Oncogeriatrics

Dr Sandra De Breucker

With warm thanks to my colleague, Dr Héloïse Rouvière, oncogeriatrician
A PARADOX
60% newly diagnosed cancer occur in 65+

BUT older people are still underrepresented in clinical trials

⇒ Lack of evidence in cancer treatment of older people

HETEROGENEITY of aged (frailty and G profile)

⇒ CHALLENGE to determine the intensity of the treatment fitting best with the patient’s profile

⇒ What are the TIPS AND TRICKS based on actual scientific knowledge?
Should this patient be treated?

Some tips and tricks...
Frailty in oncogeriatrics

Linear Decline Of Organ Reserve With Increasing Age

- Nerve Conduction Velocity
- Basal Metabolic Rate
- Heart Output
- Kidney Blood Flow
- Maximum Breathing Capacity

% Reserve Remaining

Age (years)
Comprehensive Geriatric Assessment

All predictive of toxicity and mortality in old cancer patients (9 studies)

Caillet, Clin Interv in Aging, 2014
# Comprehensive Geriatric Assessment

## Comprehensive Geriatric Assessment CGA

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Instrument</th>
<th>Administration</th>
<th>Prognosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependency, functional status</td>
<td>PS, Activity of Daily Living (ADL), Instrumental ADL</td>
<td>Self administered</td>
<td>+</td>
</tr>
<tr>
<td>Comorbidity</td>
<td>Charlson Comorbidity Index (CCI), Cumulative Illness rating Scale-Geriatric (CIRS-G)</td>
<td>Self- or interviewer-administered or chart-based</td>
<td>+</td>
</tr>
<tr>
<td>Economic / social support</td>
<td>Life conditions, relatives, care-givers</td>
<td>Interviewer-administered or chart-based</td>
<td>?</td>
</tr>
<tr>
<td>Cognition</td>
<td>Folstein Mini-mental State Examination (MMSE)</td>
<td>Interviewer-administered</td>
<td>+</td>
</tr>
<tr>
<td>Depression</td>
<td>Geriatric Depression Scale (GDS)</td>
<td>Self administered</td>
<td>+</td>
</tr>
<tr>
<td>Polypharmacy</td>
<td>List</td>
<td>Interviewer-administered or chart-based</td>
<td>?</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Mini Nutritional Assessment (MNA), BMI</td>
<td>Interviewer-administered</td>
<td>+</td>
</tr>
<tr>
<td>Geriatric syndromes</td>
<td>Dementia, delirium, falls</td>
<td>Interviewer-administered or chart-based</td>
<td>+</td>
</tr>
<tr>
<td>Mobility/falls</td>
<td>Timed-up-and-go test, Tinetti, gait speed</td>
<td>Performance-tests</td>
<td>+</td>
</tr>
</tbody>
</table>
Treatment decisions

CGA influences the oncologist decision in 21 to 49 %

The most predictive (mortality, toxicity) CGA problems are:
- Functional status (ADL, IADL, PS)
- Malnutrition
- Comorbidities

Oncogeriatrics aims to assess potentially reversible conditions before the treatment and to identify and follow at-risk patients

Aparicio, J Clin Oncol, 2013
Caillet, Clin Interv in Aging, 2014
Wildiers, JCO, 2014
Toolbox: Prognostic scales

- Community-dwelling patients (15 months to 10 years)
- Institutionnalized patients (6 months to 1 year)
- Hospitalized patients (1 year after hospital stay, 2 years)
- Patient with advanced stages of cancer

http://eprognosis.ucsf.edu/index.php
Toolbox: Prognostic scales
### Aide à l’estimation de la survie : Score de Lee
Permet d’estimer le risque de mortalité à 4 ans chez des sujets âgés par un auto-questionnaire

<table>
<thead>
<tr>
<th>Score</th>
<th>% de décès à 4 ans</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>&lt; 4%</td>
</tr>
<tr>
<td>6-9</td>
<td>15%</td>
</tr>
<tr>
<td>10-13</td>
<td>42%</td>
</tr>
<tr>
<td>≥ 14</td>
<td>64%</td>
</tr>
</tbody>
</table>

1. Age
   - 60-64 : 1 point
   - 65-69 : 2 points
   - 70-74 : 3 points
   - 75-79 : 4 points
   - 80-84 : 5 points
   - 85+ : 7 points

2. Sexe
   - Male : 2 points
   - < 25 : 1 point

3. IMC
   - Diabète : 2 points

4. Est-ce qu’un docteur vous a déjà parlé de diabète ou d’un excès de sucre ?
   - Cancer : 2 points

5. Est-ce qu’un médecin vous a parlé de cancer ou de tumeur maligne, excepté les petits cancers de la peau ?
   - Maladie pulmonaire : 2 points

6. Avez-vous une maladie chronique du poumon qui limite vos activités habituelles ou nécessite de l’oxygène à la maison ?
   - Insuffisance cardiaque : 2 points

7. Est qu’un docteur vous a parlé d’insuffisance cardiaque congestive ?
   - Tabac récent : 2 points

8. Avez-vous fumé des cigarettes durant la dernière semaine ?
   - Bain : 2 points

9. Du fait de problèmes de santé ou de mémoire, avez-vous des difficultés à prendre un bain ou une douche ?
   - Finances : 2 points

10. Du fait de problèmes de santé ou de mémoire, avez-vous des difficultés à gérer votre argent, comme payer des factures ou faire vos comptes ?
    - Marche : 2 points

11. Du fait de problème de santé, avez-vous des difficultés à marcher quelques centaines de mètres ?
    - Pousser ou tirer : 1 point

12. fait de problème de santé, avez-vous des difficultés à tirer ou pousser de gros objets comme un fauteuil par exemple ?
    - Total des points :

---

*Lee et al. JAMA 2006;295:801-“*
Breast cancer: PREDICT: prognostic score at 5 and 10 years without neoadjuvant treatment and with different types of treatments (hormonal treatment; chemotherapy; targeted therapies)
Treatment options

Some tips and tricks...
Surgery

More than 50% of old surgical patients are admitted for cancer surgery

Urgent surgery induces higher rates of complications

Perioperative management is crucial for elective surgery: geriatric follow-up is recommended

Screening of risk of delirium! Preventive measures

Korc- Grodzicki, JCO, 2014
Radiation therapy

Assess the feasibility (don’t move!), the risks and benefits

High risk of adverse effects, but interruption of treatment lowers the benefit. Fraction

Concomitant RT and chemotherapy increases the toxicity level

Radiation mucositis: consider pain killers and nutritional support

Late toxicities are common
Chemotherapy

Same efficacy than younger patients, but higher levels of toxicity

Interruptions of treatments are common in old patients: loss of chance! Prefer a lower dose to interruption

Nauseas, vomitings, diarrheas are less frequent
Mucositis and hematological toxicity are more frequent
Renal toxicity (CisPt)
Cardiac toxicity (Anthracyclines)
Neurological toxicity (Thalidomid)
Fatigue +++
Toolbox: prediction tool for chemo toxicity

**Prediction Tool for Chemotherapy Toxicity** in Older Adults With Cancer: CARG

11 items: predicts grades 3, 4 & 5 of toxicity in solid cancers (65–94 years old) – external validation on 250 patients

- Low risk
- Moderate risk
- High risk

Hurria, JCO, 2016
<table>
<thead>
<tr>
<th>Variable</th>
<th>Value/Response</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of patient</td>
<td>≥ 72 years</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>&lt; 72 years</td>
<td>0</td>
</tr>
<tr>
<td>Cancer type</td>
<td>Gl or GU cancer</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Other cancer types</td>
<td>0</td>
</tr>
<tr>
<td>Planned chemotherapy dose</td>
<td>Standard dose</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Dose reduced upfront</td>
<td>0</td>
</tr>
<tr>
<td>Planned No. of chemotherapy drugs</td>
<td>Polychemotherapy</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Monochemotherapy</td>
<td>0</td>
</tr>
<tr>
<td>Hemoglobin</td>
<td>&lt; 11 g/dL (male), &lt; 10 g/dL (female)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>≥ 11 g/dL (male), ≥ 10 g/dL (female)</td>
<td>0</td>
</tr>
<tr>
<td>Creatinine clearance (Jeliffe, ideal weight)</td>
<td>&lt; 34 mL/min</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>≥ 34 mL/min</td>
<td>0</td>
</tr>
<tr>
<td>How is your hearing (with a hearing aid, if needed)?</td>
<td>Fair, poor, or totally deaf</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Excellent or good</td>
<td>0</td>
</tr>
<tr>
<td>No. of falls in the past 6 months</td>
<td>≥ 1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Can you take your own medicine?</td>
<td>With some help/unable</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Without help</td>
<td>0</td>
</tr>
<tr>
<td>Does your health limit you in walking one block?</td>
<td>Somewhat limited/limited a lot</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Not limited at all</td>
<td>0</td>
</tr>
<tr>
<td>During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc)?</td>
<td>Limited some of the time, most of the time, or all of the time</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Limited none of the time or a little of the time</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Risk Score</th>
<th>%Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>0 to 3</td>
</tr>
<tr>
<td></td>
<td>4 to 5</td>
</tr>
<tr>
<td>Mid</td>
<td>6 to 7</td>
</tr>
<tr>
<td></td>
<td>8 to 9</td>
</tr>
<tr>
<td>High</td>
<td>10 to 11</td>
</tr>
<tr>
<td></td>
<td>12 to 19</td>
</tr>
</tbody>
</table>
Toolbox : prediction tool for chemo toxicity

- Chemotherapy Risk Assessment Scale for High-Age Patients
  = **CRASH Score**

Predicts grades 3, 4 non hematological toxicity and grade 4 hematological toxicity in solid cancers (70-94 years old) – No external validation

Low risk
Low to moderate risk
Moderate to high risk
High risk

Extermann, Cancer, 2012
### CRASH (Chemotherapy Risk Age Scale for High Risk Patients) Scoring Analysis

<table>
<thead>
<tr>
<th>Chemotherapy risk (see table)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hematologic risk factors</td>
<td></td>
</tr>
<tr>
<td>Diastolic blood pressure (greater than 72 = 1)</td>
<td></td>
</tr>
<tr>
<td>IADL (less than 26 = 1)</td>
<td></td>
</tr>
<tr>
<td>LDH (greater than 459 = 2)*</td>
<td></td>
</tr>
<tr>
<td>Non-hematologic risk factors</td>
<td></td>
</tr>
<tr>
<td>ECOG PS (1-2 = 1; 3-4 = 2)</td>
<td></td>
</tr>
<tr>
<td>MMS (less than 30 = 2)</td>
<td></td>
</tr>
<tr>
<td>MNA (less than 28 = 2)</td>
<td></td>
</tr>
<tr>
<td>Heme score (incl. chemo risk)</td>
<td></td>
</tr>
<tr>
<td>Non-heme score (incl. chemo risk)</td>
<td></td>
</tr>
<tr>
<td>Combined score (count chemo risk only once)</td>
<td></td>
</tr>
</tbody>
</table>

### Table 6. Example of Toxicity of the Chemotherapy Regimen (Chemotox) Values for Various Chemotherapy Regimens

<table>
<thead>
<tr>
<th>CRASH Points&lt;sup&gt;b&lt;/sup&gt;</th>
<th>0</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capecitabine 2g</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Carboplatin</td>
<td></td>
<td>5-FU/LV (Roswell-Park)</td>
</tr>
<tr>
<td>Gemcitabine AUC 2.5 g</td>
<td></td>
<td>5-FU/LV (Mayo)</td>
</tr>
<tr>
<td>Paclitaxel weekly</td>
<td></td>
<td>5-FU/LV and bevacizumab</td>
</tr>
<tr>
<td>ECF</td>
<td></td>
<td>CAF</td>
</tr>
<tr>
<td>Gemcitabine 1 g</td>
<td></td>
<td>Carboplatin/docetaxel q3w</td>
</tr>
<tr>
<td>Gemcitabine 1.25 g</td>
<td></td>
<td>CHOP</td>
</tr>
<tr>
<td>Gemcitabine 1.25 g q3w</td>
<td></td>
<td>Cisplatin/docetaxel 75/75</td>
</tr>
<tr>
<td>Paclitaxel weekly</td>
<td></td>
<td>Cisplatin/etoposide</td>
</tr>
<tr>
<td>Pemetrexed</td>
<td></td>
<td>Carboplatin/gemcitabine d1,d8,d15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Carboplatin/paclitaxel 135-24 h q3w</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CMF classic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doxorubicin q2w</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FOLFOX 85 mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gemcitabine/nimotepan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEG doxorubicin 50 mg q4w</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Topotecan weekly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>XELOX</td>
</tr>
</tbody>
</table>

### Individual risk

<table>
<thead>
<tr>
<th>Sample</th>
<th>CRASH score (points / % with severe toxicity)</th>
<th>Risk Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Derivation (n=347)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Derivation (n=347)</td>
<td>0-1: 7%</td>
<td>0-2: 33%</td>
</tr>
<tr>
<td>Derivation (n=347)</td>
<td>2-3: 23%</td>
<td>3-4: 46%</td>
</tr>
<tr>
<td>Derivation (n=347)</td>
<td>4-5: 54%</td>
<td>5-6: 67%</td>
</tr>
<tr>
<td>Derivation (n=347)</td>
<td>Greater than 5: 100%</td>
<td>Greater than 6: 93%</td>
</tr>
<tr>
<td>Validation</td>
<td>0-1: 12%</td>
<td>0-2: 42%</td>
</tr>
<tr>
<td>Validation</td>
<td>2-3: 35%</td>
<td>3-4: 59%</td>
</tr>
<tr>
<td>Validation</td>
<td>4-5: 45%</td>
<td>5-6: 66%</td>
</tr>
<tr>
<td>Validation</td>
<td>Greater than 5: 50%</td>
<td>Greater than 6: 100%</td>
</tr>
</tbody>
</table>

**Ref:** Extermann et al., ASCO 2010

**Warning:** This score is for use by oncologists familiar with chemotherapy administration. It is aimed at supporting clinical decision making and should in no way supersede it. It is to be used in addition to drug-specific dose adaptations. Further individual or treatment plan characteristics might lead the oncologist to depart from these risk estimates.
### Chemotherapy Risk

#### Hematologic Risk Factors

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diastolic blood pressure</td>
<td>0</td>
</tr>
<tr>
<td>ADL</td>
<td>0</td>
</tr>
<tr>
<td>LDH</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Non-Hematologic Risk Factors

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECOG PS</td>
<td>0</td>
</tr>
<tr>
<td>MMS</td>
<td>0</td>
</tr>
<tr>
<td>MNA</td>
<td>0</td>
</tr>
</tbody>
</table>

### CRASH Points (Regimens not listed should be scored by analogy)

<table>
<thead>
<tr>
<th>CRASH Points</th>
<th>Regimen 1</th>
<th>Regimen 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Regimen 1**: Bendamustine +/- rituximab
- **Regimen 2**: 5-FU/LV (Roswell-Park)

- **Regimen 1**: Carboplatin/pemetrexed
- **Regimen 2**: 5-FU/LV (Mayo)

- **Regimen 1**: Carboplatin/gemcitabine AUC 4.6/1g d1,d8
- **Regimen 2**: 5-FU/LV + bevacizumab

- **Regimen 1**: Carboplatin/pemetrexed
- **Regimen 2**: AC

- **Regimen 1**: Carboplatin/gemcitabine d1,8
- **Regimen 2**: CAF

- **Regimen 1**: Gemcitabine 1g 3/4 weeks
- **Regimen 2**: ECF

- **Regimen 1**: Gemcitabine 1.25g 3/4 weeks
- **Regimen 2**: Fludarabine

- **Regimen 1**: Paclitaxel weekly +/- trastuzumab
- **Regimen 2**: FOLFOX 65mg (e.g. FOLFOX4 or mFOLFOX6)

- **Regimen 1**: Gemcitabine 7/8 weeks then 3/4
- **Regimen 2**: PEG doxorubicin 50mg q4w

- **Regimen 1**: Gemcitabine/irinotecan
- **Regimen 2**: Cladribine/gemcitabine d1,8,15

- **Regimen 1**: Topotecan weekly
- **Regimen 2**: Cladribine/paclitaxel 135-240q3w

- **Regimen 1**: XELOX
- **Regimen 2**: CMF classic

- **Regimen 1**: XELOX
- **Regimen 2**: Docetaxel q3w

- **Regimen 1**: XELOX
- **Regimen 2**: Doxorubicin q3w

- **Regimen 1**: XELOX
- **Regimen 2**: Eribulin

- **Regimen 1**: XELOX
- **Regimen 2**: FCR

- **Regimen 1**: XELOX
- **Regimen 2**: FOLFOX 100-130 mg

- **Regimen 1**: Gemcitabine/pemetrexed qd
- **Regimen 2**: Irinotecan q3w

- **Regimen 1**: Gemcitabine/pemetrexed qd
- **Regimen 2**: Irinotecan q3w
Geriatric interventions

Some tips and tricks...
# Validated geriatric interventions

## Functional status
- Physiotherapy @ home
- Occupational therapy @ home
- Home nursing care
- Home security
- Assessment of risk of falling
- Promote physical exercise
- Screening and assessment of osteoporosis

## Cognition
- Involve the proxy caregivers
- Reduce potentially inappropriate medications
- Preventive measures of delirium
- Assess the ability to understand and acknowledge the treatment
- Identify the relatives / collaborative decisions
- Perform neuropsychological testing
## Validated geriatric interventions

<table>
<thead>
<tr>
<th>Social support/ Caregiver burden</th>
<th>Psychological status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation assistance to the hospital</td>
<td>Non pharmacological care: meditation, relaxation, acupuncture</td>
</tr>
<tr>
<td>Home care</td>
<td>Exercise program</td>
</tr>
<tr>
<td>Support groups</td>
<td>Psychological support</td>
</tr>
<tr>
<td>Psychological support</td>
<td>Medication for anxiety, depression</td>
</tr>
<tr>
<td>Spiritual assistance</td>
<td>Support programs, stress management</td>
</tr>
<tr>
<td></td>
<td>Spiritual assistance</td>
</tr>
</tbody>
</table>

NCCN Guidelines version 2.2017
Validated geriatric interventions

<table>
<thead>
<tr>
<th>Nutrition</th>
<th>Dietician advice + follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dietetic recommendations</td>
</tr>
<tr>
<td></td>
<td>Oral care</td>
</tr>
<tr>
<td></td>
<td>Nutritional support (oral, enteral)</td>
</tr>
<tr>
<td></td>
<td>If functional impairment : occupational therapist, physiotherapy, home care, meals on wheels, caregiver involvement, vitamin D</td>
</tr>
</tbody>
</table>

NCCN Guidelines version 2.2017
Medical interventions

Some tips and tricks...
Anémie

- Complications cardiaques
- Déclin fonctionnel
- Chutes
- Mortalité
- Déclin cognitif
- Dépression
- Chimiototoxicité
- Fatigue

Beghé, Am J Med, 2004
NCCN Guidelines, 2017
ANEMIA - WORKUP

Etiological assessment

Transfusion according to Hb level, tolerance and comorbidities

The use of erythropoietin is controversial

NCCN Guidelines, 2018
Hb level ≤11g/dL

Asymptomatic – no significant comorbidity
- Observe
- Periodical assessment

High risk patient (progressive loss of Hb and recent chemo or radiotherapy)
- Transfusion

Or

Asymptomatic with comorbidities:
- cardiac
- pulmonary
- cerebrovascular

Symptomatic:
- Tachycardia, tachypnea, chest pain, dyspnea, dizziness, syncope, fatigue limiting the achievement of ADLs
- Transfusion

NCCN Guidelines, 2018
FEBRILE NEUTROPENIA

NEUTROPENIA = PMN <500 /mm$^3$
    or WBC <1000/mm$^3$
    (or waited in the next 48h)
→ Higher risk of major infection when PMN < 100/mm$^3$

FEBRILE = oral $T^\circ \geq 38,3^\circ C$ or $\geq 38^\circ C$ for $>1h$

►►► EMERGENCY
LOW RISK: chemo for solid tumors, myeloma, lymphoma

INTERMEDIATE: stem cell autograft

HIGH RISK:
- Induction and consolidation of acute leukemia
- Allograft of marrow and stem cells
- Myelosuppression
FEBRILE NEUTROPENIA

Worrying signs:

Presence of infection on a "major" site:

- **LUNG** Pneumonia
- **PERINEAL** Cellulitis
- **SKIN** Cellulitis

Or

Hemodynamic instability
### LOW RISK FEBRILE NEUTROPENIA

**Table: Characteristic and Weight**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burden of febrile neutropenia with no or mild Symptoms¹</td>
<td>5</td>
</tr>
<tr>
<td>No hypotension (systolic BP &gt; 90 mm Hg)</td>
<td>5</td>
</tr>
<tr>
<td>No chronic obstructive pulmonary disease²</td>
<td>4</td>
</tr>
<tr>
<td>Solid tumor or hematological malignancy with no previous fungal infection³</td>
<td>4</td>
</tr>
<tr>
<td>No dehydration requiring parenteral fluids</td>
<td>3</td>
</tr>
<tr>
<td>Burden of febrile neutropenia with moderate Symptoms⁴</td>
<td>3</td>
</tr>
<tr>
<td>Outpatient status</td>
<td>3</td>
</tr>
<tr>
<td>Age &lt;60 years</td>
<td>2</td>
</tr>
</tbody>
</table>

**Score > 20 : low risk**

LOW RISK FEBRILE NEUTROPENIA

MASCC ≥ 21

Hospital supervision from 2 to 24 hours

Cipro + Amoxi / clav. or Cipro + Clindamycin if allergy during 7 jours

If not better after 48h or worrying signs : hospitalization
NAUSEAS - VOMITINGS

Impact majeur sur la qualité de vie

Impact sur l’adhérence

Déshydratation

Troubles ioniques
NAUSEAS - VOMITINGS

Risk of toxicity of anti-emetic drugs

Ex. 5HT3 Antagonists: prolonged QT, constipation, headache
Dexamethasone: insomnia, hyperglycemia

No specific guidelines for older people

Metoclopramide well tolerated

## Diarrhea

<table>
<thead>
<tr>
<th>Category</th>
<th>Cause</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretary</td>
<td>Perturbation of secretory pumps of enterocytes</td>
<td>IRINOTECAN 5-FU</td>
</tr>
<tr>
<td>Osmotic</td>
<td>Osmotic effects, water retention</td>
<td>IRINOTECAN</td>
</tr>
<tr>
<td>Motility</td>
<td>Faster intestinal motility</td>
<td>IMMUNO-THERAPY</td>
</tr>
<tr>
<td>Immune-Mediated</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DIARRHEA - WORKUP

- Stop food containing lactose
- Stop alcohol
- Stop hyperosmolar supplements (ONS)
- Rehydration treatment
- Small multiple meals
- Discuss interruption of chemotherapy

- Loperamide (NB: clostridium) 4mg then 2mg/4h
- Octreotide if oral treatment not effective after 24/48h

Benson, JCO, 2004
Andreyev, Lancet Oncol. 2014
NCCN guidelines, 2017
MUCOSITIS

Higher risk with age

Oral healthcare
Oral bath care (bicarbonate + antiseptic solution)
Pain killers
Ice blocks
Antifungal treatment
IV hydration
Follow up of nutrition

Hospitalization if mucositis associated with dysphagia or diarrhea
MUCOSITIS

NCCN, Task force report, 2008
Follow-up in oncogeriatrics

Some tips and tricks...
How to organize the follow-up?

►►► A REAL CHALLENGE!

A good level of communication between the stakeholders

Table 2. Healthcare professionals* who should be part of an elderly oncology patient, QoL-focused, MDT, with team make-up tailored according to patient needs

- Medical oncologist
- Geriatrician
- Palliative medicine specialist
- Oncology nurse practitioner (in countries were available; oncology nurse for other countries)
- Pain specialist
- General practitioner
- Nutritionist
- Psycho-oncologist
- Social worker (financial, family needs, disability expenses (e.g. wheelchairs etc.))
- Physiotherapist
- Pharmacist

- Important consultants to the oncology team such as:
  - Dermatologist
  - Cardiologist (trained in cardiotoxicity of oncological treatments)
  - Neurologist
  - Pneumologist
  - Endocrinologist
  - Surgeon
  - Radio oncologist
  - Nephrologist
  - Psychiatrist
  - Ear, nose and throat specialist (ENT)
  - Rheumatologist
  - Ophthalmologist
  - Sexual health specialist
  - Allied health professionals in the community and in hospitals
  - Care-home staff
  - Self-help and support groups, patient advocacy associations
  - Clerics (or spiritual helper)
  - Volunteers
How to organize the follow-up?

- G8
- CGA
- CMOG
- Oncogeriatric follow-up
- Death from another cause
- Cancer diagnosis and workup
- Oncological treatments
- Progression-free survival
- Recurrence
How to organize the follow-up?

ONCOGERIATRIC FOLLOW-UP IN OUR HOSPITAL

- Combined consultation with the oncologist (1x/w)
- Multidisciplinary oncogeriatric meetings (1x/w): treatment plan
- Involvement of all oncological coordinating nurses (G8)
- Continuing education for nurses
- Implication in Young SIOG courses and SIOG congresses:
  Very dynamic working group in Belgium: join them!
How to organize the follow-up?

DIFFERENT MODELS OF FOLLOW-UP

- Consultative model: CGA + recommendations
- Shared model: collaboration between geriatricians and oncologists
- Full care model: geriatric oncologist and oncological geriatrician

Monfardini, SIOG Advanced course 2018
How to organize the follow-up?

**Follow-up of old cancer patients in the world?**

- **Belgium, Netherlands, France, Norway, Switzerland**: good cooperation between oncologists and geriatricians

- **Italy**: central funding for oncologists, a dozen of geriatric oncology units, less cooperation with geriatricians

- **Other countries of UE**: no collaboration with geriatricians

Monfardini, SIOG Advanced course 2018
How to organize the follow-up?

ONCOGERIATRIC FOLLOW-UP IN BELGIUM

Cancer plan

But … still a great heterogeneity

No more funding for oncogeriatric nurses