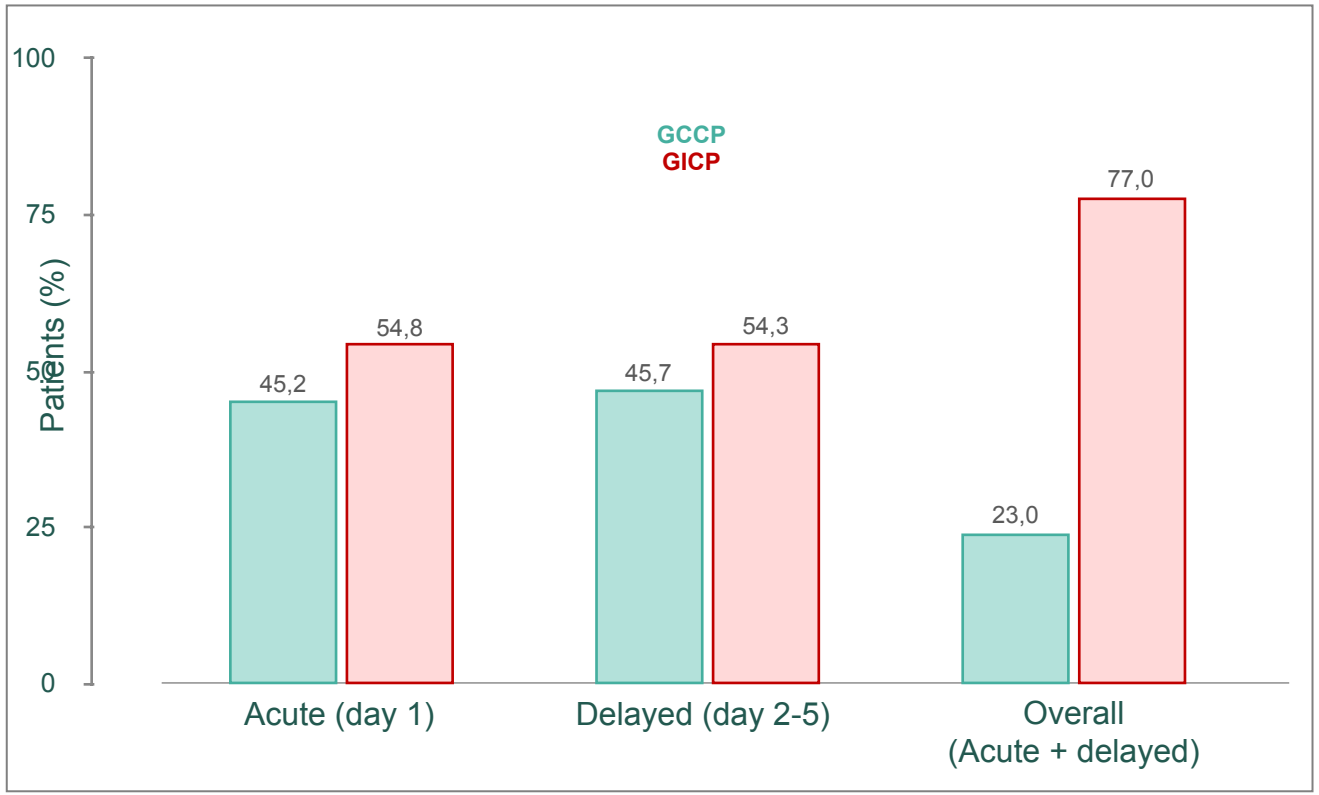
*AC : Anthracycline/cyclophosphamide; HEC : highly emetogenic chemotherapy; MEC : moderately emetogenic chemotherapy;*
*DEX : dexamethasone (=any corticosteroid); APR : aprepitant; MCP : metoclopramide*

# Patient characteristics

| Characteristics | Overall (n=1089) | GCCP (n=251) | GICP (n=838) |
|---|---|---|---|
| **Gender** | | | |
| - Male | 277 (25,4%) | 54 (21,5%) | 223 (26,6%) |
| - Female | 812 (74,6%) | 197 (78,5%) | 615 (73,3%) |
| **Age** (years) | | | |
| - Median (IQR) | 59,1 (48,3-66,7) | 58,4 (47,9-65,1) | 59,3 (48,5-67,3) |
| **ECOG** | | | |
| - 0 | 337 (61,2%) | 157 (62,5%) | 510 (60,9%) |
| - 1 | 407 (37,4%) | 89 (35,5%) | 318 (37,9%) |
| - 2 | 15 (1,4%) | 5 (2,0%) | 10 (1,2%) |
| **Primary cancer diagnosis** (>5%) | | | |
| - Breast | 502 (46,1%) | 122 (48,6%) | 380 (45,3%) |
| - Lung | 144 (13,2%) | 45 (17,9%) | 99 (11,8%) |
| - Colorectal | 90 (8,3%) | 25 (10,0%) | 65 (7,8%) |
| - Ovarian | 87 (8,0%) | 17 (6,8%) | 70 (8,4%) |
| - Urogenital | 73 (6,7%) | 11 (4,4%) | 62 (7,4%) |
| - Hematological | 67 (6,2%) | 7 (2,8%) | 60 (7,2%) |
| - Gastrointestinal tract | 68 (6,2%) | 16 (6,4%) | 52 (6,2%) |
| **Prior chemotherapy** | | | |
| - Naive | 531 (48,8%) | 128 (51,0%) | 403 (18,1%) |
| - Non-naive | 558 (51,2%) | 123 (49,0%) | 435 (51,9%) |

*GCCP : guideline-consistent CINV prophylaxis; GICP : guidelin-inconsistent CINV prophylaxis; IQR :interquartile range*

# Percentage of all patients receiving GCCP vs GICP




*GCCP : guideline-consistent CINV prophylaxis; GICP : guideline-inconsistent CINV prophylaxis*

# Complete Response (No emesis/No rescue use) rates by guidelines consistency

| | Proportion of patients who received : | | Overall (0-120h) cycle 1 Complete response rate | |
|---|---|---|---|---|
| | GCCP | GICP | GCCP | GICP |
| All patients (n=1089) | 251/1089 (23,0%) | 838/1089 (77,0%) | **156/251** (62,2%)* | **441/838** (52,6%) |
| HEC : Non-AC +AC (n=708) | 166/708 (23,4%) | 542/708 (76,6%) | **100/166** (60,2%)* | **259/542** (47,8%) |
| MEC (n=189) | 61/189 (32,3%) | 128/189 (67,7%) | **45/61** (73,8%)* | **74/128** (57,8%) |

**Statistically signicicant difference (p<0,05, chi-square test) between GCCP vs GICP group*
*AC : Anthracycline/cyclophosphamide; HEC : highly emetogenic chemotherapy; MEC : moderately emetogenic chemotherapy*
*GCCP : guideline-consistent CINV prophylaxis; GICP : guideline-inconsistent CINV prophylaxis; IQR :interquartile range*

# Immune mediated toxicities

## Connectivitis with skin involvement associated with IT

**Bui A-T.*et al*.** - MASCC® 2021 - Parallel Session Challenges in the Management of Patients Undergoing Immunotherapy Oral Proffered Paper 2

## Using PROs to diagnose adverse effects

**Pappot H. *et al.*** - MASCC® 2021 - Parallel Session: Challenges in the Management of Patients Undergoing Immunotherapy, Oral Proffered Paper 1

## Multidisciplinary approach to endocrine toxicities

**Sbrana A. *et al.*** - MASCC® 2021 - Parallel Session Endocrine and Menopausal Symptom Management

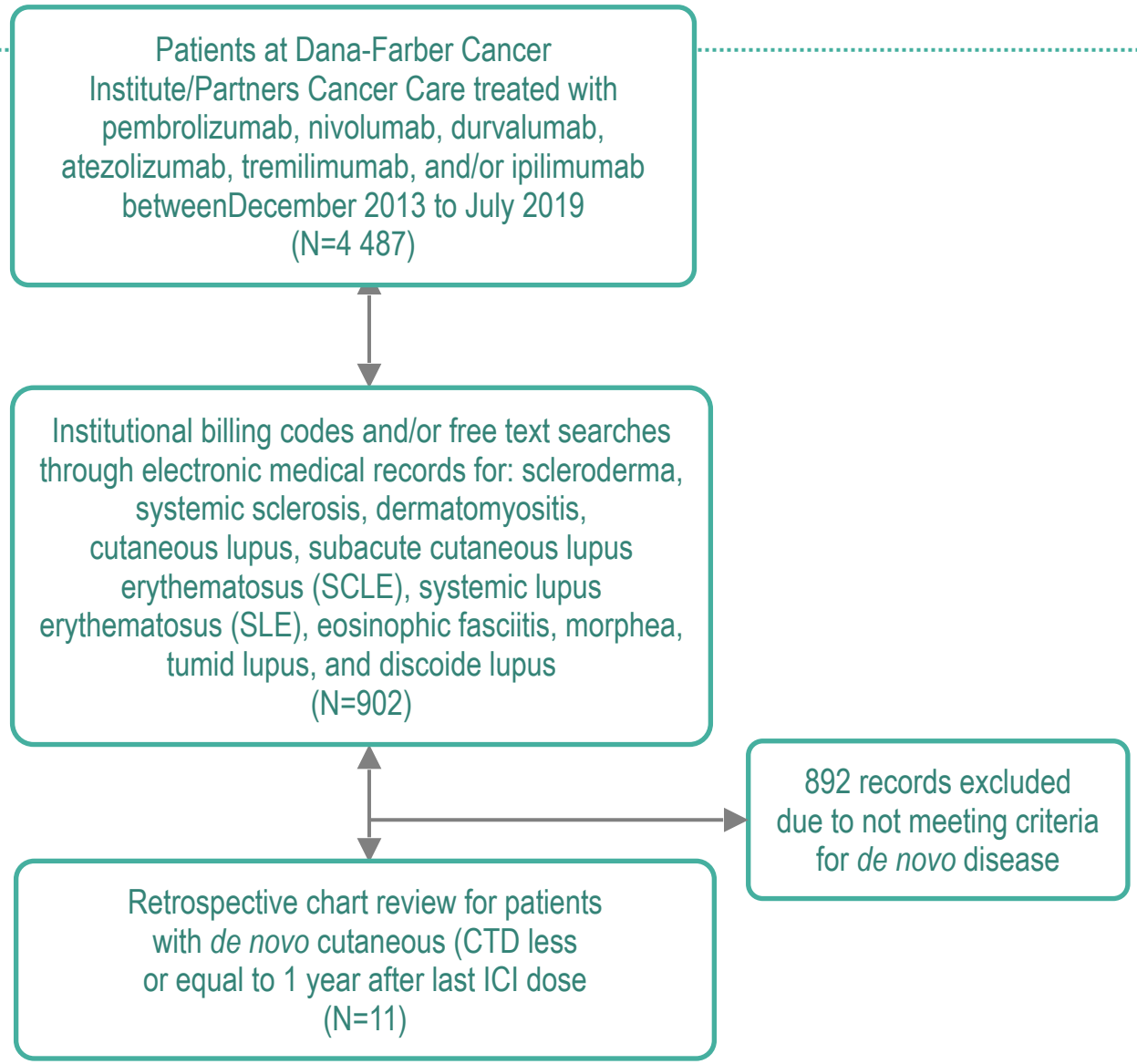
# Cutaneous Connective Tissue Disease Temporally Associated with Immune Checkpoint Inhibitor Therapy:
## A Retrospective Analysis

*Bui A-T. et al. - MASCC® 2021 – OPP2 – Parallel session*

# Method and design

## A retrospective cohort study

- **Study objectives :**
  to evaluate the frequency of IO-associated *de novo* cutaneous CTD and report clinical features and management
  - Scleroderma
  - Systemic sclerosis
  - Dermatomyositis
  - Cutaneous lupus (acute and chronique)
  - Subacute cutaneous lupus erythematosus
  - Eosinophilic fasciitis
  - Discoide and tumid lupus




CTD : Connective Tissue Disease; IO: Immuno-Oncology therapy

# Results

## A retrospective cohort study

- A total of 4,487 patients received IO between December 2013 and July 2019 in Dana-Farber Cancer Institute and Mass General Brigham
- 11 patients had confirmed IO-associated cutaneous CTD (0.025%)

| Cutaneous CTD | N | Treatments | Skin responses | IO interruption |
|---|---|---|---|---|
| SCLE | **8 (72.7%)** | **Topical corticosteroids, antihistamines, photoprotection and for 3 patients hydroxychloroquine** | **6 PR, 1 CR, 1 N/R** | **For 4 patients temporarily** |
| SLE | **1 (9.1%)** | **Topical corticosteroids, photoprotection** | **N/R** | **Not interrupted by SLE but previously for colitis** |
| EF | **1 (9.1%)** | **Topical corticosteroids, natural UV light, physical therapy** | **PR** | **None** |
| Dermatomyositis | **1 (9.1%)** | **Systemic steroids, topical corticosteroids, topical tacrolimus, hydroxychloroquine** | **PR** | **Permanently** |

CTD : Connective Tissue Disease; IO: Immuno-Oncology therapy ; SCLE : Subacute cutaneous lupus erythematosus ; SLE : Systemic lupus erythematosus ; EF : eosinophilic fasciitis ; PR : partial response ; CR : complete response ; N/R : not reported

# The Use Of Patient-Reported Outcomes To Detect Adverse Events In Metastatic Melanoma Patients Receiving Immunotherapy: A Randomized Controlled Trial

*Pappot H - MASCC® 2021 -Challenges in the Management of Patients Undergoing Immunotherapy, Oral Proffered Paper 1*

# Evaluation of PRO to detect adverse events in patients receiving immunotherapy for melanoma

## Clinical Study

- Value of PRO (patient Reported Outcomes programs) is well established for patients with chemotherapy or targeted therapies

- Specific toxicities with checkpoint inhibitors (anti PD1/PDL1, anti CTLA4)
  - Almost all organs can be involved
  - Non-specific symptoms and presentation
  - Impossible to predict

- Prospective randomized trial
  - 146 patients
    - Immunotherapy in adjuvant or metastatic setting
  - Usual follow-up : physician consultation / 3 weeks
  - Follow-up with PRO: patients report symptoms on tablet once a week, analyses made with physician during consultation / 3weeks

# Evaluation of PRO to detect adverse events in patients receiving immunotherapy for melanoma

## Results:

- No benefit on side effect incidence or severity
- No impact on non-scheduled consultations
- Important reduction of phone calls

**This study does no show a benefit for the use of PRO in patients undergoing immunotherapy for melanoma**

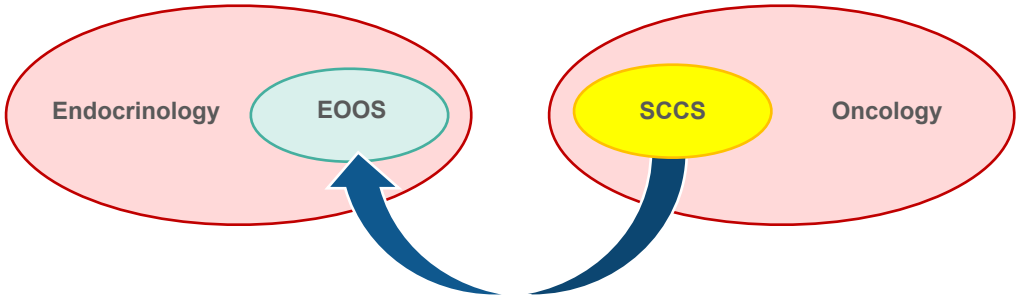
***Maybe the choice of the symptoms reported or their analysis every 3 weeks explain these findings.***

# Multidisciplinary Treatment of Endocrine Toxicities from Targeted Therapy and Immunotherapy : An Integrated Management Model

*Sbrana A. et al. - MASCC® 2021 – OPP1 – Parallel session*

# Multidisciplinary Treatment of Endocrine Toxicities from Targeted Therapy and Immunotherapy

## An Integrated Management Model




| Oncological characteristics | |
|---|---|
| **Primary site of tumor** | **N (%)** |
| Lung cancer | 31 (32,98%) |
| Genitourinary cancers | 27 (28,72%) |
| Melanoma | 18 (19,15%) |
| Other | 18 (19,15%) |
| *All patients were affected by advanced/metastatic disease* | |
| **Line of treatment** | |
| First | 43 (45,74%) |
| Second and later | 51 (54,26%) |
| **Cancer therapy** | |
| ICI | 79 (84,04%) |
| TKI | 15 (15,96%) |

*EOOS : endocrino oncology outpatient service ; SCCS : supportive care in cancer service*

# Multidisciplinary Treatment of Endocrine Toxicities from Targeted Therapy and Immunotherapy

## An Integrated Management Model

- Endocrine toxicities :
  - 51 (54,26%) patients developed any-grade ET

| Endocrine Toxicities | |
|---|---|
| Thyroid disfunction<br>- Hypothyroidism<br>- Hyperthyroidism | 46 (90,2%)<br>44 (86,28%)<br>2 (3,92%) |
| Adrenal insufficiency | 3 (5,88%) |
| Hypophysitis | 2 (3,92%) |
| **Endocrine Severity** | |
| G1-G2 | 44 (86,27%) |
| G3-G4 | 7 (13,73%) |

- Oncology treatment :
  - How we behave ?

| Oncology treatment | |
|---|---|
| Dose reduction | 4 (7,84%) |
| Temporary interruption | 13 (25,49%) |
| **Permanent discontinuation** | **1 (1,96%)** |
| Hormone replacement therapy | 49 (96,08%) |
| Corticosteroids<br>- Oral<br>- Intravenous | 13 (25,49%)<br>9 (17,55%)<br>4 (7,84%) |

*ET : endocrine toxicity*

# COVID-19

## The impact of the Covid-19 pandemic on oncology activity

**Manzano J.*et al.*** - MASCC® 2021 - The Impact of COVID-19 on Supportive Care - Session 1

## Vaccine and antibodies in the prevention of SARS-COV-2

**Verschoor C.. *et al.*** - MASCC® 2021 - ISOO Parallel Session 2

## COVID-19, thrombosis and breast cancer

**Illarramendi J. *et al.*** - MASCC® 2021 - Parallel session The Impact of COVID-19 on Supportive Care - Session 1 Oral Proffered Paper 3

## Mortality in cancerology

**Kuderer N *et al.*** - MASCC® 2021 - Parallel Session The Impact of COVID-19 on Supportive Care - Session 1

# The impact of the Covid-19 pandemic on oncology activity: Italian experience

*Manzano J. et al. - MASCC® 2021 - Parallel Session: The Impact of COVID-19 on Supportive Care - Session 1*

# The impact of COVID-19 pandemic on oncology workload in an Italian reference cancer center

## Results

| | Feb-May 2019 | Feb-May 2020 | Difference |
|---|---|---|---|
| **New patient referrals** | 503 | 474 | -29 (-6%) |
| **First consultations** | 470 | 457 | -13 (-3%) |
| **New therapy assignments** | 777 | 755 | -22 (-3%) |
| **Treatment prescription visits** | 4036 | 3938 | -98 (-2%) |
| **Therapy administrations** | 5884 | 5856 | -28 (0%) |
| **Disease re-assignment visits** | 1158 | 1081 | -77 (-7%) |
| **Follow-up visits** | 1995 | 984 | -1011 (-51%) |
| **Tele-examinations** | 0 | 741 | |
| **Unplanned presentations** | 629 | 479 | -150 (-24%) |

# Hospitalization characteristic

- Mean LOS = 11,2 days (median 6 days, min 0 – max 87)
- ICU events = 24% (Mean LOS=21 days)
- Discharge disposition = 81% discharge home/home with service

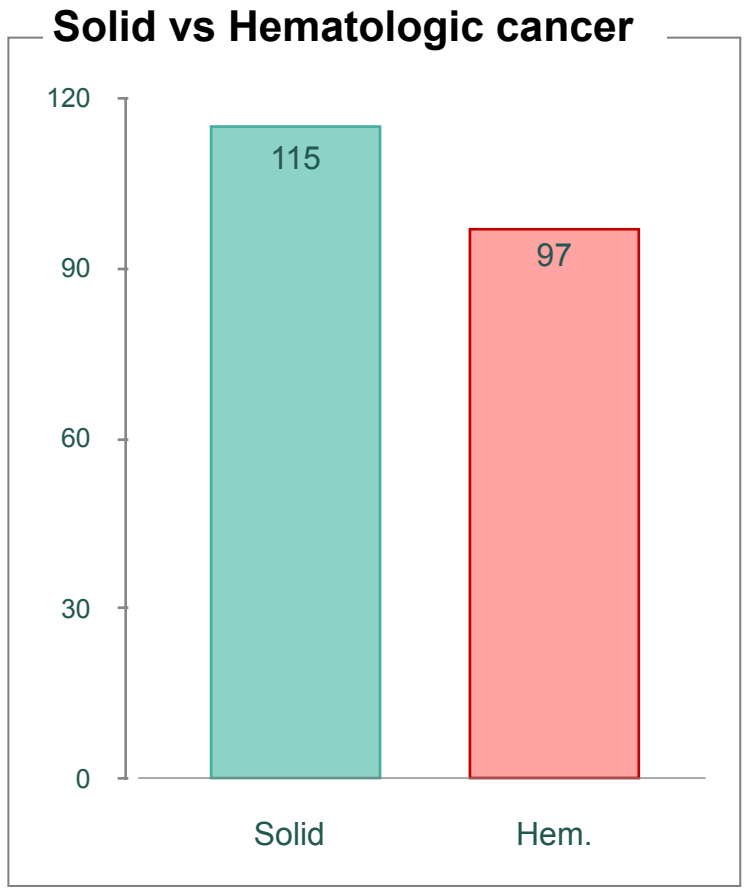
# COVID hospitalization outcomes

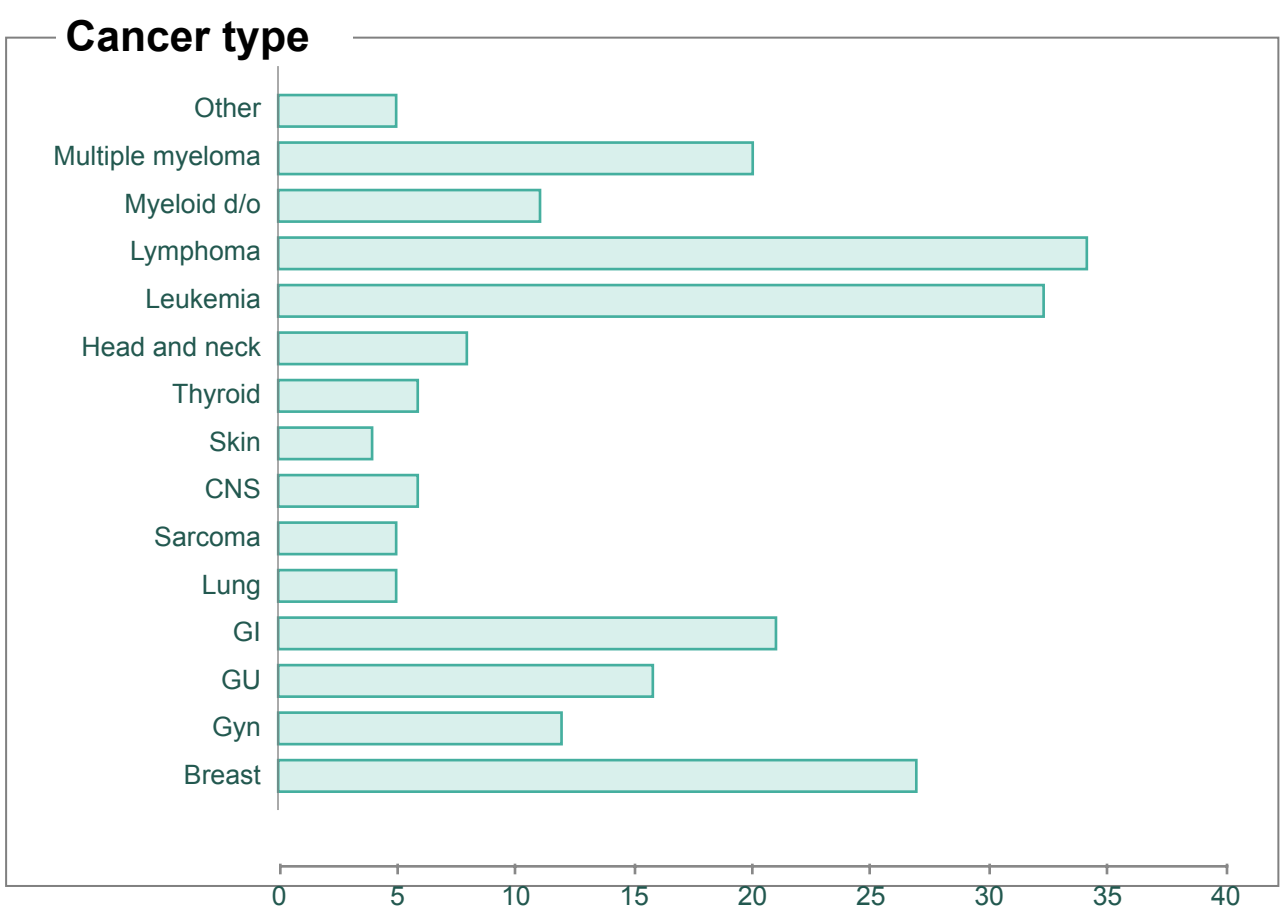
## Severe Disease = 25%

| Highest_02_Device | count |
|---|---|
| High_flow_nasal_cannula | 31 |
| Mechanical_ventilation | 18 |
| Nasal_cannula | 77 |
| NIV | 5 |
| Non-rebreather | 9 |
| None | 69 |
| Venturi mask/simple ... | 3 |
| **Grand total** | **212** |

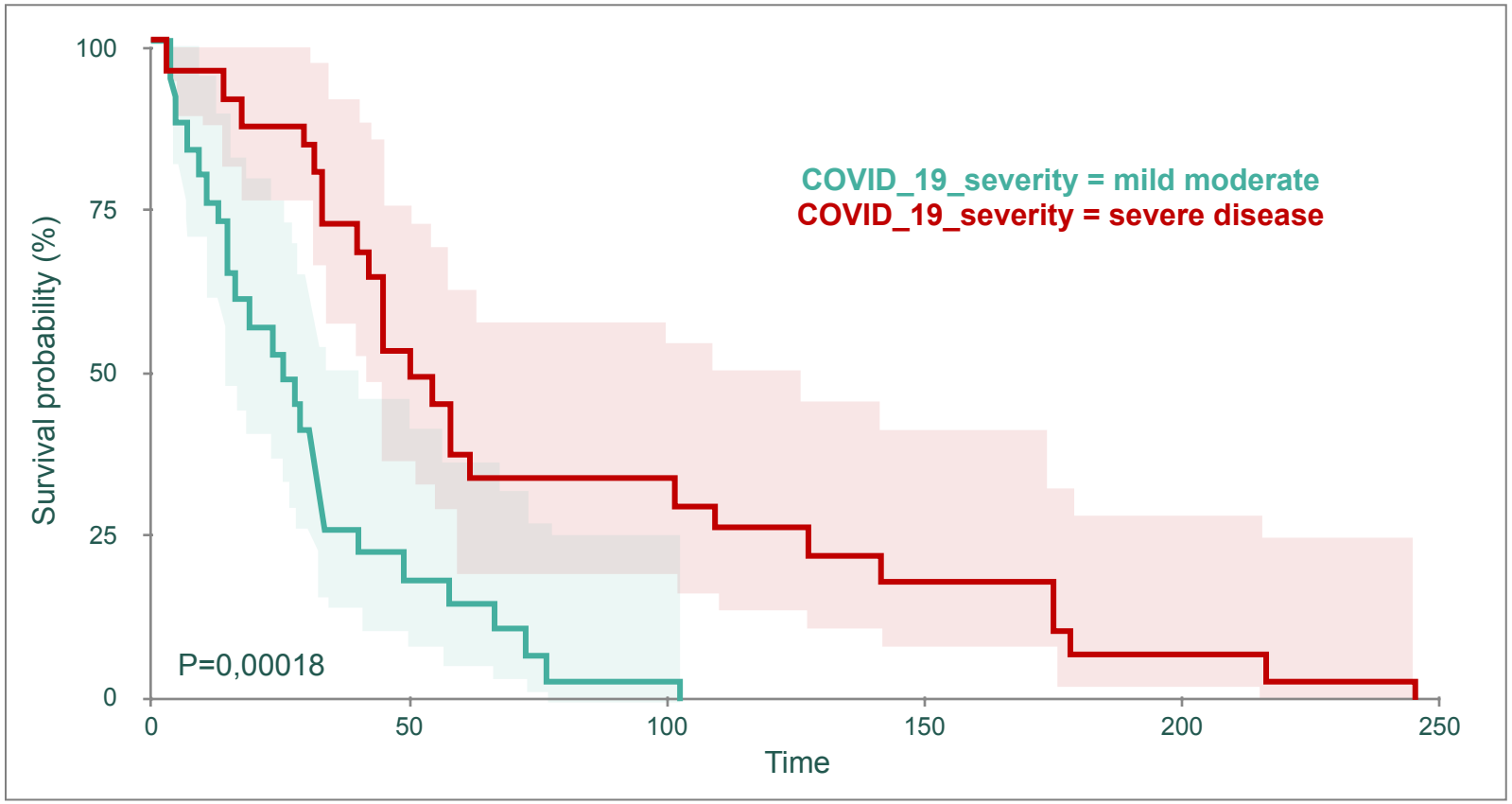
- Mechanically ventilated = 8,5%
- Inpatient Mortality = 10,8%
- 30-Day Mortality = 24,5% (29 deaths 30 days post discharge)
- 30-Day all-cause readmission = 32,8% (of 189 patients discharged alive)

# Population characteristic (n=212)



# Survival curve by COVID-19 severity

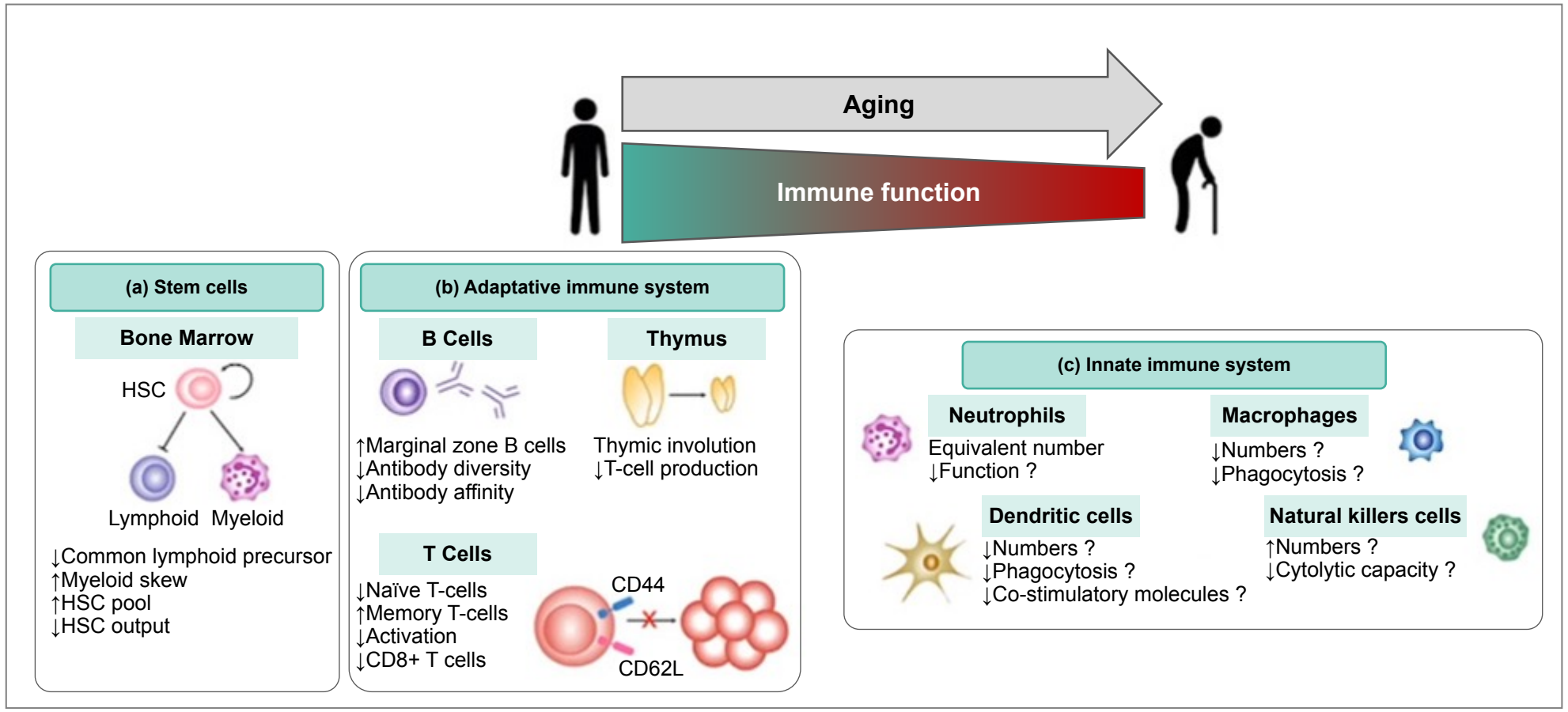


# Vaccine and Antibody Mediated Prevention of SARS-COV-2 Infection and Severe Outcomes :
Importance for Older Adults

*Verschoor C. et al. - MASCC® 2021 - ISOO Parallel Session 2*

# The aging immune system and COVID19

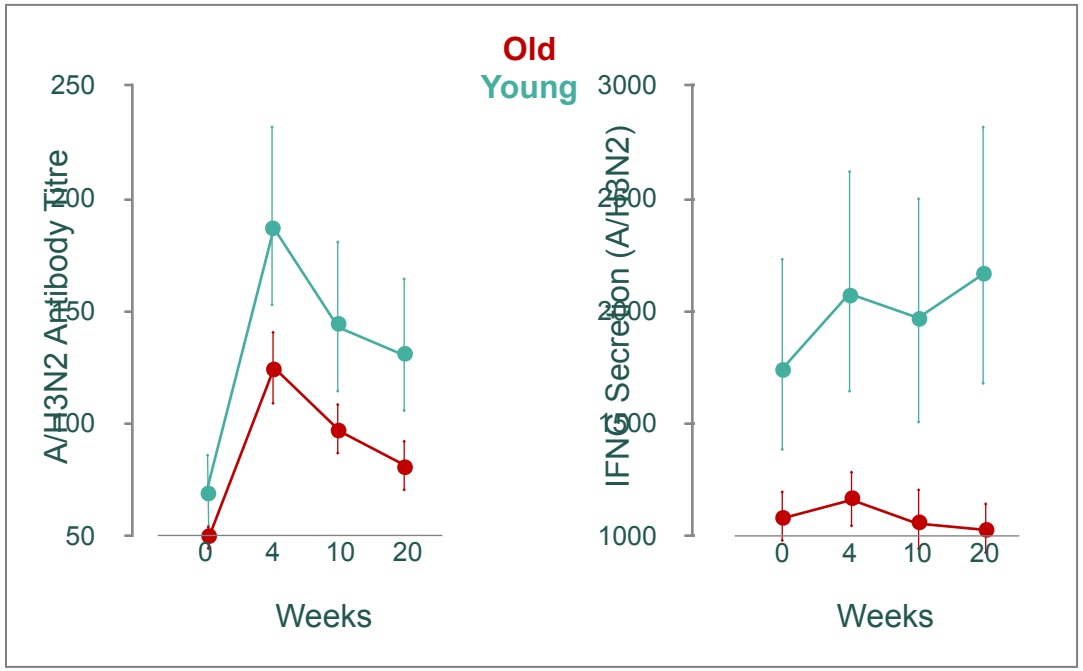
## Why is age associated with severe outcomes ?



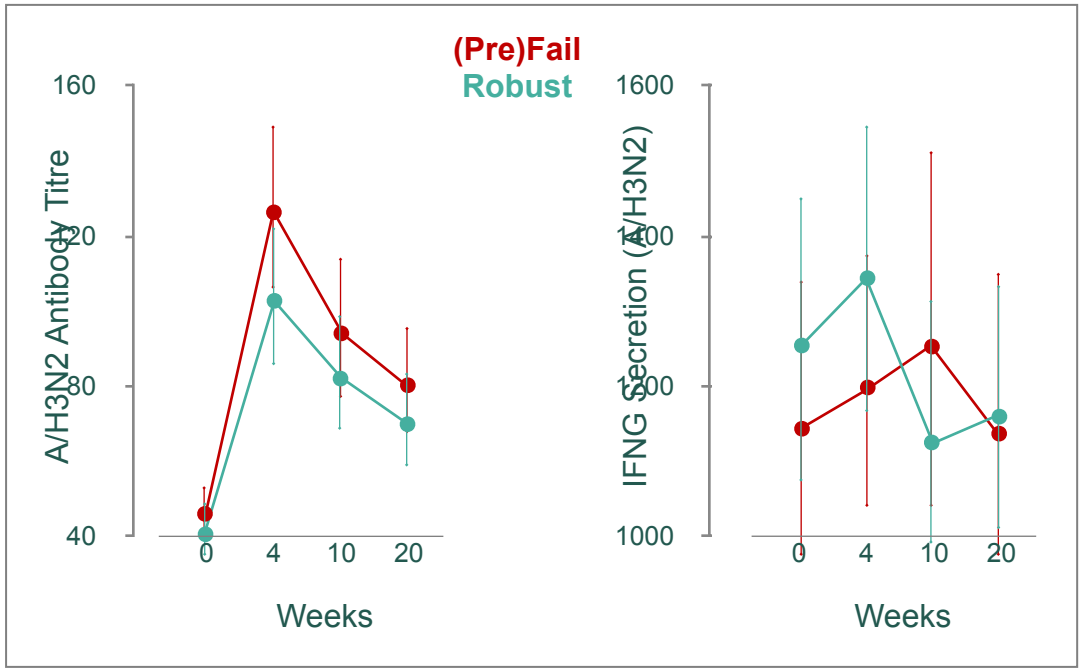
# The aging immune system and COVID19

## Why does frailty impact COVID outcomes ?

- How frailty affects immunity is poorly understood




Antibody and cellular response to vaccination decrease with age

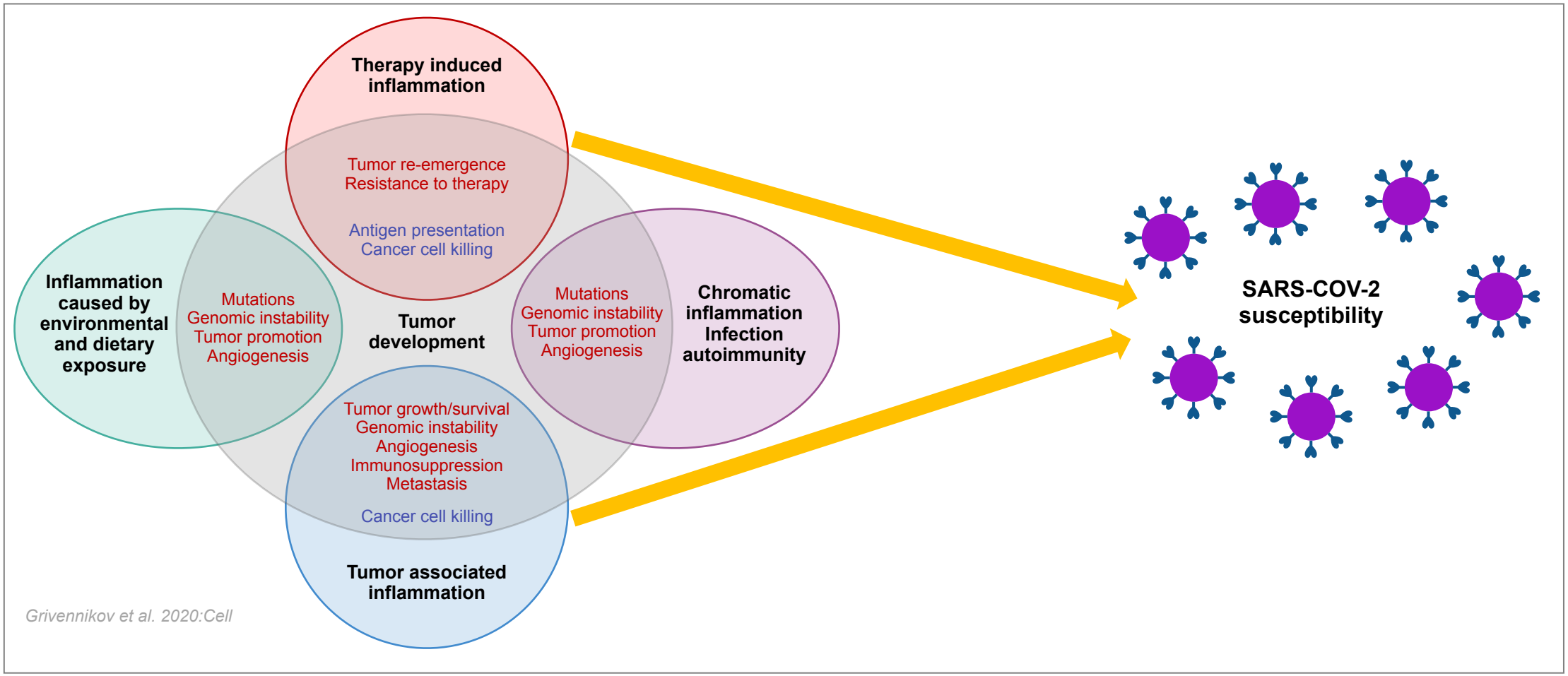



Only cellular response seem to decline with frailty

# The aging immune system and COVID19

## Implications for the treatment and care of cancer patients ?

- Sources of inflammation during cancer care



# Observational Study on Thromboembolic Events During COVID-19 Infection in Patients with Breast Cancer

*Illarramendi J. et al. - MASCC® 2021 – EPP3 – Parallel session*

# Observational Study on Thromboembolic Events During COVID-19 Infection in Patients with Breast Cancer (BC)

## Description of the study population

| Characteristics | n=189 |
|---|---|
| Mean age (Range) | 66 years (34-95) |
| Maintenance anticoagulation before COVID-19 | 18/189 (9,8%) |
| Active systematic anticancer therapy | 62/188 (32,8%) |
| Follow-up surveillance | 114/188 (60,3%) |
| Other treatments or before BC diagnosis | 12/188 (6,3%) |

# Observational Study on Thromboembolic Events During COVID-19 Infection in Patients with Breast Cancer

## Patient outcomes

| Outcomes | N (%) |
|---|---|
| Hospital admission* | 56/188 (29,6) |
| Deaths (lethality)** | 10/188 (5,2) |

**Including patients with at-home hospitalisations and/or hospitalisations in conditioned hotels during the peak of the first wave*
***Deaths during the next 30 days following the diagnosis*

| Deaths | |
|---|---|
| Mean age (range) | 83,9 years ($IC_{95\%}$=76-90) |
| Severe pneumonia | 8 |
| Guillain-Barré syndrome | 1 |
| Aortic dissection | 1 |

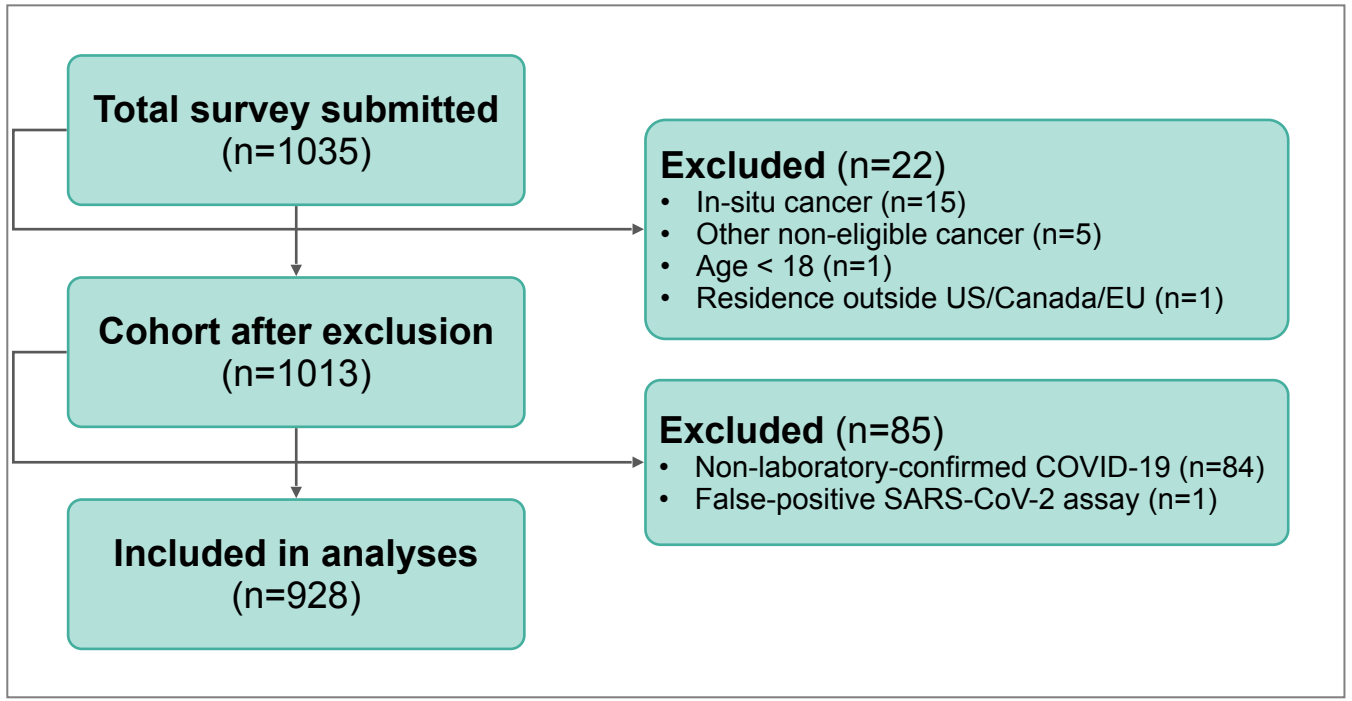
| Thrombo-embolic events (TEE) | N (%) |
|---|---|
| Overall cohort | 5/188 |
| Hospitalised patients* | 5/56 (8,9) |
| Ambulatory patients | 0/132 (0) |
| Pulmonary embolisms | 4/5 cases |
| Acute femoral embolism | 1/5 cases |
| Deep vein thrombosis*** | 0/5 cases |

****Prophylactic anticoagulation was included in the protocol for hospitalized patients*

# Cohort Study of Clinical Impact of COVID-19 on Patients With Cancer

*Kuderer et al. - MASCC® 2021 - Parallel Session*

# Consort diagram



# Clinical Impact of COVID-19

## Select factors associated with 30-days mortality

| Characteristics | pAOR[1] | 95%CI |
|---|---|---|
| Older agen risk per decade | 1,84 | 1,53-2,21 |
| Male sex | 1,63 | 1,07-2,48 |
| Former vs never smoker | 1,60 | 1,03-2,47 |
| ECOG PS 2 vs 0/1 | 3,89 | 2,11-7,18 |
| Cancer present, stable[2] | 1,79 | 1,09-2,95 |
| Cancer present, progressing[3] | 5,20 | 2,77-9,77 |
| HCQ+Azithro vs neither | 2,93 | 1,79-4,79 |

*[1]pAOR : partially adjusted odds ratio; adjusted for age, sex, smoking status, and obesity*
*[2]Versus remission/NED, association is no longer statistically significant in the exploratory elastic net analysis*
*[3]Versus remission/NED*

# Active Comorbidities and 30-Day All-Cause Mortality

| Number of active comorbidities | N | Univariate OR | pAOR[1] | Death (%) |
|---|---|---|---|---|
| 0 | 132 | 1 (ref) | 1 (ref) | 3 (2%) |
| 1 | 202 | 3,12 (0,87-11,19) | 1,87 (0,51-6,85) | 13 (6%) |
| 2 | 231 | 9,52 (2,89-31,40) | 4,50 (1,33-15,28) | 41 (18%) |
| 3 | 117 | 11,54 (3,37-39,53) | 5,04 (1,42-17,93) | 24 (21%) |
| ≥4 | 192 | 8,77 (2,62-29-29) | 3,55 (1,03-12,30) | 31 (16%) |
| Unknown | 23 | 12,33 (2,71-56,01) | 6,77 (1,42-32,33) | 5 (22%) |

*[1]pAOR : partially adjusted odds OR*
**Require active medical intervention*

# Clinical Impact of COVID-19

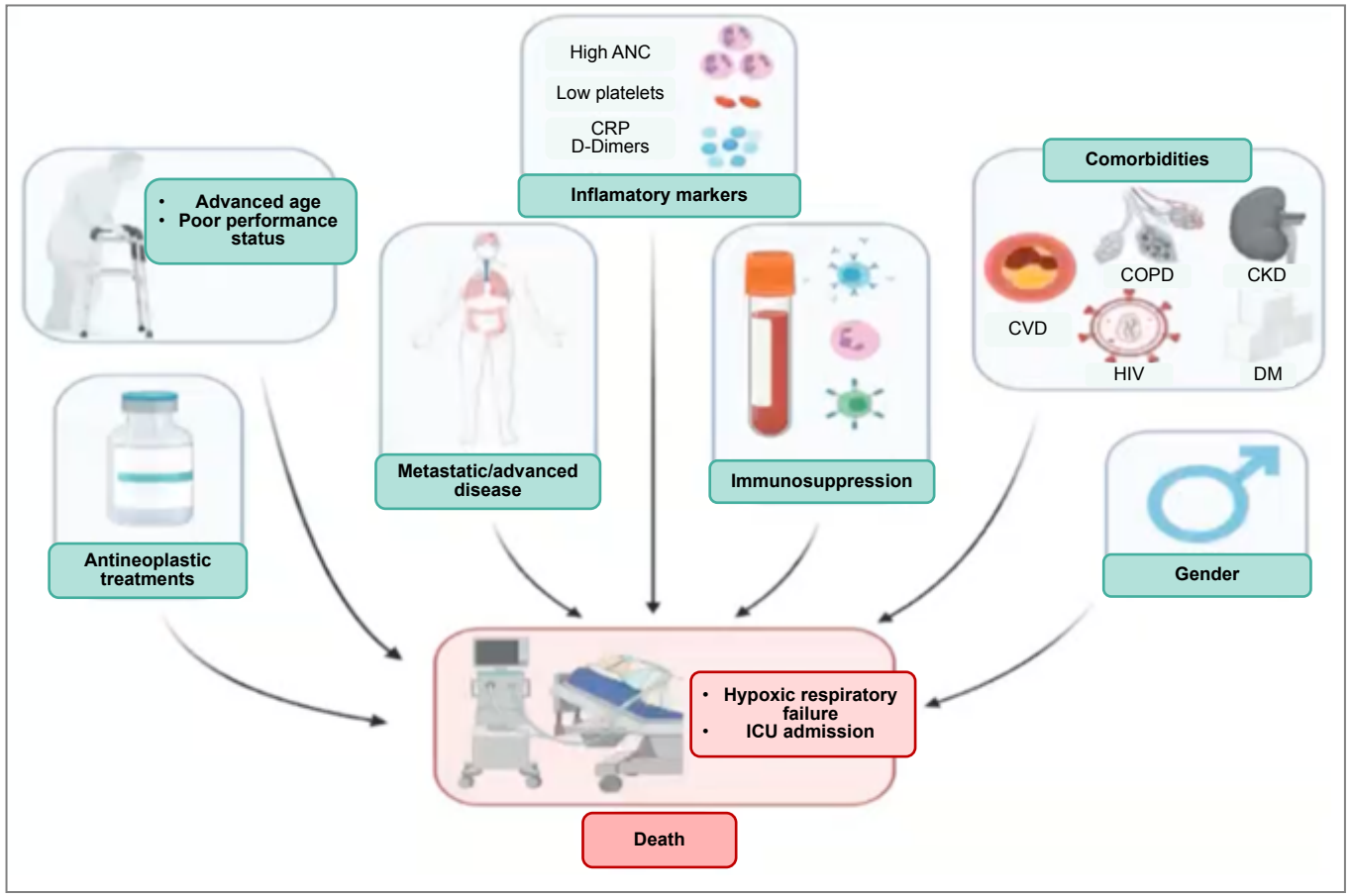
## Rates of complication[1]

| Outcome | Number | % |
|---|---|---|
| Deaths[2] | 121 | 13% |
| Mechanical ventilation | 116 | 12% |
| ICU admission | 132 | 14% |
| **Composite outcome[3]** | **242** | **26%** |
| **O2 requirement** | **405** | **44%** |
| **Hospitalization** | **466** | **50%** |

*[1]Median 21 days of follow-up (IQR 11-41days)*
*[2]30-days all-cause mortality*
*[3]A composite of death, severe illness requiring hospitalization, ICU admission, or mechanical ventilation*

| Mortality key subgroups | Number/total | % |
|---|---|---|
| ECOG PS 0, no comorbidities | 0/86 | 0% |
| Global statistics[1] | 316k/4,74M | 6,6% |
| **Total for CCC19 cohort** | **121/928** | **13%** |
| Male sex | 78/468 | 17% |
| Age 75+ | 70/279 | 25% |
| Cancer present, progressing | 25/102 | 25% |
| ECOG PS 2+ | 42/118 | 36% |
| Age 75+ with intubation | 26/44 | 59% |
| ECOG PS 2+ with intubation | 11/13 | 85% |

# Risk Factors for Mortality in Patients with COVID-19 and Cancer




*Risk factors for adverse outcomes in patients with cancer and COVID-19, CKD, chronic kidney disease; COPD, chronic obstructive pulmonary disease; CVD, cardiovascular disease; DM, diabetes mellitus; HIV, human immunodeficiency virus*

# Oral oncology : ISOO®-MASCC®

## Photobiomodulation Therapy for Oral Mucositis

**Kauark-Fontes E. *et al.*** - MASCC® 2021 - Parallel Session: Mucositis – New Dimensions in Research and Clinical Practice, Oral Proffered paper 3

# **Extraoral Photobiomodulation Therapy for Oral Mucositis in Oral and Oropharyngeal Cancer Patients:** Interim Analysis of a Randomized Clinical Trial

*Kauark-Fontes E, MASCC® 2021, Mucositis – New Dimensions in Research and Clinical Practice, Oral Proffered paper 3*

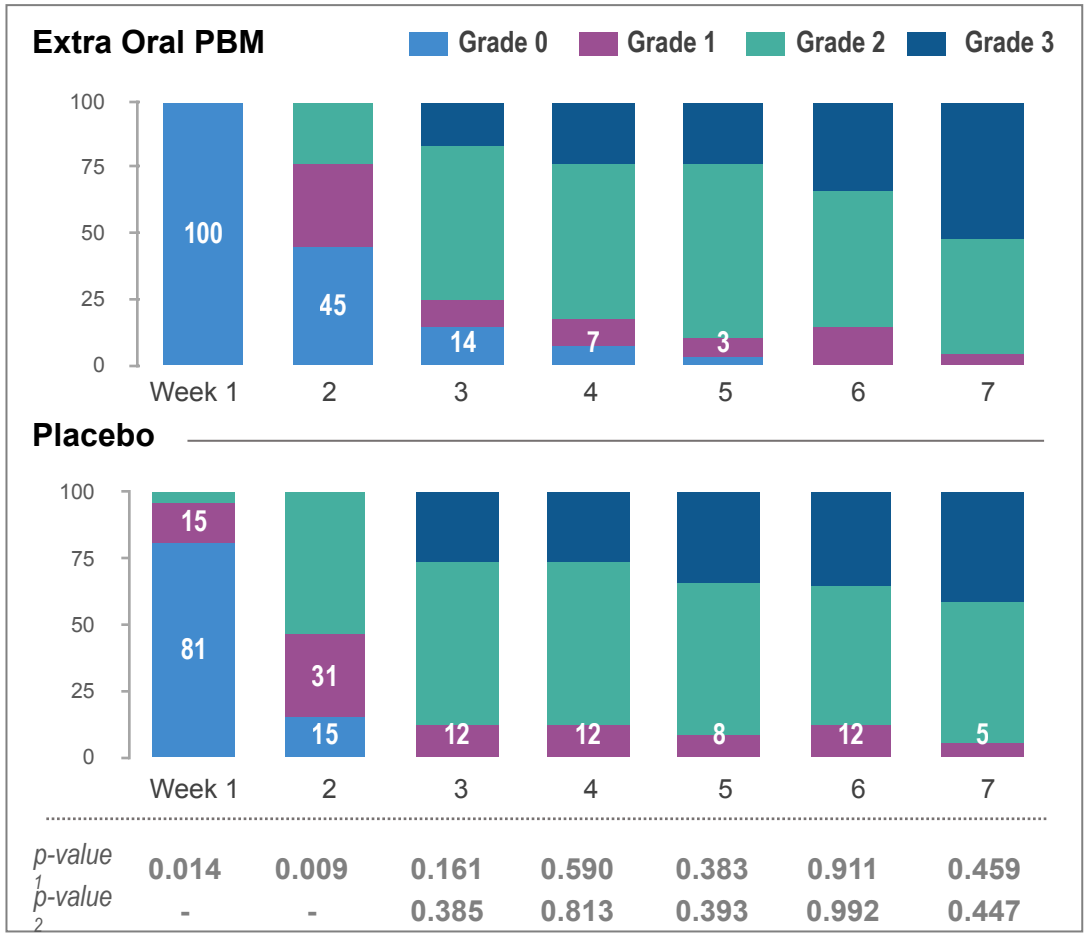
# Extraoral Photobiomodulation (PBM) Therapy for Oral Mucositis in Oral and Oropharyngeal Cancer Patients

- PBM is useful for the treatment of oral mucositis induced by radiotherapy in head and neck cancer patients
  - Potential benefit of extraoral PBM
    - Easier to use
    - Time saving
    - Reduced infectious risk in the Covid era

- Prospective , randomized double blind study
  - Patients treated with radiation therapy (60-70Gy), for oral or oropharyngeal
  - One PBM session / day with the device switched on or not (placebo)
    - Cheeks, chin and neck
  - Evaluation criteria:
    - Mucositis incidence and severity
    - Pain
    - Analgesics and anti-inflammatory drug use
    - Patients quality of life

# Evaluation of Extraoral Photobiomodulation Therapy for Oral Mucositis in Oral and Oropharyngeal Cancer Patients

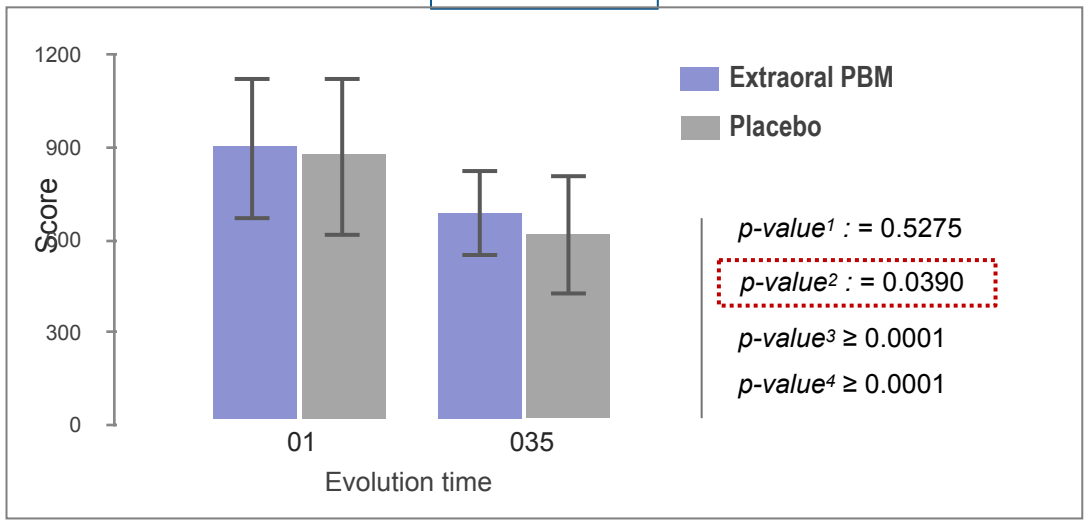
Incidence and severity of mucositis




- No effect on mucositis incidence or grade
- But less pain
  - Mean VAS 2.1 vs 4.5, p=0.009
- Less analgesics use
- Quality of life more preserved

***These results need to be confirmed to support the use of extraoral PBM in clinical practice***

Quality of life




*p-value¹ : Mann-Whitney test for between-groups overall OM comparison (Extraoral PBM vs placebo)*
*p-value² : Chi-square test for between-groups severe OM comparison (Extraoral PBM vs Placebo)*

# Models of care

## SCC: A luxury in low and middle income countries?
**Soto Perez de Celis E.** ***et al.*** - MASCC® 2021 - Plenary Session 3: Models of Supportive Care

## Models of supportive care: level of evidence
**Scotte F.** ***et al.*** - MASCC® 2021 - Plenary Session 3: Models of Supportive Care

## 30 years of MASCC®
**Keefe D.** ***et al.*** - MASCC® 2021 - Plenary Session 3: Models of Supportive Care

## Use of the PROs
**Eicher M.** ***et al.*** - MASCC® 2021 - Parallel Session Standards and New Technologies Session

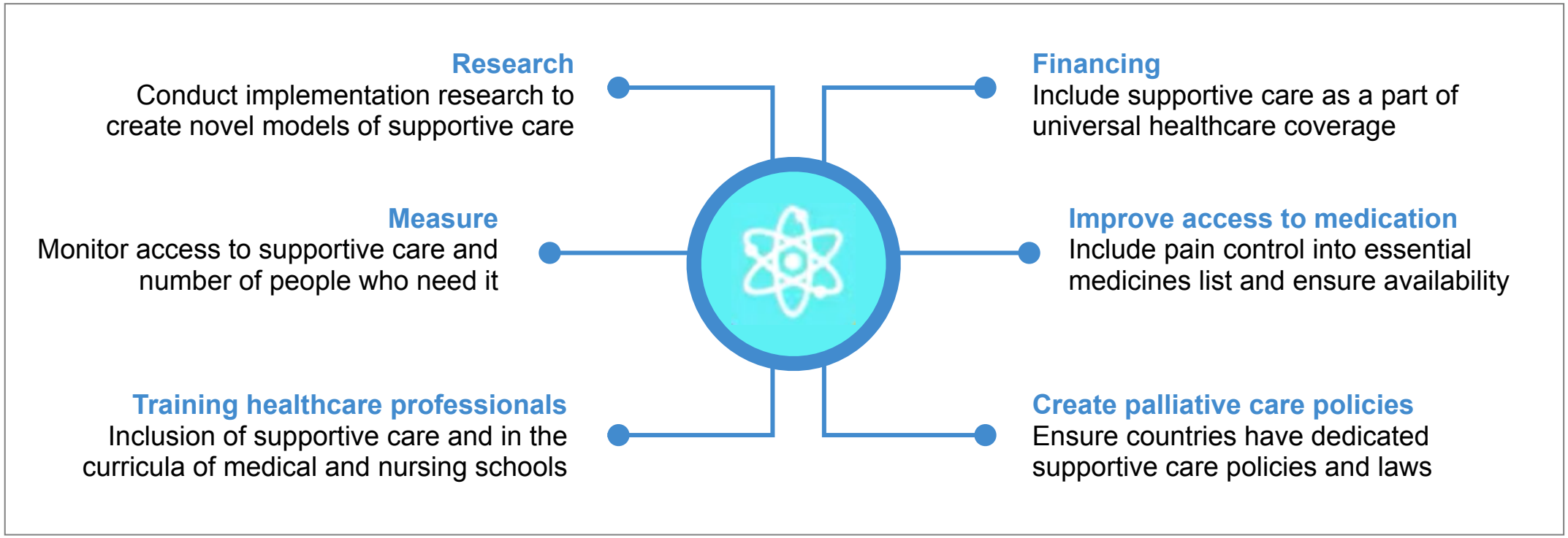
# Supportive care models: Levels of evidence and economic limits

*Soto Perez de Celis E. - MASCC® 2021 – Plenary Session 3: Models of Supportive Care*

*Scotte F. et al. - MASCC® 2021 – Plenary Session 3: Models of Supportive Care*

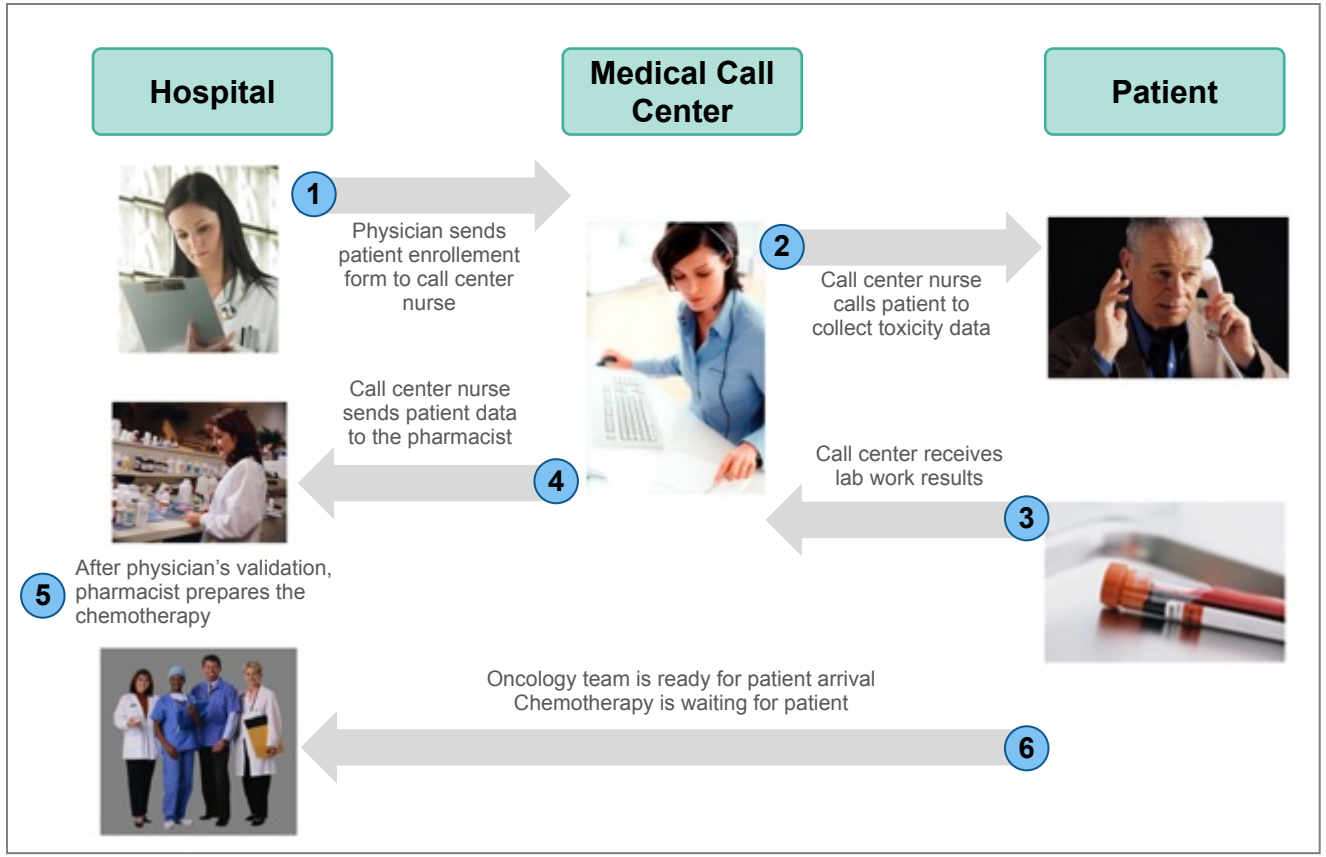
# SUPPORTIVE CARE:
# A luxury in low and middle income economies?

## Moving forward

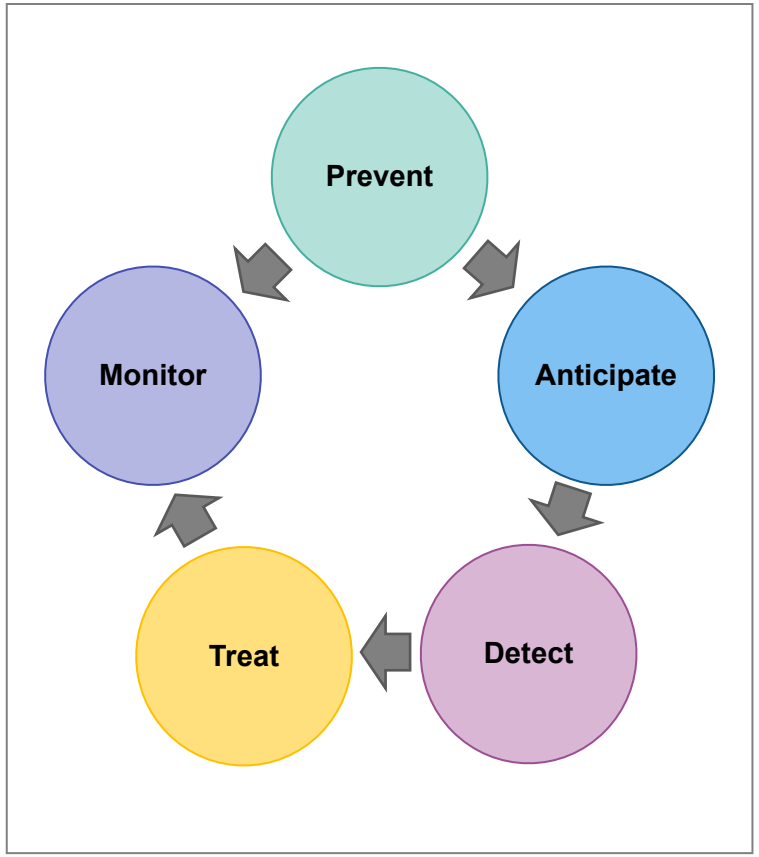


# MODELS OF SUPPORTIVE CARE : What's the Evidence?

## Several published models




*Scotté F. et al. Eur J Cancer 2013.*
*Scotté F. Oncologist 2012.*




*Champiat S. et al. Annals of Oncology 27: 559–574, 2016*
*adapted from Weber, et al., Journal of Clinical Oncology, 2012.*

# Applying to the MASCC certification program

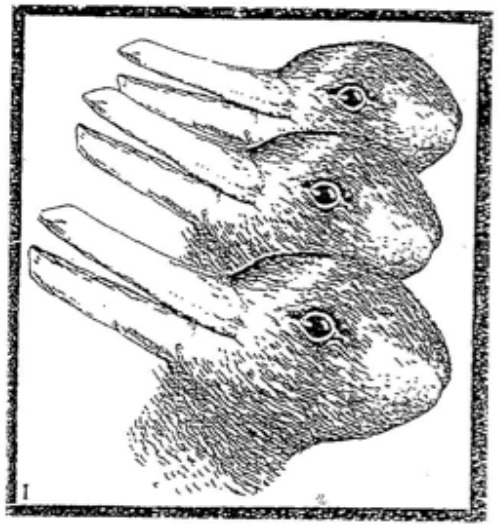
## Is There One Model …

MASCC
Multinational Association of Supportive Care in Cancer
WWW.MASCC.ORG

Designated Centers of Excellence in Supportive Care in Cancer

Certification Program

**Excellence in Supportive Care in Cancer**



AFSOS
Association Francophone pour les Soins Oncologiques de Support

RASSC

nicso
NETWORK ITALIANO CURE DI SUPPORTO IN ONCOLOGIA

AICSO
Associação de Investigação e Cuidados de Suporte em Oncologia

IASCC
Indian Association of Supportive Care in Cancer

JASCC
Japanese Association of Supportive Care in Cancer

## What's the Evidence?

# 30 years of MASCC® :
# Dorothy Keefe testimony

*Keefe D.* et al. - *MASCC® 2021 - Plenary Session 3: Models of Supportive Care*

# MASCC®: 30 years and more

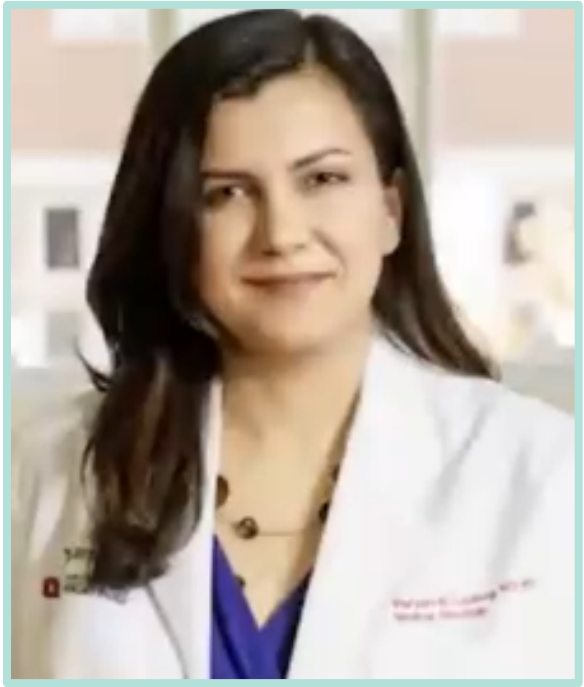
## Supportive care in cancer: the holistic concept (Klastersky)

- Applies to the entire duration of the disease
- Addresses all the aspects of the patient
- Needs multiple competences
- Requires international dimension

# MASCC®: 30 years and more

## **All the presidents** (men, and now women)

- Jean Klastersky
- Richard Gralla
- Matti Aapro
- Paul Hesketh
- Doroty Keele
- Steve Grunberg
- Dave Warr
- Jorn Herrstedt
- Ian Olver
- Raj Lalla
- Andrew Davies
- Maryam Lustberg



# Guiding Patients in Self-Management of Symptoms

*Eicher M.* et al. - *MASCC® 2021 - Parallel Session Standards and New Technologies in Monitoring and Management of Patient-Reported Toxicities During Active Treatment and in Follow-Up Session*

# Guiding Patients in Self-Management of Symptoms

- Symptoms identification using PRO (patient reported outcomes) better than health care professional evaluation
  - More accurate
  - Comprehensiveness
  - Real time transmission
- Digital devices are useful
  - Data collection easier
  - Real time analyses
- Digital device requirement
  - Must be adapted to patient, as patient is the first user (do no forget)
  - Nurse training is mandatory
    - For using digital device
    - More important: PRO create a new kind of relationship with patients
  - Able to deal with emergencies
  - Connection with computed patient file is important

# Goodies

## Managing hot flashes

**Loprinzi C. et .** ***et al.*** - MASCC® 2021 - Parallel session Endocrine and Menopausal Symptom Management

## Chewing vitamin C for xerostomia

**Dutta S.** ***et al.*** - MASCC® 2021 - Travel Scholarship Awards 2020

## High-dose vitamin D for bone preservation

**Peppone L*et al.*** - MASCC® 2021 - , Parallel Session: Bone Health in the Cancer Continuum, Oral Proffered Paper 1

## Nutrition and translational research

**Baracos V.** ***et al.*** - MASCC® 2021 - Parallel Session: A Call to Action: Malnutrition in Patients with Cancer - Priorities within Clinical Practice, Research, Education and Health Policy

## Cannabinoids

**Vigano ML. .** ***et al.*** - MASCC® 2021 - Parallel Session: Cannabinoids in Cancer patients

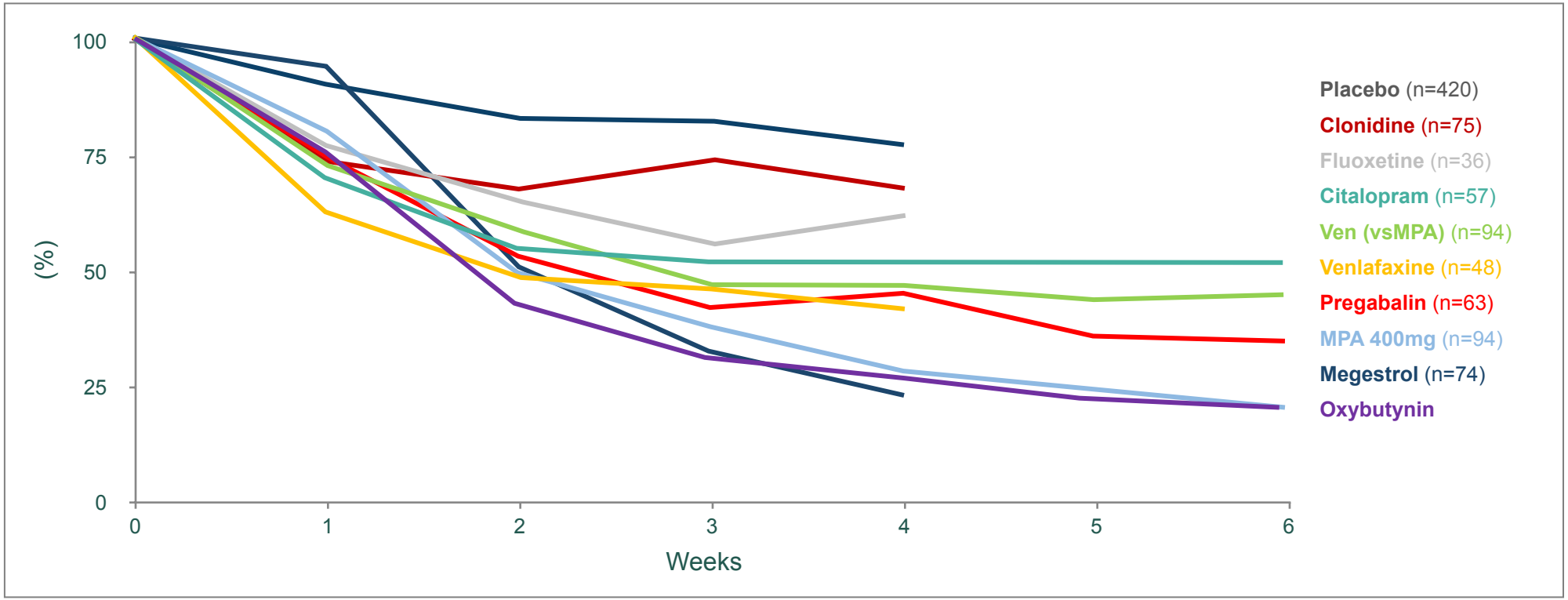
# Non Estrogenic Management of Hot Flashes

*Loprinzi C. et al. - MASCC® 2021 – Parallel session*

# Mean Hot Flash Score % Reduction Randomized Studies

## Positive trials

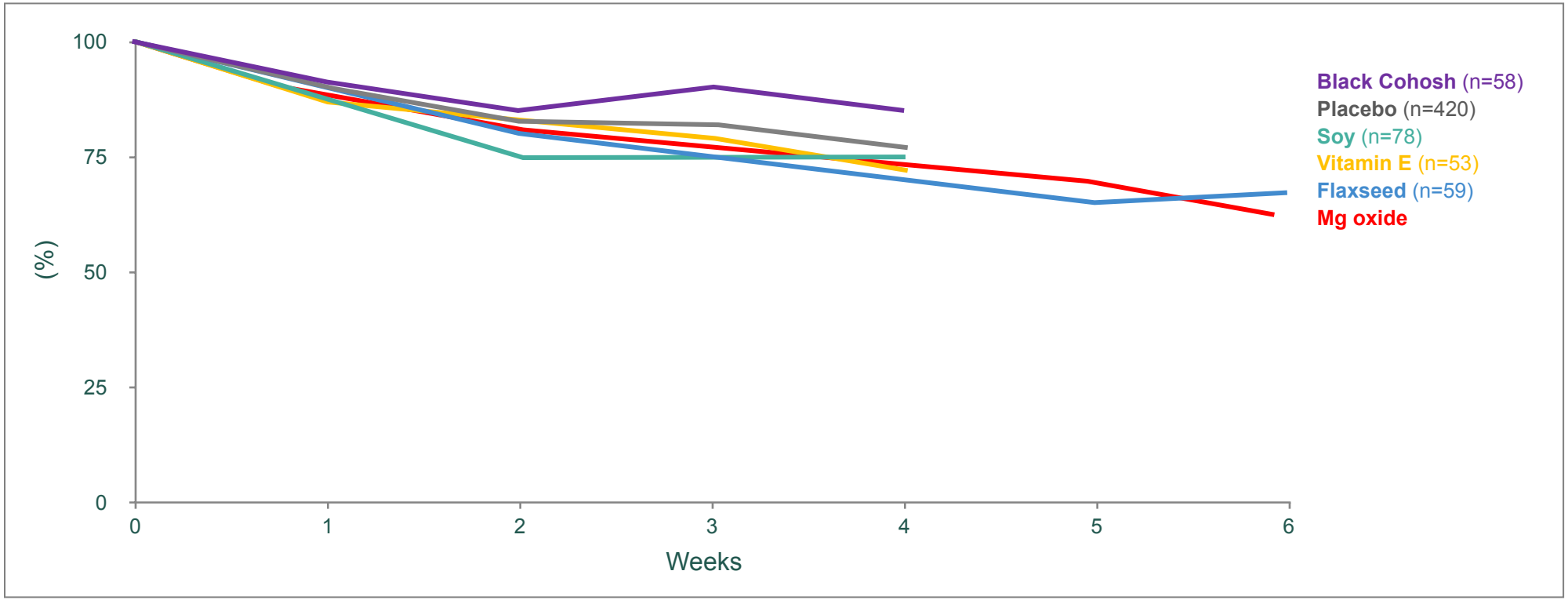
- Mean hot flash score % reduction
  - Randomized studies



# Mean Hot Flash Score % Reduction Randomized Studies

## Negative trials

- Mean hot flash score % reduction
  - Randomized studies



# Vitamin C tablets improve radiation-induced xerostomia

*Dutta S.* et al. - *MASCC® 2021 - Travel Scholarship Awards 2020*

# Vitamine C tablettes Improves Radio Induced Xerostomia

## Randomised open label study to compare chewing vitamin C tablette vs sugar free gum

- Head Neck Cancer
- Radiotherapy
- Chemo naive

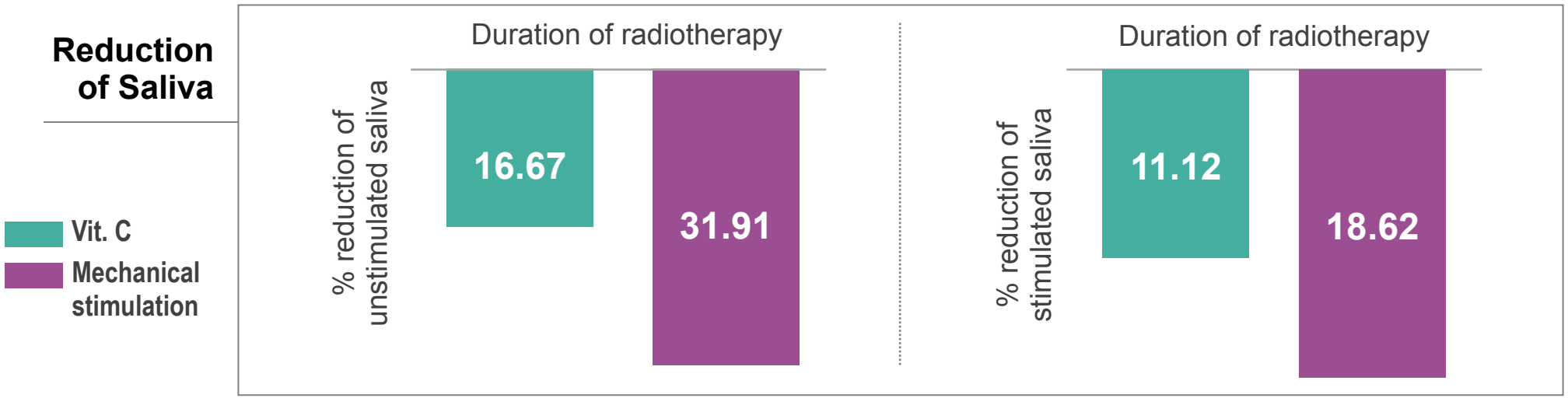
R 1:1

N=20 — **Chewable Vit.C (500mg) tablette 5 minXBID**

N=40

N=20 — **Chewable gum (sugar free) tablette 5 minXBID**

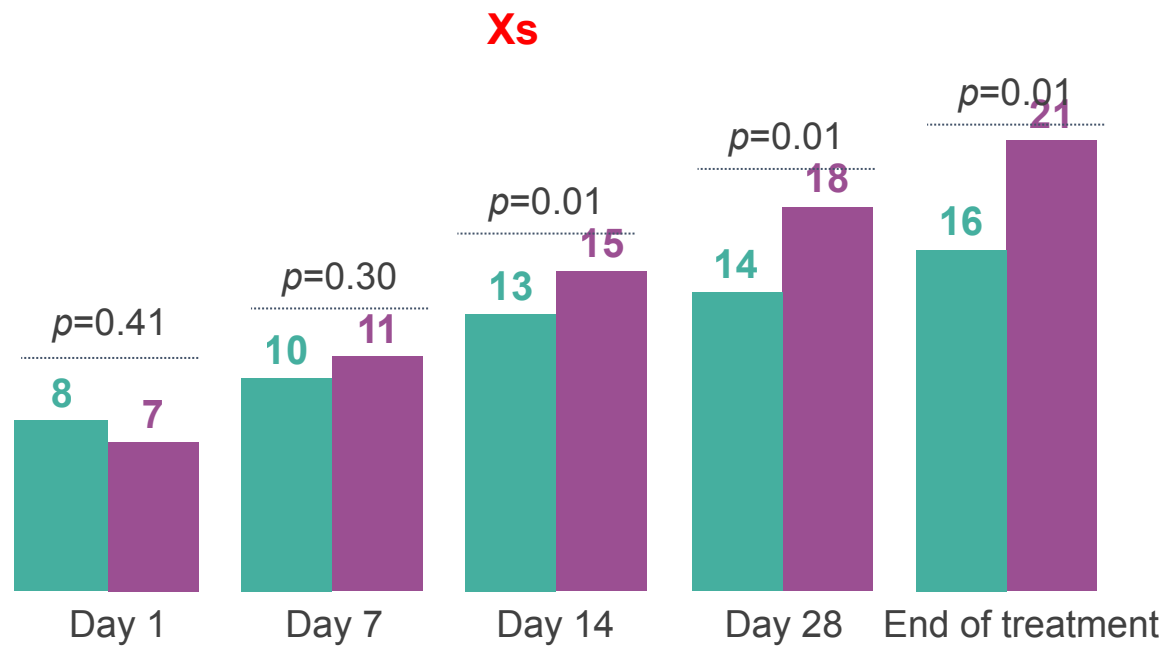
**Assessment:**
- Salivary amount in g/min
- Xerostomia Score
- EORTC QLQ H&N35 questionnaire



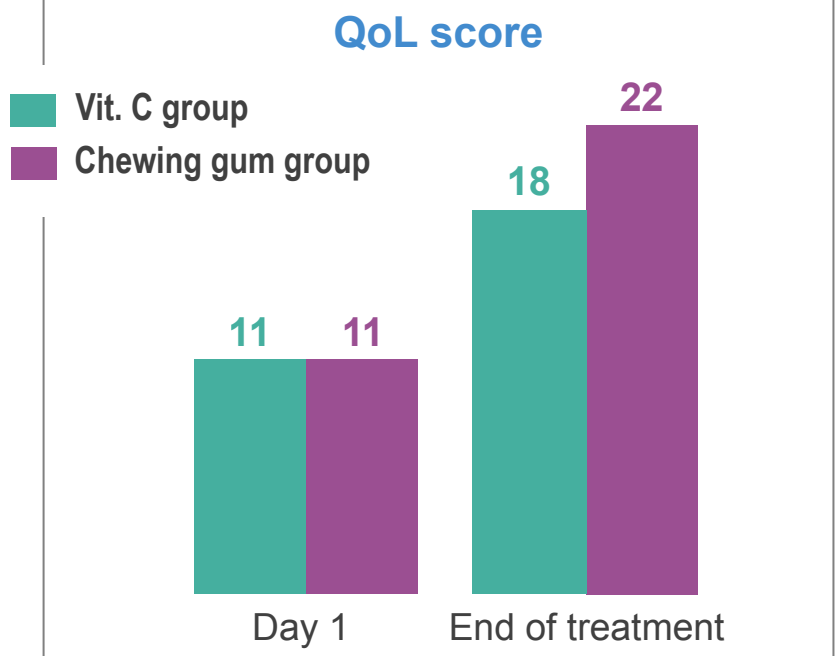
# Vitamine C tablettes Improves Radio Induced Xerostomia

## Randomised open label study to compare chewing vitamin C tablette vs sugar free gum

### Assessment of signs & symptoms of xerostomia




### Assessment of quality of life




**Chewing Vit C improves QOL and xerostomia radio-induced**

QOL= Quality of Life

# Safety And Efficacy Of High-Dose Vitamin D Supplementation For Bone Loss In 164 Breast And Prostate Cancer Patients

*Peppone L, MASCC® 2021, Bone Health in the Cancer Continuum, Oral Proffered Paper 1*

# High-Dose Vitamin D Supplementation For Bone Loss Breast And Prostate Cancer Patients

- Bone loss and osteoporosis is an important problem in patients with breast or prostate cancer
  - Bone loss estimated to  2- 4% per year
  - Link between bone loss and risk of fracture and between hip fracture and survival in women with breast cancer.
- Vitamin D plays an important role in bone metabolism
  - Dose dependent
  - Patients have often vitamin D deficiency
- Randomized, placebo controlled study
  - Evaluation  of high dose vitamin D
    - Patients with breast cancer (menopausal patients with hormonal therapy) or prostate cancer (with androgen deprivation), all with  vitamin D insufficiency

# High-Dose Vitamin D Supplementation For Bone Loss Breast And Prostate Cancer Patients

Results:

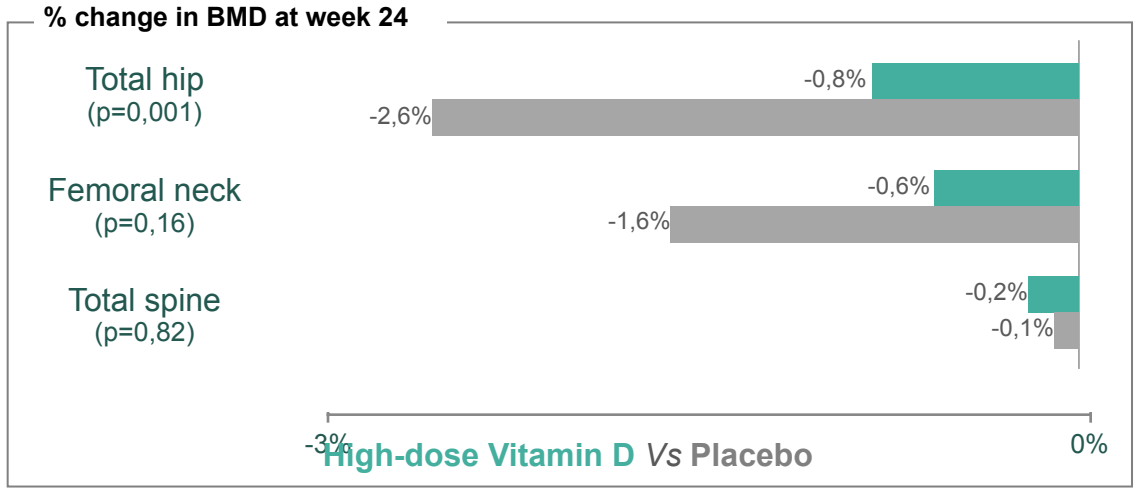
- 164 patients included
- High dose Vitamin D (5000 UI/ week) vs placebo
  - All patients receiving 600UI of vitamin D daily with calcium1g
- Significant increase of vitamin D levels in patients receiving high dose vitamin D
  - Without increase of calcemia
- Bone loss was seen in all of the patients
  - But more pronounced in patients receiving high dose vitamin D
  - As measured on the hip, not on the spine

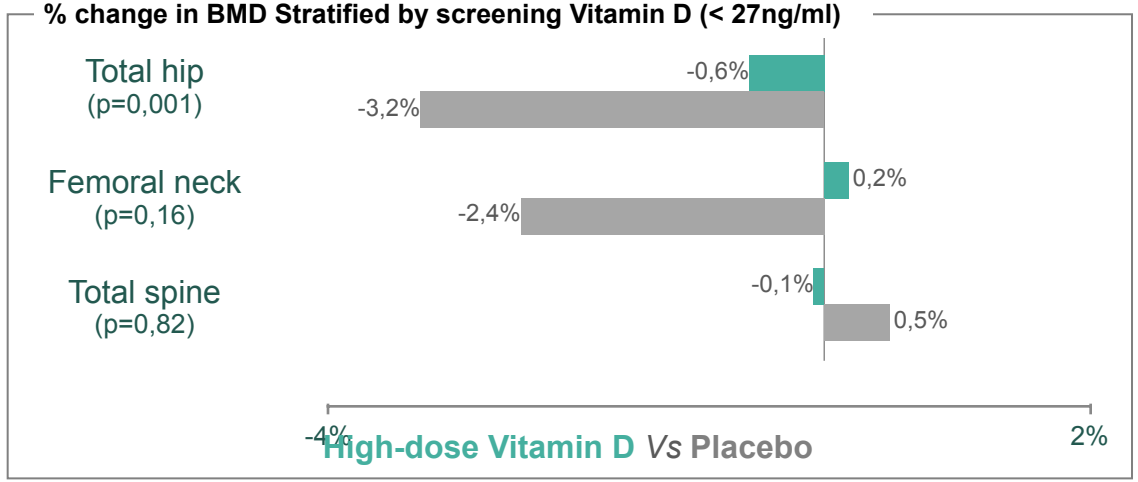
# Evaluation of high dose vitamin D to prevent bone loss in patients with breast or prostate cancer

## Effect on hip and spine bone density

- All patients experienced some bone loss
  - High dose vitamin D limits bone loss, especially for hip
  - This protective effect is more important in patients with lower vitamin D level at inclusion

*Further larger studies are required to properly evaluate the benefit of high dose vitamin D to prevent bone loss in cancer patients*



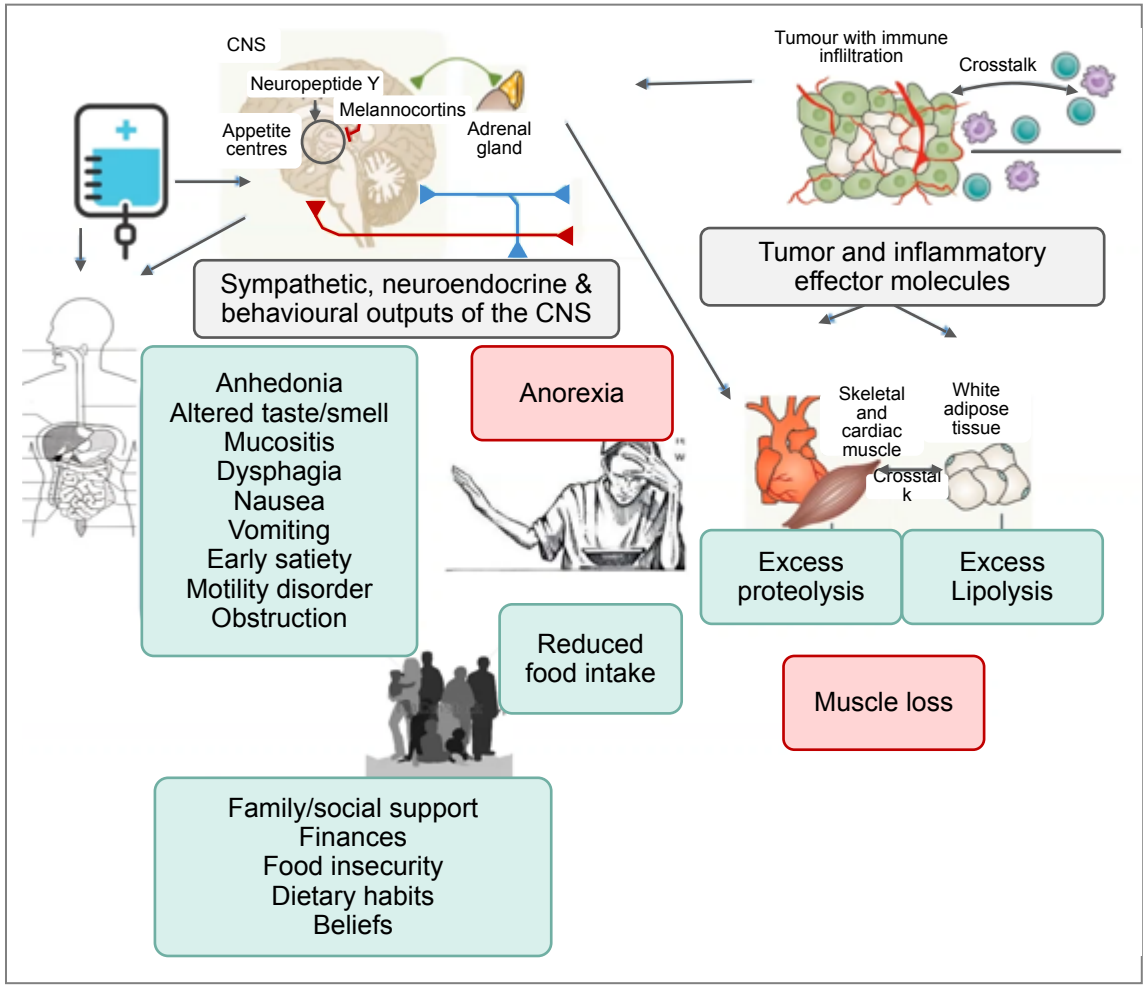



# Translational Science Priorities (Mechanisms, Diagnostic Criteria, Management)

*Baracos V. et al. - MASCC® 2021 - Parallel Session: A Call to Action: Malnutrition in Patients with Cancer - Priorities within Clinical Practice, Research, Education and Health Policy*

# Malnutrition in patients with cancer

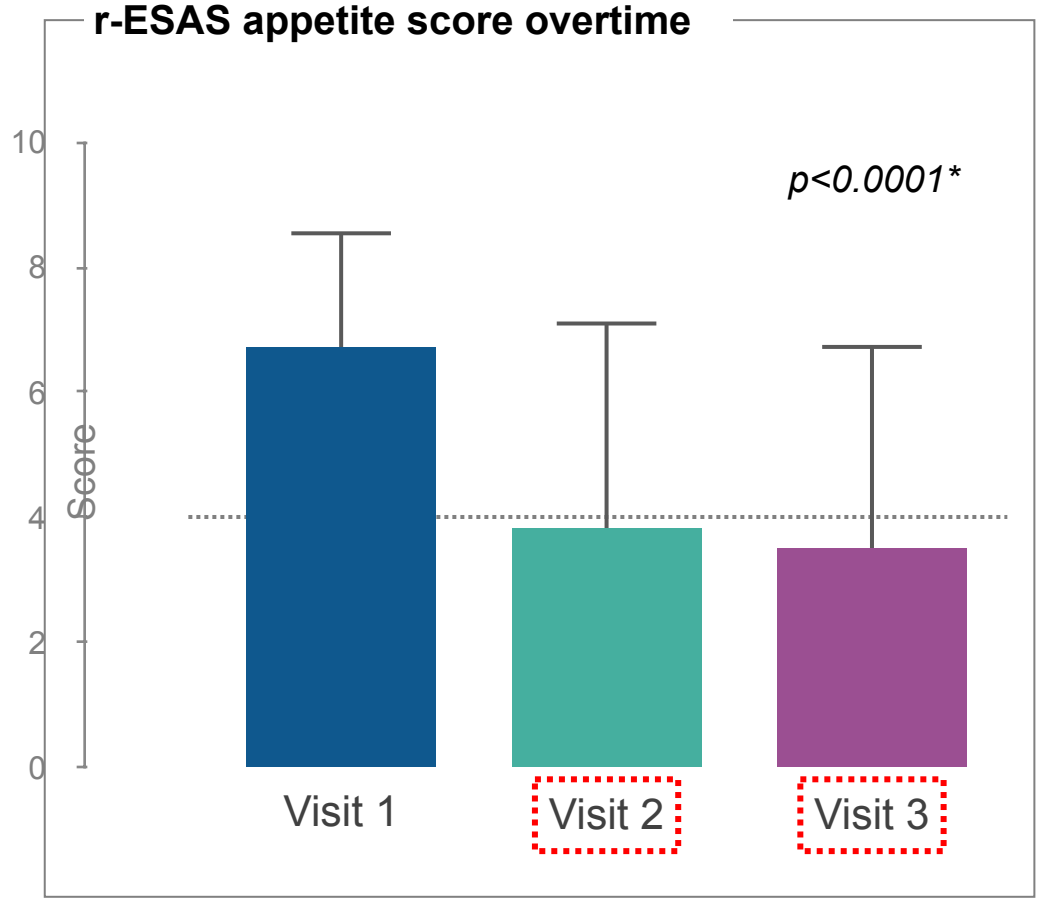
- Multiple factors are involved in denutrition pathophysiology
  - CNS
  - Inflammation cytokines
  - Food intakes
  - Psychological and social context

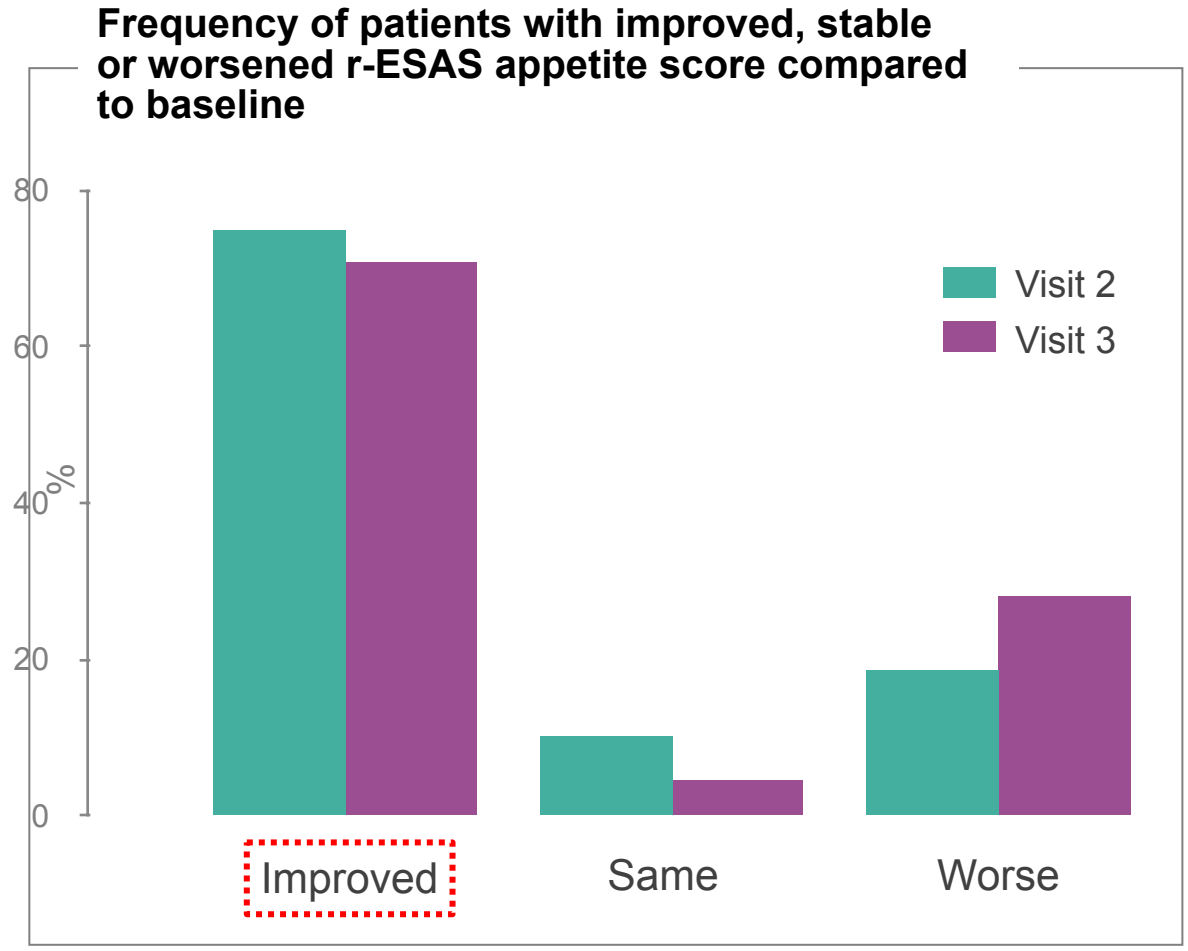


# Cannabinoids

*Vigano ML.* et al. *- MASCC® 2021 - Parallel Session: Cannabinoids in Cancer patients Oral Proffered Paper 4*

# RESULTS: r-ESAS lack of appetite score




*Kruskal-Wallis test

# RESULTS: r-ESAS lack of appetite score

## Results: Demographic/patients characteristics

| | | Mean (n=81) | SD |
|---|---|---|---|
| Age (years) | | 59.1 | 15.0 |
| R-ESAS appetite (score) | | 6.5 | 2.0 |
| | | N (81) | % |
| Sex | Male | 38 | 46.9 |
| | Female | 42 | 51.9 |
| | Unknown | 1 | 1.2 |
| Diagnosis | Gastrointestinal | 20 | 24.7 |
| | Hematological | 13 | 16.0 |
| | Genito-urinary | 10 | 12.3 |
| | Hepatobiliary | 10 | 12.3 |
| | Breast | 9 | 11.1 |
| | Lung | 8 | 9.9 |
| | Other | 7 | 8.6 |
| | Unknown | 4 | 4.9 |
| Cannabis route | Inhaled | 16 | 19.8 |
| | Oral | 41 | 50.6 |
| | Inhaled & oral | 23 | 28.4 |
| | Unknown | 1 | 1.2 |
| Cannabinoid content ratio of strains at baseline | Balanced (CBS; THC) | 36 | 44.4 |
| | CBD-dominant | 17 | 21.0 |
| | THC-dominant | 19 | 23.5 |
| | Unknown | 9 | 11.1 |

# Cardiotoxicity – Fatigue – Cognitive

## Beyond left heart dysfunction
**Suter T. . et . *et al*.** - MASCC® 2021 - Plenary Session 2

## Genetics and epigenetics on cardiotoxicity and fatigue
**Mustian K. . *et al*.** - MASCC® 2021 - Parallel Session Double Hitter

## Physical, emotional and cognitive fatigue according to tumour
**Schmidt M. *et al*.** - MASCC® 2021 - , Parallel Session:Double Hitter Oral Proffered Paper 4

## Metalloporphyrin Radioprotective in glioma
**Peters K. . *et al*.** - MASCC® 2021 - Parallel Session: Oral Proffered Paper 4

# **Cardio-Oncology :**
# Beyond Left Ventricular Dysfunction

*Suter T. et al. - MASCC® 2021 - Plenary Session 2*

# Classification of Risks for CTRCD

| Therapy related factors | Patients related factors |
|---|---|
| **Low risk of cardiotoxicity** | |
| • Lower dose AC (eg doxorubicin <200mg/m$^2$, epirubicin <300mg/m$^2$); liposomal formulations<br>• Trastuzumab without AC | • Age > 18 and < 50 years |
| **Medium risk of cardiotoxicity** | |
| • Modest dose AC (doxorubicin 200-400mg/m$^2$, epirubicin 300-600mg/m$^2$)<br>• AC followed by trastuzumab<br>• VEGF tyrosine kinase inhibitors<br>• Second and third generation Bcr-Abl tyrosine kinase inhibitors<br>• Proteasome inhibitors<br>• Combination immune checkpoint inhibitors | • Age 50-64 years<br>• 1-2 CV risk factors such as hypertension, dyslipidaemia, obesity, insulin resistance, smoking |
| **High risk of cardiotoxicity** | |
| Simultaneous AC and trastuzumab<br>High dose AC (doxorubicin ≥400mg/m$^2$, epirubicin ≥600mg/m$^2$)<br>Modest dose Acplus left chest radiation therapy<br>Elevated cardiac troponin post AC prior to HER2-targeted therapy<br>High dose radiation therapy to central chest including heart in radiation field ≥30Gy | • Age ≥65 years<br>• >2 CV risk factors as hypertension, dyslipidaemia, obesity, smoking, diabetes<br>• Underlying CV disease : CAD, PAD, CMP, severe VHD, heart failure |
| VEGF tyrosine kinase inhibitors following previous AC chemotherapy | • Reduced or low-normal LVEF (50-54%) pre-treatment<br>• Prior cancer therapy |

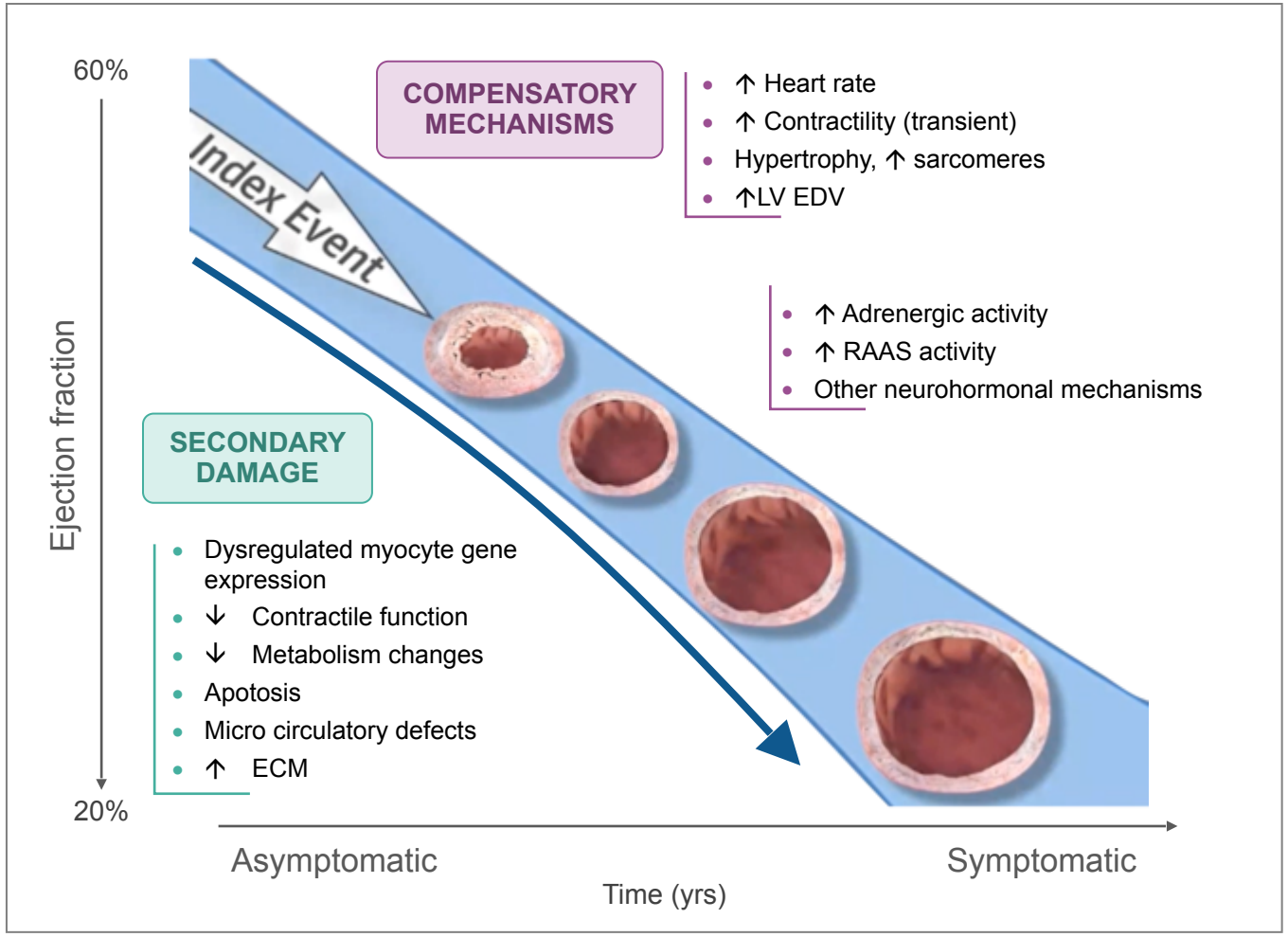
*CTRCD : Cancer therapy-related cardiac dysfunction*

# Long-term Surveillance for CTRCD

| Baseline risk of cardiotoxicity | During chemotherapy | Following chemotherapy |
|---|---|---|
| **Low** | • Baseline<br>• Following cycle completing cumulative lifetime dose of 240mg/m$^2$ doxorubicin or equivalent<br>• Every additional 100mg/m$^2$ doxorubicin above 240 mg/m$^2$ or every 2 cycles | • 12 months after final cycle<br>• 5 yearly review |
| **Medium** | • Baseline<br>• Following 50% of planned total treatment or every 2 cycles (optionnal)<br>• Following cycle completing cumulative lifetime dose of 240mg/m$^2$ doxorubicin or equivalent | • 12 months after final cycle<br>• 5 yearly review |
| **High** | • Baseline<br>• Every 2 cycles<br>• Consider after every cycle above 240mg/m$^2$ doxorubicin or equivalent | • 6 months after final cycle<br>• 12 months after final cycle<br>• Annualy for 2 or 3 years thereafter, and then in 3 to 5 years intervals for life |

*CTRCD : Cancer therapy-related cardiac dysfunction*

# Cardiac Dysfunction – A Progressive Disease



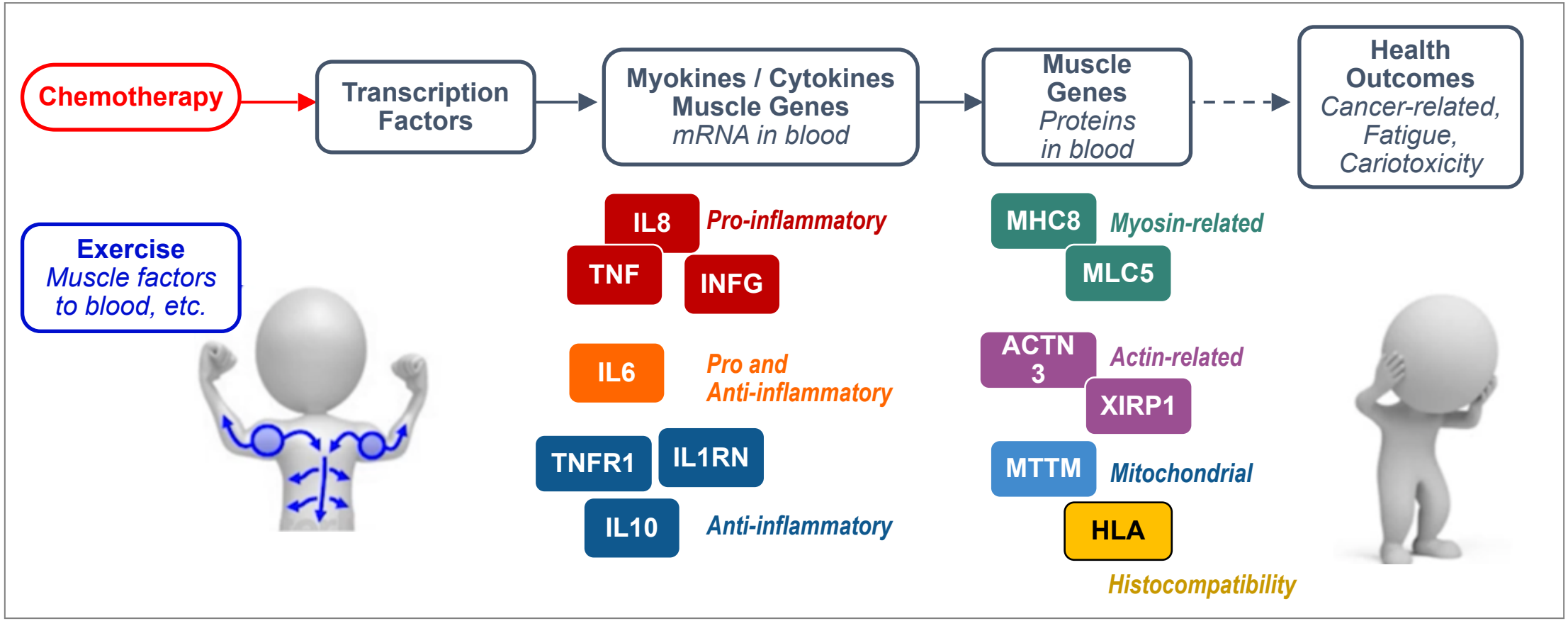

*CTRCD : Cancer therapy-related cardiac dysfunction*

# Genetic and Epigenetic Role of Muscle in Cardiotoxicity and Cancer Related Fatigue

*Mustian K. et al. - MASCC® 2021 - Parallel Session*

# Influence of Exercise

## From Genetics to Signaling Processes to Fatigue and Cardiotoxicity



# Comparison of Physical, Emotional, and Cognitive Fatigue Across Different Cancer Entities

*Schmidt M. et al. - MASCC® 2021 – 0PP4 - Parallel Session*

# Comparison of Physical, Emotional, and Cognitive Fatigue Across Different Cancer Entities

## Physical, emotional, and total fatigue adjusted by age, sex, BMI and cancer treatment

| Entity | Physical fatigue | | Emotional fatigue | | Total fatigue | |
|---|---|---|---|---|---|---|
| | Adjusted mean (95%CI) | P (difference to breast cancer) | Adjusted mean (95%CI) | P (difference to breast cancer) | Adjusted mean (95%CI) | P (difference to breast cancer) |
| Stomach | 69,4 (61,6-77,2) | **0,0004** | 42,4 (35,0-49,9) | **0,0047** | 50,0 (43,5-56,4) | **0,0013** |
| Lung | 66,9 (55,8-78,0) | **0,034** | 39,5 (28,9-50,1) | 0,13 | 46,9 (37,7-56,0) | 0,10 |
| Kidney | 66,6 (59,4-73,8) | **0,0011** | 40,7 (33,9-47,6) | **0,0069** | 47,8 (41,9-53,7) | **0,0038** |
| Pancreas | 65,0 (53,5-76,5) | 0,081 | 37,1 (26,1-48,1) | 0,31 | 45,9 (36,4-55,4) | 0,16 |
| Endometrium | 62,7 (55,3-70,1) | **0,022** | 37,7 (30,6-44,8) | 0,056 | 44,7 (38,6-50,8) | 0,052 |
| Liver | 61,9 (50,4-73,4) | 0,23 | 33,3 (22,3-44,3) | 0,72 | 41,8 (32,3-51,3) | 0,58 |
| Leukemia | 61,7 (53,9-69,4) | 0,10 | 39,1 (31,7-46,6) | 0,056 | 44,5 (38,1-50,9) | 0,13 |
| Ovaries/Cervix | 61,5 (53,8-69,1) | 0,079 | 38,2 (30,9-45,5) | 0,063 | 43,5 (37,2-49,8) | 0,17 |
| Colon | 61,5 (54,2-68,8) | 0,07 | 36,6 (29,6-43,6) | 0,14 | 43,9 (37,8-49,9) | 0,12 |
| Bladder | 60,8 (53,2-68,8) | 0,12 | 42,4 (35,1-49,6) | **0,0036** | 44,8 (38,5-51,1) | 0,082 |
| Rectum | 60,7 (53,6-67,7) | 0,097 | 41,9 (35,1-48,6) | **0,0020** | 45,4 (39,5-51,2) | **0,034** |
| Malignant melanoma | 60,4 (53,1-67,8) | 0,12 | 38,4 (31,3-45,4) | 0,046 | 43,1 (37,0-49,2) | 0,19 |
| Non-Hodgkin lymphoma | 59,2 (52,5-66,0) | 0,22 | 35,5 (29,1-41,9) | 0,23 | 41,8 (36,2-47,3) | 0,38 |
| Prostate | 55,8 (48,9-62,8) | 0,76 | 36,2 (29,6-42,8) | 0,14 | 40,6 (34,9-46,3) | 0,59 |
| Breast | 54,8 (47,8-61,7) | Ref. | 31,3 (24,7-37,9) | Ref. | 39,1 (33,4-44,8) | Ref. |

# Cognitive Outcomes of Phase 1 Trial of Novel Metalloporphyrin Radioprotectant and Radiosensitizer in Newly Diagnosed High Grade Glioma Patients

*Peters K. - MASCC® 2021* - Cancer Related Cognitive Impairment in Patients with CNS Tumors: Are We Making Progress? Oral Proffered Paper 4

# Cognitive Outcomes of Phase 1 Trial of Novel Metalloporphyrin Radioprotectant and Radiosensitizer in Newly Diagnosed High Grade Glioma Patients

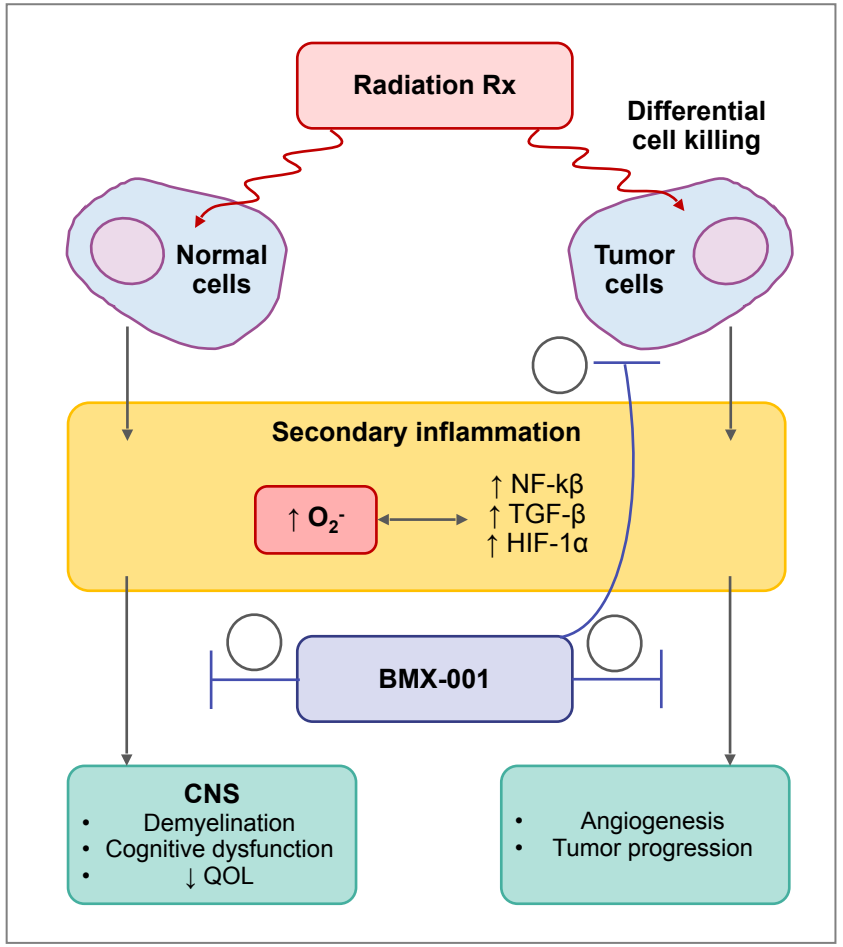
## Results of a Phase 1 study with BMX-01

- Cognitive impairment is a concern in patients undergoing cerebral radiotherapy
- Metalloporphyrines have both radioprotectant effect for normal cells and radiosensitizing effect for tumor cells
- **Phase 1 study with BMX-01**
  - Part of metalloporphyrines family
    - First in human
    - Given subcutaneously , twice a week
- **Cognitive status was evaluate in different dimensions**
  - Visual and verbal memory, psychometric tests, executive functioning, processing speed …
  - Before treatment and 2 and 6 month after radiotherapy completion
- **Results** (15 patients included)
  - Radiotherapy was associated with temozolomide
  - Tolerance profile was good, dose limiting toxicity was hypotension
  - Cognitive function was improved for a majority of patients

# Phase 1 Trial of Novel Metalloporphyrin Radioprotectant and Radiosensitizer in Newly Diagnosed High Grade Glioma Patients

## Mechanisms of a potential impact of BMX-01 on Cognitive Outcomes

- Metalloporphyrins have redox activity
- BMX-01 is a potent superoxyde mimetic
  - Could prevent CNS side effects
  - With radio sensitizing properties




**Phase 1 study with BMX-01 shows promising results**
**Phase 2 study is ongoing**

# Scientific Societies Corner (Joint sessions)

## EONS®/ISNCC®/ONS®/MASCC®

**Charalambous A. et . *et al.*** - MASCC® 2021 - Cancer nursing models and interventions in supportive care: a review of the evidence

## MASCC® - JASCC® : Patients with Rare Cancers

**Gatellier L. . *et al.*** - MASCC® 2021 - Joint Session with JASCC/MASSC – Cancer of Unknown Primary and Rare Tumours

## Nurses Meetings: towards IPAs

**Gyldenvang H. H. *et al.*** - MASCC® 2021 - , eposter

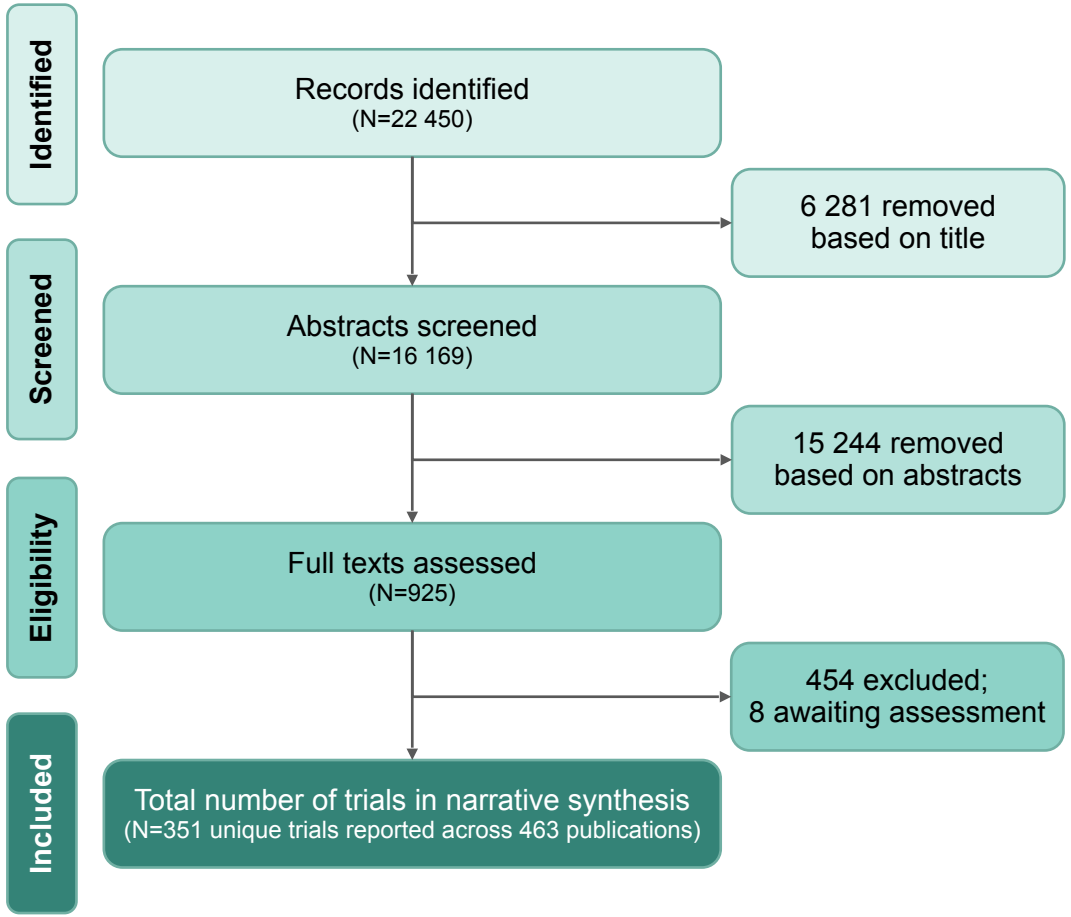
# Joint session: EONS/ISNCC/ONS/MASCC

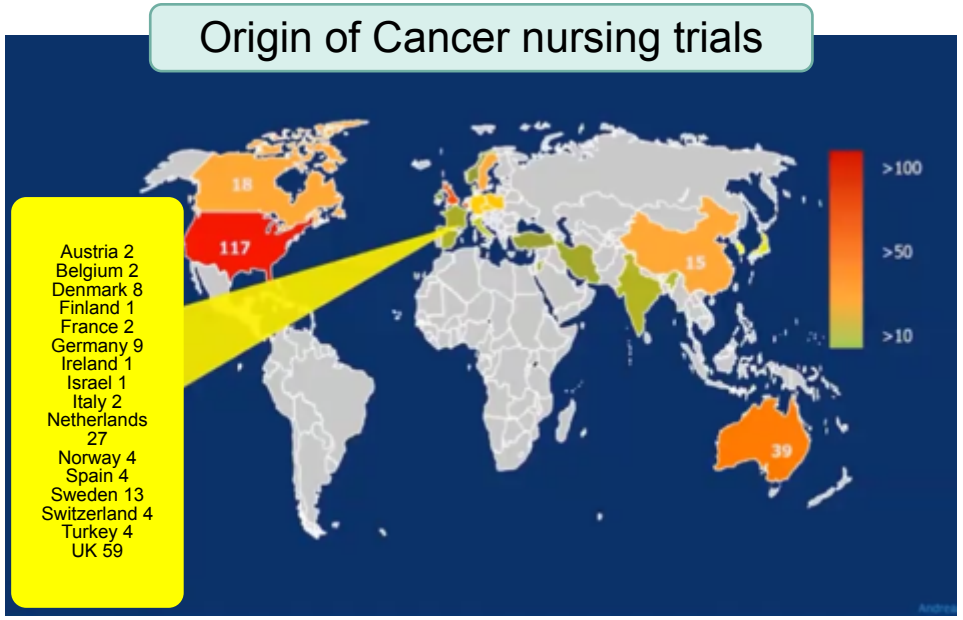
Dr A. Charalambous

## Cancer nursing models and interventions in supportive care: a review of the evidence

# Methodology

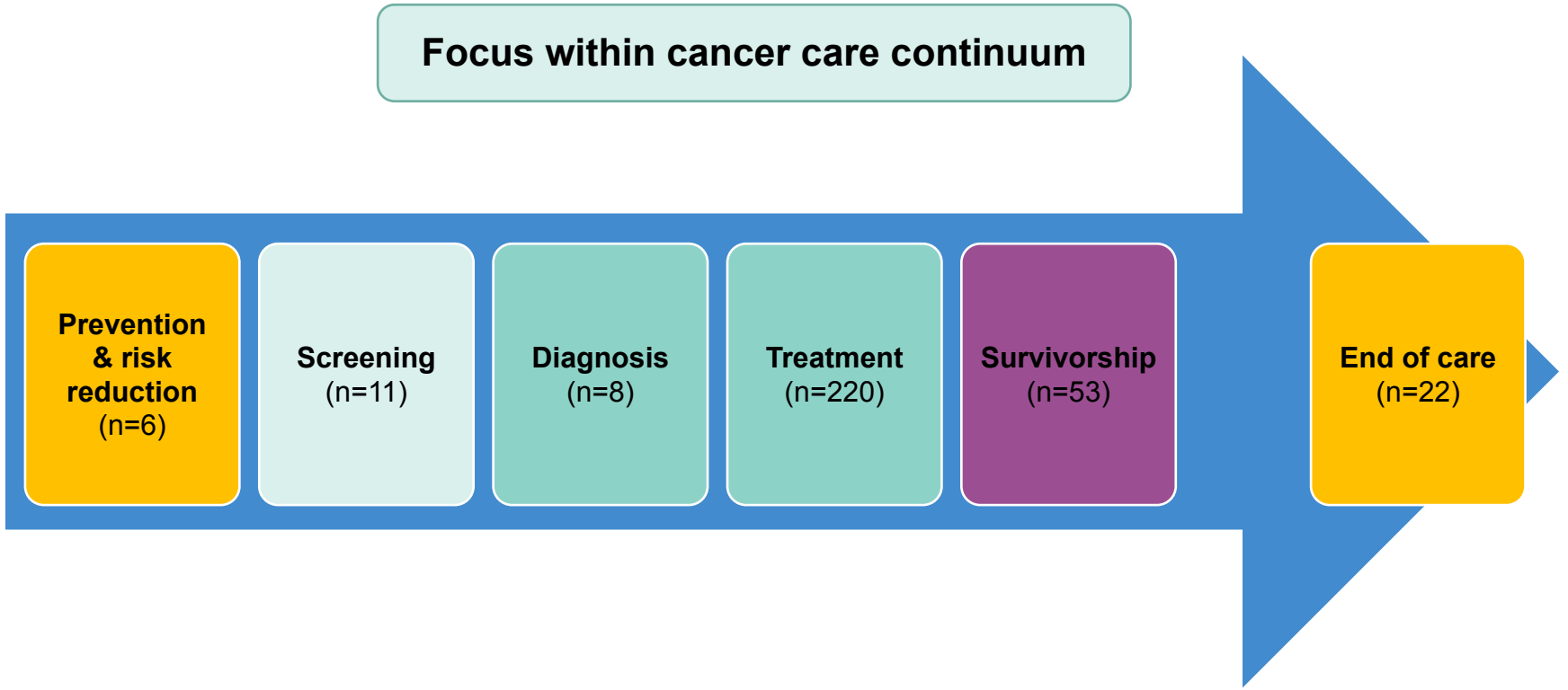
## Database selection



# Methodology

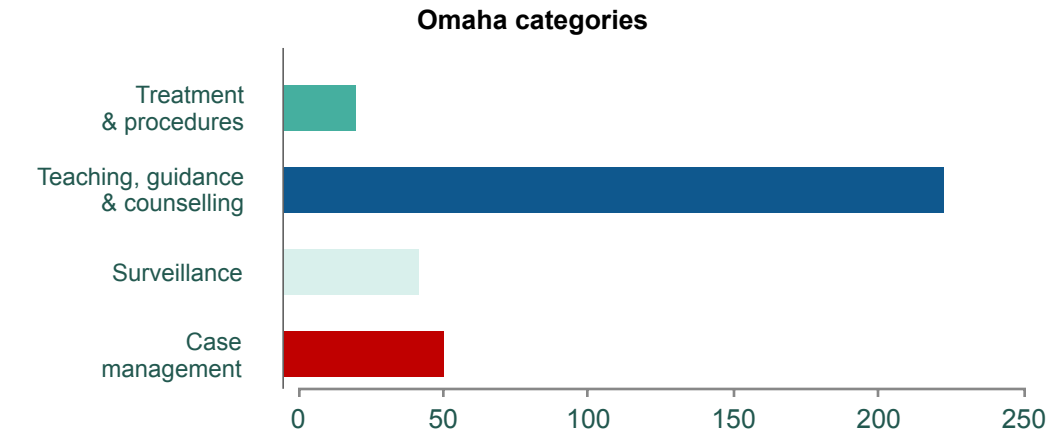
## Sélection de la base documentaire



# Methodology

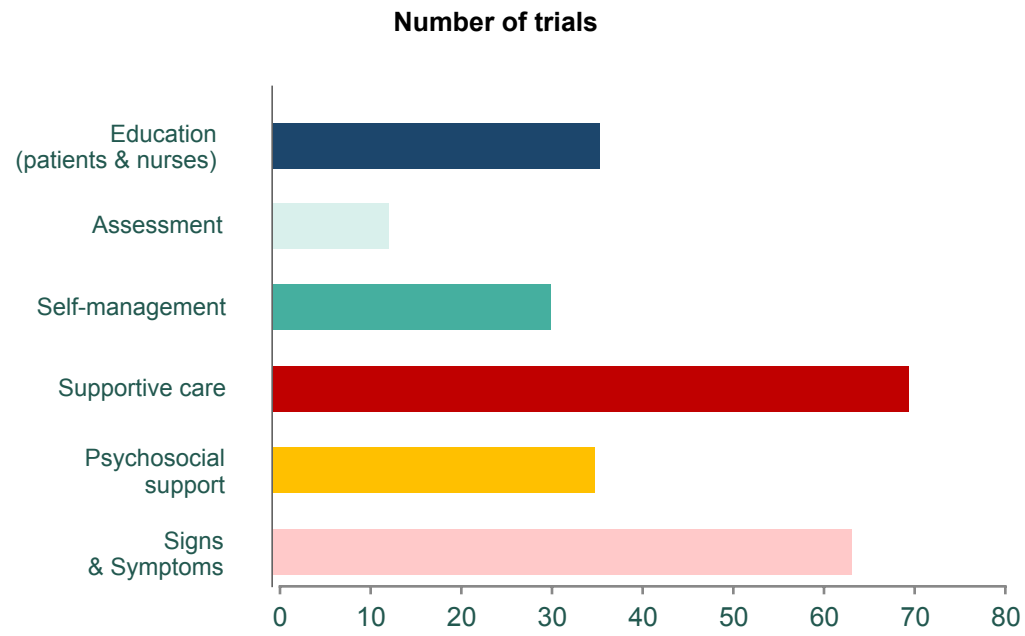
## Database selection

### Nature of interventions - Omaha




| | Case management | Surveillance | Teaching, guidance & counselling | Treatment & procedures |
|---|---|---|---|---|
| **Number of trials** | **54** | **46** | **227** | **24** |

### Main component of cancer nursing interventions



# Meta-analysis

## EORTC QLQ C-30

### Global QoL

- Evidence of beneficial effect of nurse-led interventions compared with control (usual care / attention control)

| Study or subgroup | Intervention | | | Control | | | | Mean difference |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Total | Mean | SD | Total | Weight | IV, Random, 95% CI |
| Cheng 2013 | 53.03 | 14.76 | 45 | 52.42 | 14.6 | 41 | 7.7% | 0.62 (-5.59;6.83) |
| De Wit 2001 | 51.7 | 21.7 | 53 | 49.4 | 22.2 | 51 | 4.8% | 2.30 (-6.14; 10.74) |
| Faithfull 2001 (1) | 72.75 | 6.25 | 55 | 68.75 | 6.25 | 44 | 18.0% | 4.00 (1.52; 6.48) |
| Kim 2011 | 73.33 | 17.6966 | 23 | 68.02 | 16.1819 | 22 | 3.7% | 5.31 (-4.59; 15.21) |
| Kim 2013 | 40 | 17 | 54 | 38 | 12 | 54 | 8.9% | 2.00 (-3.55; 7.55) |
| Kimman 2007 | 74.4 | 17.4 | 150 | 74.7 | 16.9 | 149 | 13.1% | -0.30 (-4.19; 3.59) |
| Moore 2002 (2) | 66.18 | 9.03 | 76 | 66.68 | 9.62 | 74 | 16.1% | -0.50 (-3.49; 2.49) |
| Walker 2009a | 56.8 | 22.8 | 253 | 49 | 21.8 | 247 | 13.0% | 7.80 (3.89; 11.71) |
| Walker 2009b | 50.5 | 18.8 | 59 | 15.1 | 16.7 | 70 | 7.7% | 5.40 (-0.79, 11.59) |
| Yates 2004 | 52.8 | 22.8 | 87 | 53.8 | 20.5 | 79 | 7.1% | -1.00 (-7.59; 5,59) |
| **Total (95% CI)** | | | **855** | | | **831** | **100%** | **2.49 (0.41; 4.57)** |

**Heterogeneity : Tau¹ = 4.67; Chi² = 16.95; df = 9 (p=0.05): I² = 47%**
**Test for overall effect: Z = 2.35 (p=0.02)**

Footnotes
(1) Mean and SD calculated from median and IQR data
(2) Means and SD calculated from median and IQR data

### Emotional function

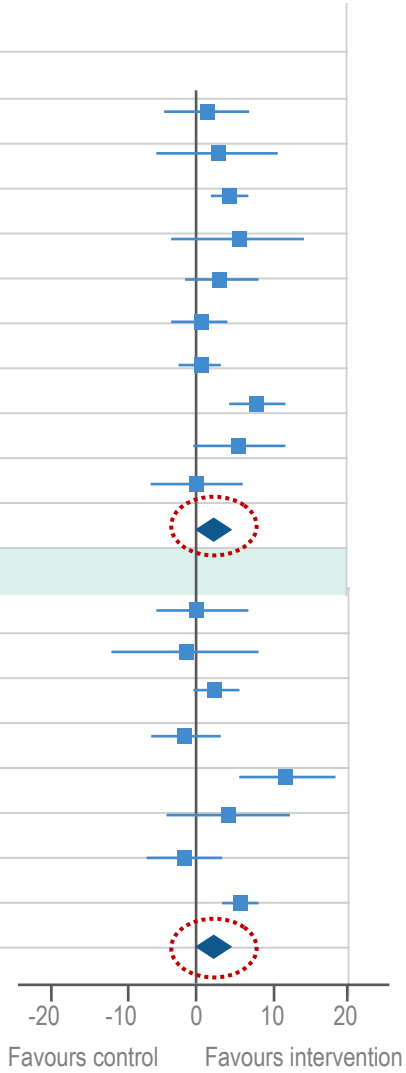
- No evidence of benefit or harm of nurse-led interventions compared with control (usual care / attention control)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Cheng 2013 | 56.49 | 15.16 | 45 | 56.06 | 16.96 | 41 | 10.2% | 0.43 (-6.39; 7.25) |
| De Wit 2001 | 67.4 | 24.5 | 53 | 69.1 | 27.3 | 51 | 6.2% | -1.70 (-11.74; 8.34) |
| Faithfull 2001 (1) | 89.75 | 6.25 | 54 | 87.75 | 8.25 | 43 | 18.6% | 2.00 (-0.98; 4.98) |
| Jefford 2013 | 81.8 | 18.4 | 96 | 81.2 | 18.9 | 107 | 13.5% | -1.40 (6.54; 1.74) |
| Kim 2011 | 84.01 | 9.5315 | 23 | 72.17 | 33.9305 | 22 | 9.8% | 11.84 (4.77; 18.91) |
| Kim 2013 | 58 | 20 | 54 | 54 | 24 | 54 | 8.0% | 4.00 (-4.33; 12.33) |
| Kimman 2007 | 73.9 | 20.9 | 150 | 75.6 | 21.7 | 149 | 14.2% | -1.70 (-6.53; 3.13) |
| Moore 2002 (3) | 82.8 | 9 | 76 | 77.1 | 7.23 | 74 | 19.5% | 5.70 (3.09; 8.31) |
| **Total (95% CI)** | | | **551** | | | **541** | **100%** | **2.48 (-0.44; 5.39)** |

**Heterogeneity : Tau¹ = 9.58; Chi² = 14.45; df = 7 (p=0.01): I² = 62%**
**Test for overall effect: Z = 1.66 (p=0.10)**

Footnotes
(1) Mean and SD calculated from median and IQR data

QOL = Quality of Life



# Meta-analysis

## EORTC QLQ C-30

### Social function

- Evidence of beneficial effect of nurse-led interventions compared with control (usual care / attention control)

**Heterogeneity : Tau¹ = 14.06; Chi² = 22.49; df = 9 (p=0.007): I² = 60%**
**Test for overall effect: Z = 3.64 (p=0.0001)**

Footnotes
(1) Mean and SD calculated from median and IQR data

### Emotional function

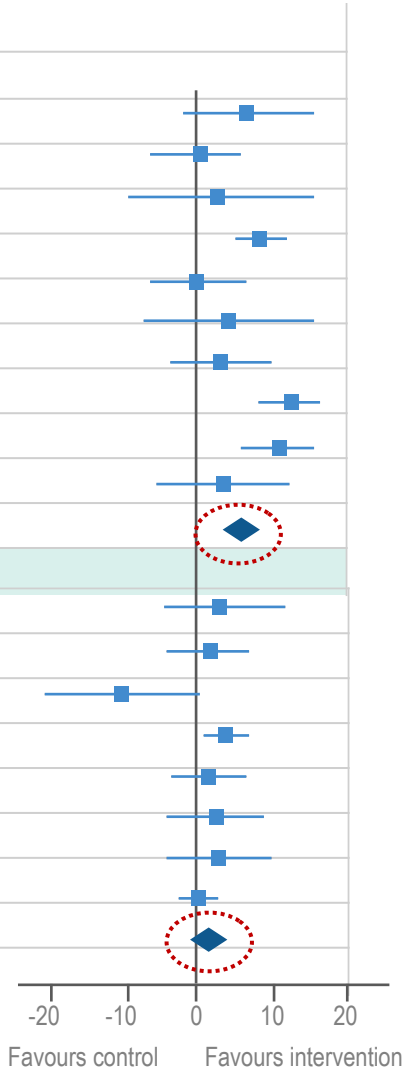
- No evidence of benefit or harm of nurse-led interventions compared with control (usual care / attention control)

**Heterogeneity : Tau¹ = 1.18; Chi² = 8.20; df = 7 (p=0.32): I² = 15%**
**Test for overall effect: Z = 1.61 (p=0.11)**

Footnotes
(1) Mean and SD calculated from median and IQR data

### EORTC QLQ C-30: social function
### Evidence of beneficial effect of nurse-led interventions compared with control (usual care / attention control)

| Study or subgroup | Intervention | | | Control | | | | Mean difference |
|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Total | Mean | SD | Total | Weight | IV, Random, 95% CI |
| Aaronson 2010 | 74.6 | 22.7 | 69 | 67.9 | 29.1 | 66 | 7.7% | 6.70 (-2.13; 15.53) |
| Cheng 2013 | 47.24 | 14.44 | 45 | 47.35 | 14.23 | 41 | 11.2% | -0.11 (-6.17; 5.95) |
| De Wit 2001 | 65.1 | 33.4 | 53 | 62.1 | 12.2 | 51 | 4.8% | 3.00 (-9.61; 15.61) |
| Faithfull 2001 (1) | 91.75 | 8.25 | 53 | 83.25 | 8.25 | 44 | 15.7% | 8.50 (5.20; 11.80) |
| Jefford 2013 | 79.8 | 23.6 | 96 | 79.7 | 23.3 | 107 | 10.6% | 0.10 (-6.36; 6.56) |
| Kim 2011 | 86.18 | 18.404 | 23 | 81.91 | 21.2007 | 22 | 5.4% | 4.27(-7.37; 15.91) |
| Kim 2013 | 35 | 17 | 54 | 32 | 18 | 54 | 10.4% | 3.00 (-3.60; 9.60) |
| Moore 2002 | 83.33 | 9.62 | 76 | 70.85 | 14.45 | 74 | 14.7% | 12.45 (8.54; 16.42) |
| Walker 2009a | 62.2 | 31.8 | 253 | 51.3 | 29.8 | 247 | 12.3% | 10.90 (5.50; 16,30) |
| Walker 2009b | 57.3 | 28.6 | 59 | 54.2 | 25.2 | 71 | 7.2% | 3.10 (-6.26; 12.46) |
| **Total (95% CI)** | | | **781** | | | **777** | **100%** | **5.92 (2.73; 9.12)** |
| Aaronson 2010 | 73.6 | 24.8 | 69 | 70.2 | 23.1 | 66 | 5.5% | 3.40 (-4.68; 11.48) |
| Cheng 2013 | 59.73 | 12.35 | 45 | 57.93 | 11.28 | 41 | 11.4% | 1.80 (-3.64; 7.24) |
| De Wit 2001 | 72.6 | 30 | 53 | 82.5 | 23.6 | 51 | 3.5% | 9.90 (-20.25; 0.45) |
| Faithfull 2001 (1) | 91.75 | 8.25 | 52 | 87.75 | 8.25 | 44 | 25.0% | 4.00 (0.69; 7.31) |
| Jefford 2013 | 83.2 | 18.6 | 96 | 81.8 | 18.5 | 107 | 12.6% | 1.40 (-3.71; 6.51) |
| Kim 2011 | 83.44 | 8.8723 | 23 | 81.05 | 14.3996 | 22 | 7.2% | 2.39 (-4.64; 9.42) |
| Kim 2013 | 57 | 20 | 54 | 54 | 17 | 54 | 7.2% | 3.00 (-4.00; 10.00) |
| Moore 2002 | 83.33 | 9.62 | 76 | 83.33 | 9.62 | 74 | 27.6% | 0.00 (-3.08; 3.08) |
| **Total (95% CI)** | | | **468** | | | **459** | **100%** | **1.61 (-0.35; 3.58)** |



# **Patients with Rare Cancers:**
# Do They Need Specialist Supportive Care?

*Gatellier L- MASCC® 2021 - Joint Session with JASCC/MASSC –*
*Cancer of Unknown Primary and Rare Tumours*

# Patients with Rare Cancers: needs for informations

## Results of a survey in 502 adults cancer patients in Japan

- Source of information related to the disease itself, side effects and complications, *etc*.
  - General trends :

| Source | N=502 |
|---|---|
| Internet | **428 (85%)** |
| Hospital, physician | **332 (66%)** |
| Patient groups | **331 (66%)** |
| Pamphlets/magazines/newspapers | **142 (28%)** |

- Additionally, **44%** of rare cancer patients considered that they could not find sufficient information related to their disease, complications and side effects
  - To fill this gap :

| Extracted from free text | N=44 |
|---|---|
| Blogs | **7 (25%)** |
| Seminars/public lectures/conferences | **6 (21%)** |
| TV/Radio | **5 (18%)** |
| Personal connections | **8 (29%)** |
| Specialists | **2 (7%)** |

# A patient perspective on patient needs in supportive care

- Global overview from patient associations
  - **United States: AACR** Survivor/ Scientist Program Patients Advocate
    - ASCO recommendations: access to supportive care for all patients at cancer diagnosis
    - Not often done in real life, depending of cancer center local situation
    - Lack of knowledge about supportive care local resources both from patients and physicians
    - Lack of coordination around the patient
  - **Europe: EUPATI** -European Patients' Academy on Therapeutic Innovation - Patients Experts
    - Multidisciplinary meetings are welcomed
    - Access to supportive care seems correct in the hospital
    - The patient feels lost at home, because of the lack of coordination outside the hospital

## Solutions:

- **Systematic evaluation of patient need for supportive care at diagnosis**
- **Grant access to patient associations**
- **Implement effective patient care coordination**

# Nursing consultation

*Gyldenvang H. H. et al. - MASCC® 2021 - eposter*

# Nurse-led Consultation for patients diagnosed with breath or gynecological cancer – A pilot study

## RESULTS_Patient's satisfaction (n=109)

| | To a high degree N(%) | To somewhat degree N(%) | To a minor degree N(%) | Almost not N(%) | Not at all N(%) | Not relevant N(%) |
|---|---|---|---|---|---|---|
| I received a fulfilling answer to my question[1] | 93 (85,3%) | 13 (11,9%) | | | | |
| The adressed topics were important to me | 100 (91,7%) | 9 (8,3%) | | | | |
| I was provided with sufficient and appropriate knowledge on how to manage my side-effects[2] | 84 (77%) | 14(12,8%) | | | 1 (0,9%) | 7 (6,4%) |
| I received support to handle any emotional reactions e.g. distress or anxiety (2 missing data) | 58 (53,2%) | 17 (15,6%) | 3 (2,8%) | | 2 (1,8%) | 27 (24,8%) |
| It was my impression that i could be referred to a physician in case I had the need[2] | 55 (53,2%) | 17 (15,6%) | 3 (2,8%) | | 2 (1,8%) | 27 (24,8%) |
| The CNS listened to me | 1,6 (97,2%) | 3 (2,8%) | | | | |

**Only the questions that were common for both gynecological and breast cancer are present*
*1 Missing data (N=3)*
*2 Missing data (N=2)*
*CNS = Clinical nurse specialist*

# Nurse-led Consultation for patients diagnosed with breath or gynecological cancer – A pilot study

## RESULTS: nurses perspectives (n=10)

**The advanced role embraces a holistic model of care**

- Feeling job satisfaction
- A holistic model of nursing
- No taboo subject (intimacy and sexuality)

**NLC improves professionalism**

- Seek for updates knowledge to manage the different issues
- Capable to participate discussion interdisciplinary, improving the interdisciplinary teamwork
- Improved rigor due to increased responsibility

**A framework and organization as a new implementation of new models of care**

- Successful
- Flexible to create the best framework
- Cooperation with the physician