



Preventing and Treating Diarrhea Related to Chemotherapy and/or Radiation Therapy

Definition List

Term	Definition
Controlled Diarrhea (CD)	Administration of laxative treatment to avoid long contact time of irinotecan metabolite with the bowel mucosa. Reference: Takeda (2001)
Eastern Cooperative Oncology Group (ECOG) Common Toxicity Criteria for Diarrhea	0. None 1. Increase of 2–3 stools per day over pre-Rx 2. Increase of 4–6 stools per day, or nocturnal stools, or moderate cramping 3. Increase of 7–9 stools per day, or incontinence, or severe cramping 4. Increase of 10 or more stools per day, or grossly bloody diarrhea, or need for parenteral support ECOG (2007)
Glutamine	Glutamine is the most abundant amino acid in the body, comprising 60% of the free amino acid pool. Glutamine requirements increase during periods of metabolic stress and, therefore, glutamine is considered a conditionally essential amino acid. Glutamine is the primary fuel for rapidly dividing cells, including enterocytes, colonocytes, fibroblasts, and lymphocytes. Individuals deficient in glutamine often present with changes in gastrointestinal morphology, resulting in bacterial translocation, malabsorption, and diarrhea. Individuals deficient in glutamine also may present with impaired wound healing and/or impaired immune function. Savy (2002)
Kremezin™	An oral adsorbent consisting of spherical microcrystalline carbonaceous particles with oxygen complex, including surface oxides. It is given to delay the progression of chronic renal failure by removing uraemic toxins and their precursors from the gastrointestinal tract. It is available in Japan (Daiichi Sankyo, Inc.) Micromedix (2008)
National Cancer Institute Common Toxicity Criteria (CTCAE version 3.0)	National Cancer Institute Common Toxicity Criteria for Diarrhea 1. Increase of less than four stools per day over baseline; mild increase in ostomy output compared to baseline/ 2. Increase of four to six stools per day over baseline; IV fluids indicated 24 hours or less; moderate increase in ostomy output compared to baseline; not interfering with activities of daily living (ADL). 3. Increase of seven or more stools per day over baseline; incontinence; IV fluids 24 hours or more; hospitalization; severe increase in ostomy output compared to baseline; interfering with ADL. 4. Life-threatening consequences (e.g., hemodynamic collapse)



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	<p>5. Death</p> <p>NCI (2006)</p>
Oral alkalization	<p>Alkalization of the intestinal lumen. SN-38, the active metabolite or irinotecan, has absorption characteristics of weakly basic drugs. Alkalization of the intestinal lumen might reduce reabsorption of SN-38 and its attendant side effects.</p> <p>Takeda (2001)</p>
Probiotics	<p>Probiotics are defined as “live microorganisms which, when administered in adequate amounts, confer a health benefit on the host” (Reid et al, 2003). These microorganisms are capable of colonizing the intestinal tract, altering the microflora, and exerting a positive effect on the host (Delia 2007). The mechanism(s) by which probiotics exert positive effects remains to be elucidated, but purported mechanisms include the following: (1) antagonizing pathogens through the production of antimicrobial and/or antibacterial compounds; (2) decreasing gut pH by stimulating lactic-acid producing bacteria; (3) preventing colonization of pathogenic microorganisms by competing for binding sites; (4) improving immune function; (5) competing with pathogens for nutrients and growth factors; (6) producing lactase to aid lactose digestion; and/or (7) signaling cells to stop production of virulence factors.</p> <p>Kopp-Hoolihan (2001)</p>
Psyllium	<p>Psyllium is a specific form of soluble fiber. Soluble fiber has been used to treat diarrhea because of its ability to absorb fluid and increase the weight of stools.</p> <p>Singh (2007)</p>
Selenium	<p>Selenium is an essential trace element for humans. It acts as an anti-oxidant.</p> <p>(Dennert & Horneber, 2006).</p>
VSL#3	<p>A highly-potent, probiotic compound, prepared from concentrated, freeze-dried living bacteria (Bowen et al., 2007). The compound includes four strains of lactobacilli, three strains of bifidobacteria, and one strain of streptococcus</p> <p>Bowen et al. (2007); Delia et al. (2007)</p>
WHO Toxicity Criteria for Diarrhea by Grade	<p>0. None</p> <p>1. Increase of 2–3 stools per day over pre-Rx</p> <p>2. Increase of 4–6 stools per day, or nocturnal stools, or moderate cramping</p> <p>3. Increase of 7–9 stools per day, or incontinence, or severe cramping</p> <p>4. Increase of 10 or more stools per day, or grossly bloody diarrhea, or need for parenteral support</p> <p>WHO (n.d.)</p>