
Specialist Certification in Health Coaching for Cancer Patients

Nutrition and Diet for Cancer Patients

Adjuvant Nutrition Therapy

Concept: Nutrition support given alongside cancer treatment to improve outcomes. **Related terms:** enteral nutrition, parenteral nutrition, nutritional counseling. **Explanation:** This therapy aims to maintain or restore nutritional status, reduce treatment-related toxicities, and support immune function while patients undergo surgery, chemotherapy, or radiation. It is tailored to the individual's metabolic needs, disease stage, and treatment plan. **Example:** A patient with head-and-neck cancer receives a high-protein oral supplement during radiotherapy to counteract mucositis-induced weight loss. **Practical application:** Assess baseline intake, calculate energy and protein requirements, and prescribe appropriate oral, enteral, or parenteral formulas. Monitor weight, serum albumin, and tolerance weekly. **Challenges:** Identifying patients early, managing gastrointestinal side effects, and coordinating care among oncology, dietetics, and nursing teams.

Anti-Inflammatory Diet

Concept: Dietary pattern rich in foods that modulate inflammatory pathways. **Related terms:** omega-3 fatty acids, phytonutrients, Mediterranean diet. **Explanation:** Chronic inflammation can promote tumor growth and interfere with treatment efficacy. An anti-inflammatory diet emphasizes fruits, vegetables, whole grains, nuts, seeds, and fatty fish while limiting processed meats, refined sugars, and trans fats. **Example:** Incorporating salmon, walnuts, and leafy greens into meals to increase EPA/DHA and antioxidant intake. **Practical application:** Educate patients on food selection, cooking methods (steaming vs. frying), and portion sizes. Provide recipes that combine anti-oxidant rich foods. **Challenges:** Patient food preferences, cultural dietary habits, and cost of high-quality fish or nuts.

Cachexia

Concept: Multifactorial syndrome of weight loss, muscle wasting, and metabolic alteration in cancer. **Related terms:** muscle wasting, nutritional depletion, anorexia. **Explanation:** Cancer cachexia is driven by tumor-derived factors and systemic inflammation, leading to reduced appetite, altered protein synthesis, and increased energy expenditure. It is not fully reversible with standard nutrition alone. **Example:** A pancreatic cancer patient experiences rapid loss of lean body mass despite adequate caloric intake. **Practical application:** Combine nutritional interventions (high-protein, high-calorie supplements) with pharmacologic agents (e.g., Ghrelin mimetics) and exercise programs to preserve muscle. **Challenges:** Early detection, patient adherence, and distinguishing cachexia from simple malnutrition.

Calorie Density

Concept: Amount of energy (kcal) per gram of food. **Related terms:** energy density, nutrient density, portion size. **Explanation:** Foods with high calorie density provide more energy in smaller volumes, useful for patients with reduced appetite or early satiety. Conversely, low-density foods may fill the stomach without meeting energy needs. **Example:** Adding avocado or olive oil to a soup raises its calorie density without increasing volume. **Practical application:** Counsel patients to incorporate healthy fats, nut butters, or fortified

smoothies to meet energy goals. Challenges: Balancing calorie density with nutrient quality and avoiding excess saturated fats.

Dietary Fiber

Concept: Indigestible carbohydrate component that promotes gastrointestinal health. Related terms: soluble fiber, insoluble fiber, prebiotic. Explanation: Fiber supports bowel regularity, modulates glycemic response, and serves as a substrate for beneficial gut microbes. In cancer care, adequate fiber can mitigate constipation from opioid analgesics and improve immune modulation. Example: Adding chia seeds to oatmeal provides both soluble and insoluble fiber. Practical application: Recommend 20-30 g/day, gradually increase intake, and ensure adequate fluid consumption. Challenges: Managing fiber-related bloating in patients with abdominal radiation or surgical resections.

Enteral Nutrition (EN)

Concept: Delivery of nutrients directly into the gastrointestinal tract via tube. Related terms: nasogastric tube, percutaneous endoscopic gastrostomy (PEG), tube feeding. Explanation: EN is preferred over parenteral routes when the gut is functional, as it maintains mucosal integrity and reduces infection risk. Formulas can be standard, disease-specific, or polymeric. Example: A head-and-neck cancer patient with dysphagia receives a polymeric formula through a PEG tube. Practical application: Assess swallowing function, select appropriate tube size, and monitor for aspiration, tube displacement, and electrolyte imbalances. Challenges: Patient acceptance, tube site infections, and coordinating feeding schedules with oral intake.

Fat-Soluble Vitamins

Concept: Vitamins A, D, E, and K that require dietary fat for absorption. Related terms: micronutrient deficiency, lipid malabsorption, supplementation. Explanation: Cancer patients on low-fat diets or with malabsorption syndromes may develop deficiencies, affecting vision, bone health, antioxidant capacity, and coagulation. Example: A patient with cholestatic liver disease exhibits low vitamin K levels, leading to prolonged clotting times. Practical application: Screen for deficiencies, advise on fat-containing meals, and provide appropriate supplements (e.g., Vitamin D 1000 IU daily). Challenges: Over-supplementation risk, drug-nutrient interactions (e.g., Warfarin), and monitoring serum levels.

Food-Drug Interactions

Concept: Alterations in drug efficacy or toxicity due to concurrent food intake. Related terms: pharmacokinetics, absorption, cytochrome P450. Explanation: Certain foods can inhibit or induce metabolic enzymes, affecting chemotherapy metabolism. Grapefruit juice, for instance, inhibits CYP3A4, potentially raising drug concentrations. Example: A patient taking a tyrosine kinase inhibitor experiences increased toxicity after consuming grapefruit. Practical application: Provide a list of high-risk foods, educate patients to separate medication ingestion from meals when needed, and coordinate with pharmacists. Challenges: Patient recall, cultural dietary practices, and variability in enzyme activity.

Glutamine Supplementation

Concept: Non-essential amino acid used to support gut mucosa and immune cells. Related terms: enteral formulas, immune modulation, chemotherapy-induced mucositis. Explanation: Glutamine serves as fuel for

enterocytes and lymphocytes. Supplementation may reduce severity of mucositis, diarrhea, and infection rates during intensive chemotherapy. Example: A colorectal cancer patient receives 10g of oral glutamine powder daily during 5-FU therapy. Practical application: Incorporate glutamine into oral supplements or specialized EN formulas; monitor tolerance. Challenges: Limited high-quality evidence for some tumor types, cost, and potential metabolic effects in renal disease.

Glycemic Index (GI)

Concept: Ranking of carbohydrate foods based on post-prandial blood glucose response. Related terms: glycemic load, carbohydrate quality, insulin resistance. Explanation: High-GI foods cause rapid glucose spikes, which can exacerbate fatigue and support tumor glycolysis. Low-GI choices promote steadier energy levels and may improve treatment tolerance. Example: Replacing white rice with quinoa lowers the meal's GI. Practical application: Teach patients to pair high-GI foods with protein or fat to blunt glucose peaks; provide GI tables for common foods. Challenges: Limited patient awareness, cultural staple foods with high GI, and variability in individual responses.

High-Protein Diet

Concept: Dietary pattern delivering >1.2G protein per kilogram body weight daily. Related terms: lean body mass preservation, protein-energy malnutrition, muscle synthesis. Explanation: Adequate protein supports wound healing, immune competence, and counteracts sarcopenia. Cancer patients often have increased protein needs due to catabolic stress. Example: A 70-kg patient is prescribed 84g protein per day, achieved through lean meats, dairy, legumes, and protein shakes. Practical application: Distribute protein across meals, use fortified foods, and consider supplements if oral intake is insufficient. Challenges: Appetite loss, taste alterations, renal function concerns, and cost of high-quality protein sources.

Immunonutrition

Concept: Nutrition enriched with specific nutrients that modulate immune response. Related terms: arginine, omega-3 fatty acids, nucleotides. Explanation: Formulas containing arginine, omega-3s, and nucleotides have been shown to reduce postoperative infections and shorten hospital stays in some cancer surgeries. Example: A patient undergoing esophagectomy receives an immunomodulating EN formula for 5 days post-op. Practical application: Identify candidates (major abdominal surgery, high infection risk), prescribe targeted formulas, and monitor inflammatory markers (CRP, IL-6). Challenges: Evidence heterogeneity, higher cost, and potential intolerance in certain patients.

Micronutrient Deficiency

Concept: Insufficient intake or absorption of vitamins and minerals. Related terms: iron deficiency anemia, zinc deficiency, trace elements. Explanation: Cancer and its treatments can deplete micronutrients through reduced intake, malabsorption, or increased utilization. Deficiencies may impair wound healing, immunity, and energy metabolism. Example: A patient on prolonged chemotherapy develops low serum zinc, leading to delayed skin healing. Practical application: Conduct periodic labs, supplement based on deficits (e.G., Iron 325 mg ferrous sulfate daily), and encourage micronutrient-rich foods. Challenges: Interference with chemotherapy (e.G., Antioxidant supplements), pill burden, and differentiating deficiency symptoms from treatment side effects.

Modified Texture Diet

Concept: Food preparation that alters consistency to aid swallowing or digestion. **Related terms:** pureed diet, soft diet, dysphagia. **Explanation:** Patients with oral, pharyngeal, or esophageal cancers often experience dysphagia. Adjusting texture reduces choking risk and improves nutrient intake. **Example:** Blending a steak into a smooth puree with added cream to increase calorie density. **Practical application:** Train patients or caregivers on safe food preparation, ensure adequate nutrient content, and reassess texture needs regularly. **Challenges:** Maintaining palatability, patient frustration, and risk of nutrient loss during processing.

Muscle-Sparing Effect

Concept: Preservation of lean tissue despite caloric restriction. **Related terms:** protein synthesis, resistance exercise, catabolism. **Explanation:** Adequate protein combined with resistance training can protect muscle mass even when overall intake is reduced for weight management or metabolic reasons. **Example:** A breast cancer survivor follows a 1500 kcal diet with 1.5 G/kg protein and three weekly resistance sessions, maintaining muscle thickness. **Practical application:** Design individualized plans that pair nutrition goals with appropriate exercise prescriptions. **Challenges:** Fatigue, chemotherapy-induced neuropathy limiting exercise, and patient motivation.

Nutrition Screening

Concept: Brief assessment to identify patients at risk of malnutrition. **Related terms:** malnutrition risk, screening tools, clinical nutrition. **Explanation:** Tools such as the MUST, NRS-2002, or PG-SGA quickly flag individuals needing comprehensive evaluation. Early detection enables timely intervention. **Example:** A nurse uses the NRS-2002 during clinic intake; a score of 3 triggers referral to a dietitian. **Practical application:** Integrate screening into electronic health records, repeat at each treatment cycle. **Challenges:** Time constraints, staff training, and variability in tool sensitivity across cancer types.

Omega-3 Fatty Acids

Concept: Polyunsaturated fats (EPA, DHA) with anti-inflammatory and anti-cancer properties. **Related terms:** fish oil, eicosapentaenoic acid, docosahexaenoic acid. **Explanation:** Omega-3s can modulate tumor cell membranes, reduce cytokine production, and improve cachexia outcomes. They are often incorporated into supplements or fortified foods. **Example:** A patient consumes 2 g of fish oil daily during chemotherapy, reporting less fatigue and weight loss. **Practical application:** Recommend 1–2 g EPA+DHA per day, counsel on fish sources, and monitor for bleeding risk if on anticoagulants. **Challenges:** Fishy aftertaste, gastrointestinal upset, and interactions with certain chemotherapeutics.

Oral Nutritional Supplements (ONS)

Concept: Commercially prepared drinks, powders, or bars designed to augment dietary intake. **Related terms:** high-calorie supplements, protein shakes, micronutrient fortified. **Explanation:** ONS provide concentrated nutrients in easy-to-consume formats, useful for patients with reduced appetite or difficulty chewing. **Example:** A patient drinks a 250 kcal, 20 g protein vanilla shake twice daily during radiation. **Practical application:** Choose supplements matching taste preferences, schedule intake between meals, and track compliance. **Challenges:** Taste fatigue, cost, and potential for excess sugar intake.

Parenteral Nutrition (PN)

Concept: Intravenous delivery of nutrients when the gastrointestinal tract cannot be used. **Related terms:** total parenteral nutrition (TPN), central line, hyperalimentation. **Explanation:** PN supplies carbohydrates, amino acids, lipids, electrolytes, vitamins, and trace elements. **Indications** include severe bowel obstruction, high output fistula, or postoperative ileus. **Example:** A patient with extensive small-bowel resection receives TPN via a peripherally inserted central catheter (PICC) for 10 days. **Practical application:** Calculate daily caloric needs (25–30 kcal/kg), monitor blood glucose, liver function, and catheter site for infection. **Challenges:** Infection risk, metabolic complications (hyperglycemia, liver dysfunction), and high cost.

Patient-Centered Meal Planning

Concept: Customizing dietary recommendations to align with personal preferences, culture, and lifestyle. **Related terms:** food preferences, cultural competence, behavioral change. **Explanation:** Engaging patients in the planning process enhances adherence and satisfaction. It incorporates favorite foods, cooking skills, and realistic grocery options. **Example:** A Hispanic patient incorporates beans, corn tortillas, and avocado into a high-protein menu. **Practical application:** Conduct a dietary interview, create a weekly menu with interchangeable options, and provide recipes that meet nutrient targets. **Challenges:** Balancing cultural foods with oncology-specific restrictions, limited access to fresh produce, and variable cooking abilities.

Prebiotic Foods

Concept: Non-digestible fibers that stimulate growth of beneficial gut bacteria. **Related terms:** inulin, fructooligosaccharides (FOS), gut microbiome. **Explanation:** A healthy microbiome can influence immune response, inflammation, and treatment tolerance. Prebiotics such as chicory root, garlic, and Jerusalem artichoke feed probiotic strains. **Example:** Adding a tablespoon of inulin powder to a smoothie increases prebiotic intake. **Practical application:** Encourage inclusion of prebiotic-rich foods daily, monitor for bloating, and combine with probiotic supplementation when appropriate. **Challenges:** Gastrointestinal discomfort, patient misconceptions about “fiber,” and limited availability of certain foods.

Protein-Energy Malnutrition (PEM)

Concept: Simultaneous deficit of protein and calories leading to weight loss and functional decline. **Related terms:** undernutrition, catabolic state, nutritional depletion. **Explanation:** PEM is common in advanced cancer due to reduced intake, increased metabolic demand, and treatment side effects. It predicts poorer survival and higher complication rates. **Example:** A patient with gastric cancer loses 10% body weight over 4 weeks, with serum albumin dropping to 2.8 g/dL. **Practical application:** Initiate intensive nutrition support (ONS, EN, or PN), set realistic weight gain goals (0.5 kg/week), and reassess weekly. **Challenges:** Patient fatigue, tolerance to feeding tubes, and psychosocial barriers to eating.

Probiotic Supplementation

Concept: Live microorganisms that confer health benefits when consumed in adequate amounts. **Related terms:** lactobacillus, bifidobacterium, gut health. **Explanation:** Probiotics may reduce diarrhea, mucositis, and infection risk during chemotherapy and radiotherapy, though evidence varies by strain and cancer type. **Example:** A patient takes a capsule containing *Lactobacillus rhamnosus* GG daily during 5-FU treatment, reporting fewer bowel movements. **Practical application:** Select strains with documented efficacy, advise on timing (e.g., separate from antibiotics), and monitor for rare cases of bacteremia in immunocompromised

patients. Challenges: Strain specificity, regulatory variability, and patient skepticism.

Protein Digestibility-Corrected Amino Acid Score (PDCAAS)

Concept: Method for evaluating protein quality based on amino acid composition and digestibility. Related terms: biological value, essential amino acids, nutrient scoring. Explanation: High-PDCAAS proteins (e.G., Whey, soy) are preferred for meeting the increased amino acid demands of cancer patients. This metric helps dietitians select optimal protein sources. Example: Comparing whey (PDCAAS 1.0) To wheat protein (PDCAAS 0.4) Guides supplement choices. Practical application: Prioritize high-quality protein in meal plans, especially when total protein intake is limited. Challenges: Limited awareness among patients, cost of premium protein sources, and variability in digestion due to gastrointestinal surgery.

Quality of Life (QoL) Nutrition

Concept: Nutrition's impact on physical, emotional, and social well-being. Related terms: patient-reported outcomes, symptom management, functional status. Explanation: Adequate nutrition can improve energy levels, mood, and ability to engage in daily activities, thereby enhancing overall QoL during cancer treatment. Example: A patient reports less fatigue after achieving protein targets, enabling participation in family outings. Practical application: Use QoL questionnaires to track nutrition-related symptoms, adjust interventions accordingly, and celebrate small gains. Challenges: Subjectivity of QoL measures, fluctuating treatment side effects, and limited time for counseling.

Renal Considerations in Cancer Nutrition

Concept: Adjusting nutrient intake when kidney function is compromised. Related terms: creatinine clearance, electrolyte management, protein restriction. Explanation: Certain chemotherapies and tumor types can affect renal function, requiring modifications in protein, potassium, phosphorus, and fluid intake to avoid overload. Example: A patient with cisplatin-induced nephrotoxicity limits protein to 0.8G/kg and monitors serum potassium. Practical application: Calculate individualized renal-adjusted nutrient goals, coordinate with nephrology, and educate on low-potassium food choices. Challenges: Balancing protein needs for muscle preservation with renal restrictions, and patient confusion about "low-protein" versus "low-protein-quality".

Satiety-Enhancing Strategies

Concept: Techniques to increase feeling of fullness and reduce overeating. Related terms: fiber inclusion, protein timing, mindful eating. Explanation: Cancer patients often experience early satiety; using high-satiety foods can help them meet calorie goals without feeling overly full. Example: Starting meals with a broth-based soup and adding a boiled egg increases satiety. Practical application: Teach patients to prioritize protein and healthy fats early in meals, chew slowly, and avoid large liquid volumes before solids. Challenges: Taste changes, nausea, and limited appetite.

Side-Effect Specific Nutrition

Concept: Tailored dietary recommendations for common treatment toxicities. Related terms: nausea management, taste alteration, constipation. Explanation: Each side effect has specific nutritional strategies: Small frequent meals for nausea, zinc lozenges for taste loss, and fluid-rich foods for constipation. Example: A patient with chemotherapy-induced nausea consumes ginger tea and bland crackers every 2 hours.

Practical application: Create a side-effect matrix, provide handouts, and reassess after each treatment cycle. Challenges: Overlap of multiple side effects, rapid changes in symptom severity, and patient adherence.

Somatic Nutrition Assessment

Concept: Comprehensive evaluation of body composition and functional status. Related terms: bioelectrical impedance analysis (BIA), handgrip strength, mid-upper arm circumference. Explanation: Objective measures complement subjective screening, providing data on muscle mass, fluid status, and overall nutritional health. Example: A BIA shows a 5% decrease in lean mass despite stable weight, prompting intensified protein support. Practical application: Perform assessments at baseline, mid-treatment, and post-treatment; integrate results into care plans. Challenges: Access to equipment, patient positioning limitations, and interpretation variability.

Spiritual and Cultural Food Practices

Concept: Recognizing the role of faith and tradition in dietary choices. Related terms: religious fasting, cultural food prohibitions, dietary rituals. Explanation: Respecting these practices enhances trust and compliance. Adjustments may be needed to align nutritional goals with cultural or spiritual guidelines. Example: A Muslim patient observing Ramadan receives nutrient-dense suhoor and iftar meals to maintain energy. Practical application: Conduct a cultural assessment, collaborate with spiritual leaders when appropriate, and offer flexible meal timing. Challenges: Balancing medical recommendations with religious obligations, potential nutrient gaps, and limited provider knowledge.

Standardized Nutrition Care Pathway

Concept: Structured protocol guiding nutrition interventions across the cancer care continuum. Related terms: clinical pathways, interdisciplinary teamwork, outcome metrics. Explanation: A pathway delineates screening, assessment, intervention, monitoring, and evaluation steps, ensuring consistent care delivery. Example: The pathway triggers a dietitian consult within 48 hours of a high-risk score on admission. Practical application: Embed the pathway in electronic health records, assign responsibilities, and track adherence rates. Challenges: Institutional resistance, need for staff training, and adapting to diverse cancer types.

Supplemental Nutrition Assistance Program (SNAP)

Concept: Federal program providing food purchasing assistance to low-income individuals. Related terms: food insecurity, benefit eligibility, nutrition assistance. Explanation: Cancer patients may qualify for SNAP, reducing financial barriers to obtaining nutritious foods. Example: A patient with limited insurance enrolls in SNAP and receives monthly benefits to purchase fresh produce. Practical application: Screen for eligibility, refer to social services, and assist with application paperwork. Challenges: Stigma, complex application process, and intermittent benefit receipt.

Therapeutic Diets

Concept: Specific dietary regimens prescribed to address disease-related metabolic needs. Related terms: ketogenic diet, low-sodium diet, high-calorie diet. Explanation: While not universally recommended, certain cancers (e.g., Glioblastoma) may benefit from a ketogenic approach to limit glucose availability to tumor cells. Example: A patient on a modified ketogenic diet consumes 70% fat, 20% protein, and 10% carbohydrates. Practical application: Evaluate scientific evidence, monitor ketone levels, and ensure

micronutrient adequacy. Challenges: Patient adherence, risk of nutrient deficiencies, and potential interaction with chemotherapy.

Therapeutic Nutrition Education

Concept: Structured teaching sessions that empower patients to manage their nutrition. Related terms: health literacy, self-management, behavior change counseling. Explanation: Education covers meal planning, symptom coping, label reading, and safe supplement use, fostering autonomy. Example: A 30-minute session teaches a patient how to read nutrition labels to identify hidden sugars. Practical application: Use teach-back method, provide written handouts, and schedule follow-up reinforcement. Challenges: Variable literacy levels, language barriers, and limited appointment time.

Transitional Nutrition Care

Concept: Continuity of nutrition support as patients move between care settings (hospital to home). Related terms: discharge planning, home nutrition services, care coordination. Explanation: Gaps in nutrition care during transitions can lead to readmissions and weight loss. A coordinated plan includes medication reconciliation, supply of supplements, and home health dietitian visits. Example: Upon discharge, a patient receives a 2-week supply of high-protein ONS and a scheduled telehealth dietitian appointment. Practical application: Develop a checklist, assign a case manager, and verify insurance coverage for home nutrition services. Challenges: Communication breakdowns, insurance limitations, and patient or caregiver readiness.

Triceps Skinfold Thickness (TSF)

Concept: Anthropometric measure estimating subcutaneous fat stores. Related terms: body composition, nutritional status, fat mass. Explanation: TSF, combined with mid-arm circumference, helps differentiate loss of fat versus muscle, informing targeted interventions. Example: A decreasing TSF over three weeks signals fat loss despite stable weight. Practical application: Measure using calibrated calipers, record at consistent sites, and interpret alongside other markers. Challenges: Operator technique variability, edema confounding results, and limited use in severely obese patients.

Weight-Based Dosing Adjustments

Concept: Modifying nutrition prescriptions according to patient weight or BMI. Related terms: caloric calculation, protein per kilogram, dose scaling. Explanation: Accurate weight-based calculations ensure patients receive adequate energy and protein without over- or under-feeding. Example: A 60-kg patient is prescribed 30 kcal/kg (1800 kcal) and 1.3 G protein/kg (78 g) daily. Practical application: Re-measure weight weekly, adjust formulas accordingly, and document changes. Challenges: Fluid shifts causing rapid weight fluctuations, obese patients requiring adjusted calculations (e.G., Using ideal body weight), and patient reluctance to weigh themselves.

Whole-Food Approach

Concept: Emphasizing minimally processed foods for nutrient density. Related terms: food matrix, phytochemicals, dietary pattern. Explanation: Whole foods provide synergistic nutrients and fiber that isolated supplements may lack, supporting overall health and potentially reducing carcinogenic exposure. Example: Replacing processed snack bars with a homemade trail mix of nuts, seeds, and dried berries. Practical application: Guide patients in grocery shopping, meal prepping, and cooking techniques that

preserve nutrients. Challenges: Time constraints, limited cooking facilities, and cost of fresh produce.

Weight Loss Prevention Strategies

Concept: Interventions aimed at maintaining or gaining weight during cancer therapy. Related terms: energy-dense foods, nutrient supplementation, appetite stimulants. Explanation: Strategies include scheduled high-calorie meals, oral supplements, and, when needed, pharmacologic agents like megestrol acetate. Example: A patient consumes a 500 kcal liquid supplement twice daily and is prescribed megestrol 400 mg at bedtime. Practical application: Set realistic weight targets (e.G., 0.5 Kg per week), monitor weekly, and adjust interventions based on tolerance. Challenges: Side effects of appetite stimulants, taste changes, and psychological resistance to weight gain.

Weight-Based Nutrient Recommendations

Concept: Guidelines that express nutrient needs per kilogram of body weight. Related terms: kilocalorie per kg, protein per kg, fluid per kg. Explanation: Weight-based recommendations provide individualized targets that account for metabolic stress, body composition, and treatment phase. Example: During intensive chemotherapy, a patient's fluid goal may be 30 mL/kg/day, adjusted for renal function. Practical application: Use validated equations (e.G., Harris-Benedict) as a starting point, then tailor based on clinical response. Challenges: Inaccurate weight measurements, edema, and differing guidelines among professional societies.

Zinc Supplementation

Concept: Micronutrient therapy to support immune function and wound healing. Related terms: immune competence, taste perception, skin integrity. Explanation: Zinc deficiency is common in cancer patients due to reduced intake and increased losses. Supplementation can improve taste acuity, reduce infection rates, and accelerate mucosal repair. Example: A patient with oral mucositis receives zinc gluconate 25 mg twice daily, noting improved taste within a week. Practical application: Assess serum zinc, prescribe age-appropriate doses, and monitor for copper deficiency with prolonged use. Challenges: Gastrointestinal upset, interference with absorption of other minerals, and limited laboratory availability.