CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING
CLINICIAN’S RESOURCE GUIDE

The clinical tools and resources contained herein are provided as educational adjuncts to the CE-certified online activity, Preventing and Mitigating Chemotherapy-Induced Nausea and Vomiting in High-Risk Patients. To access the activity and earn CE credit visit:

https://www.i3health.com/CINV

CONTENTS

I: MASCC Antiemesis Tool (MAT) .............................................................................................................2
II: NCI-CTCAE Version 4.03: Chemotherapy-Induced Nausea and Vomiting.........................3
III: Functional Living Index-Emesis (FLIE) ..........................................................................................4
IV: Rhodes Index of Nausea, Vomiting, and Retching (INVR).........................................................5
V: Emetic Risk of Intravenous Antineoplastic Agents: High and Moderate ......................6
VI: Emetic Risk of Oral Antineoplastic Agents.....................................................................................7
VII: Online Nausea and Vomiting Risk Assessment Tool: http://www.riskcinv.org...........8
VIII: Types of Chemotherapy-Induced Nausea and Vomiting......................................................9
I: MASCC ANTIEMESIS TOOL (MAT)

### Nausea and Vomiting during the first 24 hours after chemotherapy:
(This page refers to the first 24 hours following chemotherapy):

1) In the 24 hours since chemotherapy, did you have any **vomiting**?  
   - **Yes** ☐  
   - **No** ☐  
   (Select one)

2) If you vomited in the 24 hours since chemotherapy, how many **times** did it happen?  
   (Write the number of times in this box)

3) In the 24 hours since chemotherapy, did you have any **nausea**?  
   - **Yes** ☐  
   - **No** ☐  
   (Select one)

4) If you had nausea, please circle or enter the number that most closely resembles your experience.  
   How much nausea did you have in the last 24 hours?  
   ![Nausea scale](image)

### Delayed Nausea and Vomiting

5) Did you **vomit** 24 hours or more after chemotherapy?  
   - **Yes** ☐  
   - **No** ☐  
   (Select one)

6) If you vomited during this period, how many **times** did it happen?  
   (Write the number of times in this box)

7) Did you have any **nausea** 24 hours or more after chemotherapy?  
   - **Yes** ☐  
   - **No** ☐  
   (Select one)

8) If you had nausea, please circle or enter the number that most closely resembles your experience.  
   How much nausea did you have over this time period?  
   ![Nausea scale](image)

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## II: NCI-CTCAE VERSION 4.03: CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING

<table>
<thead>
<tr>
<th>Adverse Event</th>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
<th>Grade 4</th>
<th>Grade 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nausea</td>
<td>Loss of appetite without alteration in eating habits</td>
<td>Oral intake decreased without significant weight loss, dehydration, or malnutrition</td>
<td>Inadequate oral caloric or fluid intake; tube feeding, TPN, or hospitalization indicated</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vomiting</td>
<td>1–2 episodes (separated by 5 min) in 24 hr</td>
<td>3–5 episodes (separated by 5 min) in 24 hr</td>
<td>≥6 episodes (separated by 5 min) in 24 hr; tube feeding, TPN, or hospitalization indicated</td>
<td>Life-threatening consequences; urgent intervention indicated</td>
<td>Death</td>
</tr>
</tbody>
</table>


NCI-CTCAE = National Cancer Institute Common Terminology Criteria for Adverse Events.

TPN = Total parenteral nutrition.
III: FUNCTIONAL LIVING INDEX-EMESIS (FLIE)

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much nausea (vomiting) have you had in the past 3 days?</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Has nausea (vomiting) affected your ability to maintain usual recreation or leisure activities in the past 3 days?</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Has nausea (vomiting) affected your ability to complete your usual household tasks during the past 3 days?</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>How much has nausea (vomiting) affected your ability to enjoy a meal in the past 3 days?</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>How much has nausea (vomiting) affected your ability to enjoy liquid refreshment in the past 3 days?</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>How much has nausea (vomiting) affected your willingness to see and spend time with family and friends in the past 3 days?</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Has nausea (vomiting) affected your daily functioning in the past 3 days?</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Rate the degree to which nausea (vomiting) has imposed a hardship on you (personally) in the past 3 days.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Rate the degree to which nausea (vomiting) has imposed a hardship on those closest to you in the past 3 days.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

*The phrase "in the past 3 days" can be adjusted.

IV: RHODES INDEX OF NAUSEA, VOMITING, AND RETCHING (INVR)

V: EMETIC RISK OF INTRAVENOUS ANTINEOPLASTIC AGENTS: HIGH AND MODERATE

<table>
<thead>
<tr>
<th>Emetic Risk</th>
<th>Agents</th>
</tr>
</thead>
</table>
| **High**      | - AC combination defined as any chemotherapy regimen that contains an anthracycline and cyclophosphamide  
                - Carboplatin AUC ≥4  
                - Carmustine >250 mg/m²  
                - Cisplatin  
                - Cyclophosphamide ≥1,500 mg/m²  
                - Dacarbazine  
                - Doxorubicin ≥60 mg/m²  
                - Epirubicin >90 mg/m²  
                - Ifosfamide ≥2 g/m² per dose  
                - Mechlorethamine  
                - Streptozotocin |
| **Moderate**  | - Aldesleukin >12-15 million IU/m²  
                - Amifostine >300 mg/m²  
                - Arsenic trioxide  
                - Azacitidine  
                - Bendamustine  
                - Busulfan  
                - Carboplatin AUC <4  
                - Carmustine ≤250 mg/m²  
                - Clofarabine  
                - Cyclophosphamide (<1,500 mg/m²)  
                - Cytarabine >200 mg/m²  
                - Dactinomycin  
                - Daunorubicin  
                - Dinotuximab  
                - Doxorubicin <60 mg/m²  
                - Epirubicin ≤90 mg/m²  
                - Idarubicin  
                - Ifosfamide <2 g/m² per dose  
                - Interferon alfa ≥10 million IU/m²  
                - Irinotecan  
                - Melphalan  
                - Methotrexate ≥250 mg/m²  
                - Oxaliplatin  
                - Temozolomide  
                - Trabectedin |

AC = doxorubicin hydrochloride/cyclophosphamide; AUC = area under the concentration-time curve; IU = international unit.
### VI: EMETIC RISK OF ORAL ANTI NEOPLASTIC AGENTS

<table>
<thead>
<tr>
<th>Emetic Risk</th>
<th>Agents</th>
</tr>
</thead>
</table>
| Moderate to High ≥30% frequency of emesis | • Altretamine  
• Busulfan ≥4 mg/d  
• Ceritinib  
• Crizotinib  
• Cyclophosphamide ≥100 mg/m²/d  
• Estramustine  
• Etoposide  
• Lenvatinib  
• Lomustine (single day)  
• Mitotane  
• Olaparib  
• Panobinostat  
• Procarbazine  
• Rucaparib  
• Temzolomide >75 mg/m²/d  
• Trifluridine/tipiracil |

VII: ONLINE NAUSEA AND VOMITING RISK ASSESSMENT TOOL: HTTP://WWW.RISKCINV.ORG

Overview

This custom assessment will show your patient's CINV Risk for those receiving IV medication.

This tool predicts the risk of developing grade II CINV or more. It considers both the emetogenicity of the chemotherapy (based on MASCC/ESMO international guideline classification*) and patient-related risk factors.

Risk factors and CINV outcomes data were obtained from 1198 patients receiving a total of 4197 cycles of chemotherapy.

According to the NCI-CTC*, grade II CINV is defined as 3-5 emesis events (separated by 5 minutes) in 24 hours.


References

Medical Review Board: Matt Aapro, Karin Jordan, David War, Eric Roeland, Alex Molassiotis, Pascale Dielenseger, George Druitsa, Lee Schwartzberg
### VIII: TYPES OF CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>- Occurs and resolves within 24 hours of chemotherapy</td>
</tr>
<tr>
<td></td>
<td>- Typically peaks within 5-6 hours</td>
</tr>
<tr>
<td>Delayed</td>
<td>- Occurs 1-5 days after chemotherapy</td>
</tr>
<tr>
<td></td>
<td>- Common with administration of cisplatin, carboplatin, cyclophosphamide, and doxorubicin</td>
</tr>
<tr>
<td>Anticipatory</td>
<td>- Feeling of nausea or vomiting prior to chemotherapy</td>
</tr>
<tr>
<td></td>
<td>- Conditioned response</td>
</tr>
<tr>
<td></td>
<td>- Occurs in 25-50% of patients</td>
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<tr>
<td>Breakthrough</td>
<td>- Occurs despite prophylactic treatment</td>
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<tr>
<td></td>
<td>- Requires rescue therapy</td>
</tr>
<tr>
<td></td>
<td>- Can be acute or delayed</td>
</tr>
<tr>
<td>Refractory</td>
<td>- Occurs during chemotherapy cycle after prophylaxis and/or rescue therapy has failed in earlier cycles</td>
</tr>
</tbody>
</table>