

# ONS Chemotherapy Immunotherapy Certificate Exam (2023/ 2024 Update) Questions and Verified Answers|100% Correct- Grade A

**Q:** How is relative dose intensity (RDI) calculated?

**Answer:**

By comparing the dose that the patient ACTUALLY received to the planned dose of the standard regimen

**Q:** How do alkylating agents work?

**Answer:**

By causing a break in the DNA helix strand, interfering with DNA replication and causing cell death

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**Q:** 3 subcategories of alkylating agents:

**Answer:**

1. Nitrogen mustards
2. Platinum-based agents (do not possess an alkyl group but still termed alkylating agents as they work similarly)
3. Nitrosoureas

**Q:** Most common subcategory of alkylating agents:

**Answer:**

Nitrogen mustards

**Q:** Common alkylating agents:

**Answer:**

Cyclophosphamide (Cytosan)  
Ifosfamide (Ifex)  
Bendamustine (Treanda)

**Q:** Common platinum-based agents:

**Answer:**

Cisplatin (Platinol)  
Carboplatin (Paraplatin)

**Q:** What is unique about nitrosoureas agents?

**Answer:**

Able to cross the blood-brain barrier; can be effective in treating some brain tumors

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**Q:** Common nitrosoureas agents:

**Answer:**

Carmustine (BiCNU)  
Lomustine (CeeNu)  
Streptozocin (Zanosar)

**Q:** Hypersensitivity can occur with late doses of:

**Answer:**

Carboplatin

**Q:** These agents are typically categorized as highly emetogenic:

**Answer:**

1. Alkylating agents
2. Nitrosoureas

**Q:** Pre-administration labs for alkylating agents and nitrosoureas:

**Answer:**

BUN  
Creatinine  
CBC w/ diff

**Q:** What is the medication Mesna used for?

**Answer:**

Bladder protectant with administration of cyclophosphamide or ifosfamide

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**Q:** Instruct pts receiving \_\_\_\_\_ to avoid exposure to cold air and consuming cold fluids for 3-4 days following treatment

**Answer:**

Oxaliplatin

**Q:** How do antimetabolites function?

**Answer:**

By blocking DNA and RNA growth by interfering with enzymes needed for normal cell metabolism

**Q:** Antimetabolites work in the \_\_\_ phase.

**Answer:**

S

**Q:** What types of cells are best affected by antimetabolites?

**Answer:**

Cells with high division rates

**Q:** Common side effects of antimetabolites:

**Answer:**

Myelosuppression

GI toxicities

Photosensitivity

Hand-foot syndrome

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**Q:** Common antimetabolite drugs:

**Answer:**

Azacitidine

Capecitabine

5-FU

Cytarabine

Decitabine

Methotrexate

**Q:** The institute for Safe Medication Practices recommends what route of administration for vincristine?