

ONCOLOGY NUTRITION TEST SPECIFICATIONS

I. *NUTRITION ASSESSMENT AND DIAGNOSIS* (36%) – This area includes the fundamental knowledge the oncology nutrition dietitian should possess regarding cancer and treatment modalities. This knowledge enables the dietitian to competently assess and create a nutrition care plan based on the patient’s medical history, and nutrition-related signs and symptoms of cancer and its treatment.

A. History (15%) – Includes the knowledge of how nutrition status is impacted by cancer and its treatment. It encompasses evaluation of the significance of comorbidities, lifestyle practices on nutrition status in patients with cancer and hematological disorders, e.g., alcohol and tobacco use, functional status, psychosocial, cultural/ethnicity, religious beliefs, complementary and alternative medical (CAM) therapies, and drug-nutrient interactions.

Tasks	Associated Knowledge
T5. Evaluate adequacy of nutrition intake to determine nutrition risk factors associated with cancer diagnosis, treatment or comorbid conditions.	K1. K. of comorbidities that affect nutrition status of cancer patients. K4. K. of lifestyle practices that negatively impact nutrition status during cancer treatment, e.g, tobacco use, alcohol use.
T6. Evaluate health and disease conditions from medical and family history that may impact tolerance of treatment and post-treatment recovery.	K5. K. of impact of psychosocial, socioeconomic and psychological aspects on nutrition status and tolerance of therapy. K7. K. of characteristics of nutrition practices, behaviors, food preferences for different cultures, ethnicities and religions that could impact cancer treatment.
T9. Evaluate nutrition implications of psychosocial, culture/ethnicity, religious beliefs, socioeconomic and nutrition related behavior that impact cancer prevention, treatment, or recovery.	K8. K. of interactions among drugs, botanicals and nutrients that impact nutrition status in cancer patients. K9. K. of complementary and alternative medical therapies that may be used by cancer patients.
T10. Evaluate over-the-counter dietary supplements and botanicals to determine effects on cancer and/or cancer treatment or symptom management.	K12. K. of cancer staging, screening and diagnostic methods, e.g., tumor markers, cytology, pathology, radiology. K15. K. of specific types of cancer and their implications for nutrition. K21. K. of brand-name medications and generic equivalents of medications used in pharmacotherapy regimens for cancer.
T11. Evaluate nutrition status based on results of cancer-related diagnostic tests, e.g., CT scans, modified barium swallow, endoscopy.	
T13. Evaluate drug, botanical, and nutrient interactions that may impact nutrition status before, during, and after cancer treatment.	
T14. Evaluate patient's ability to perform nutrition related self-care behaviors before, during and after treatment, e.g., shopping, food preparation.	

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B. Treatment effects (14%) - Includes the knowledge of the effects of cancer treatment on nutrition status with regard to age-specific requirements and nutrition treatment goals for curative and palliative therapy.

Tasks		Associated Knowledge	
T2.	Evaluate age-specific nutrition implications of prescribed cancer treatment regimens.	K2.	K. of effects of cancer treatments on nutrition status.
T3.	Evaluate nutrition care based on goal of treatment (curative vs. palliative).	K3.	K. of effects of cancer and cancer treatments on gastrointestinal tract.
T7.	Evaluate nutrition implications of prescribed cancer treatment regimen on ingestion, digestion, absorption, and utilization of nutrients.	K10.	K. of effect of cancer treatment on pediatric client/patient growth and development.
T12.	Anticipate nutrition-related effects of dose and timing of cancer treatment that may affect performance status and nutrition intake.	K11.	K. of age-specific macro- and micronutrient needs of cancer patients.
T15.	Identify nutrition problem(s) based on nutrition assessment, type of cancer, and treatment modality (palliative care, chemotherapy, biotherapy, surgical, radiation therapy, transplantation).	K13.	K. of standard measures of functional status.
T16.	Determine etiology/etiologies of nutrition problem(s) based on patient's cancer treatment regimen and contributing risk factors.	K18.	K. of classifications and side effects of radiation therapies.
		K19.	K. of classifications and side effects of HCT.
		K20.	K. of common surgeries performed on cancer clients/patients.
		K22.	K. of classifications and side effects of chemotherapy agents.
		K23.	K. of classifications and side effects of biotherapies.
		K24.	K. of intent of care (curative vs. palliative) on treatment goals.
		K38.	K. of malnutrition and nutrition impact symptoms in pediatric cancer patients.

C. Signs and symptoms (7%) – Includes the knowledge related to assessment of the physical signs of malnutrition, cancer cachexia, and other significant nutrition-related symptoms.

Tasks		Associated Knowledge	
T4.	Identify causes of hematological disorders that may affect nutrition status and needs, e.g., anemia, hemochromatosis.	K6.	K. of physical signs of cancer-related malnutrition or cancer cachexia.
T8.	Evaluate nutrition related physical findings for signs and symptoms of cancer and its treatment, e.g., cancer cachexia, early satiety, dysphagia.	K14.	K. of hematological disorders on nutrition status.
T17.	Determine signs and symptoms of nutrition problem(s) to validate nutrition diagnosis.	K16.	K. of nutrition care process in cancer care.

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II. NUTRITION CARE PLAN (22%) – This area includes knowledge necessary to develop strategies for nutrition interventions based on prioritization of nutrition diagnoses for the patient with cancer.

A. Strategies (13%) – Incorporates the knowledge to determine optimal nutrition interventions and define expected outcomes and strategies to optimize quality of life and nutritional status in cancer and hematological disorders.

Tasks	Associated Knowledge
T19. Identify nutrition interventions to manage hematological disorders, e.g., anemia, hemochromatosis.	K34. K. of age-specific energy requirements and methods to determine energy needs of cancer patients
T21. Define expected outcomes for nutrition interventions based on nutrition issues arising before, during or after cancer treatment, e.g., weight maintenance with tube feeding placement.	K35. K. of age-specific fluid requirements for cancer patients. K26. K. of biotherapy treatment modalities. K27. K. of chemotherapy treatment modalities.
T22. Define nutrition interventions that address current and anticipated symptoms according to patient's treatment care plan.	K28. K. of radiation treatment modalities. K29. K. of surgical oncology treatment modalities.
T23. Identify nutrition related strategies that help maintain quality of life for cancer patients, e.g., palliative care, fatigue management.	K30. K. of hemopoietic cell transplantation. K31. K. of indications, benefits and risks of enteral nutrition support. K32. K. of indications, benefits and risks of parenteral nutrition support.
T26. Determine optimal nutrition support interventions prior to, during, or after cancer treatment, e.g., enteral, parenteral formulations.	K40. K. of nutrition issues in palliative and end of life care. K41. K. of nutrition recommendations for bone health in cancer patients. K45. K. of intent/goals of treatment regimes, e.g., palliative, curative.
T27. Determine risks and benefits of nutrition support routes for patients before, during, or after cancer treatment, e.g., PEG vs. parenteral nutrition.	K65. K. of alterations in hematological function in cancer and cancer treatment. K73. K. of the anticipated side effects of cancer and cancer therapy.

B. Prioritization of goals (9%) – Includes the knowledge to prioritize nutrition diagnoses, ethical implications, anticipation of acute, delayed or chronic effects of treatment, and, frequency and duration of nutrition care.

Tasks	Associated Knowledge
T18. Consider ethical implications of providing or withholding nutrition support depending on patient's goals of treatment.	K25. K. of medications to manage nutrition impact symptoms associated with cancer.
T20. Prioritize nutrition diagnoses based on severity of problem, anticipation of acute, delayed, chronic or late effects of treatment regimen, and existing diseases or conditions.	K33. K. of effect of cancer staging on nutrition care plans. K37. K. of long-term nutritional complications of adult cancers.
T24. Define frequency and duration of nutrition care prior to, during, or after cancer treatment.	K39. K. of malnutrition and nutrition impact symptoms in adult cancer patients. K42. K. of medication and other supportive care to manage nutrition impact symptoms.
T25. Determine strategies to optimize oral nutrition intake prior to, during, or after cancer treatment.	

K = Knowledge

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III. *NUTRITION CARE INTERVENTIONS (18%)* – This area includes the knowledge necessary for successful implementation of the nutrition care plan involving education for and communication with the patient, health care providers and caregivers.

A. Education (9%) - Includes the knowledge of the acute and chronic complications of cancer therapy to educate the patient, health care provider and caregiver on the appropriate nutrition interventions to maintain nutritional status, and, safely integrate complementary and alternative medical (CAM) therapies.

Tasks	Associated Knowledge
T28. Inform patients, health care providers, and caregivers regarding risks and benefits of complementary and alternative medicine (CAM) therapies that may impact nutrition status or treatment effectiveness.	K43. K. of food safety guidelines for cancer patients. K46. K. of acute complications of cancer and cancer treatment. K47. K. of chronic complications or late effects of cancer and cancer treatment.
T30. Recommend nutrition choices and safe foodhandling practices that reduce risk for foodborne illness in cancer patients.	K51. K. of consensus-based symptom management protocols, e.g., National Comprehensive Cancer Network Guidelines for Supportive Care.
T34. Recommend strategies for management of acute nutrition impact symptoms caused by treatment modalities.	K58. K. of age-specific Dietary Reference Intakes and limits of acceptable supplementation in cancer care.
T35. Recommend strategies for management of chronic nutrition impact symptoms caused by treatment modalities.	K74. K. of risks and benefits of complementary and alternative medical (CAM) therapies.

B. Coordination (5%) – Includes the knowledge to effectively implement appropriate nutrition care plans and communicate with internal/external health care providers and agencies.

Tasks	Associated Knowledge
T29. Initiate nutrition related care through collaboration with internal support staff, e.g., speech therapy, social work, or external agencies (home health, Meals on Wheels).	K52. K. of nutrition issues involved in discharge planning to and from different care settings.
T31. Recommend modifications of oral nutrition intake based on patient’s tolerances before, during, or after cancer treatment, e.g., texture modifications.	K53. K. of nutrition strategies for managing complications of radiation therapy.
	K54. K. of nutrition strategies for managing complications of surgical oncology.
	K55. K. of nutrition strategies for managing complications of biotherapy.
	K56. K. of nutrition strategies for managing complications of chemotherapy.

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C. Nutrition support (4%) – Incorporates knowledge to initiate, advance and transition enteral and parenteral nutrition interventions based on standards of care.

Tasks	Associated Knowledge
T32. Recommend enteral formulas for nutrition support based on patient's needs before, during, or after cancer treatment.	K48. K. of guidelines for selecting enteral nutrition formulas in cancer care. K49. K. of guidelines for formulating parenteral nutrition recommendations in cancer care. K50. K. of guidelines for initiation, advancement and transition in enteral and parenteral nutrition.
T33. Recommend parenteral formulas for nutrition support based on patient's needs before, during, or after cancer treatment.	K57. K. of nutrition strategies for managing complications of hematopoietic cell transplantation.

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IV. MONITORING AND EVALUATION (20%) - This area includes the knowledge necessary to reassess the nutrition status of the patient throughout their treatment course, and adapt the nutrition care plan to reflect changes in treatment, side effects or goals in order to maximize quality of life.

A. Treatment changes (5%) – Includes the knowledge to reassess nutrition goals and interventions related to changes in cancer treatment, side effects of treatments and/or intent of treatment, e.g., curative vs. palliative.

Tasks	Associated Knowledge
T36. Evaluate nutrition interventions in the context of changes in treatment goals, e.g, end of life/palliative vs. curative.	K62. K. of changes in gastrointestinal function from cancer or cancer treatment. K75. K. of changes in intent/goals of treatment regimens, e.g., palliative vs. curative, and their impact on nutrition interventions.
T40. Evaluate nutrition implications of patient’s medical treatment plan, e, g., radiation treatment fields, surgical interventions, medical interventions, chemotherapy to revise nutrition care plan as needed.	

B. Outcomes (6%) – Includes the knowledge to reassess the response to nutrition intervention as it relates to the patient or the quality improvement process.

Tasks	Associated Knowledge
T39. Evaluate adequacy of nutrient and fluid intake before, during, or after cancer treatment.	K17. K. of tools and equipment for assessing nutrition status in adult cancers, e.g., bioelectrical impedance analysis (BIA), Patient Generated Subjective Global Assessment (PG-SGA). K60. K. of alterations in fluid balance in cancer patients. K61. K. of alterations in metabolism in cancer patients. K67. K. of standardized scales and criteria for side effects of cancer treatment, e.g., National Cancer Institute-Common Toxicity Criteria, World Health Organization.
T41. Evaluate direct outcomes of nutrition interventions to monitor nutrition status before, during or after cancer treatment.	
T42. Use standard tools and instruments to monitor nutrition status before, during or after cancer treatment, e.g., MNT protocols, Karnofsky, National Cancer Institute-Common Toxicity Criteria, PG-SGA.	
	K76. K. of quality improvement to evaluate nutrition outcomes.

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C. Complications (9%) – Includes the knowledge to monitor and evaluate acute and chronic treatment related side effects and their impact on quality of life.

Tasks	Associated Knowledge
T37. Evaluate acute side effects of cancer and cancer treatment on nutrition status, e.g., neutropenia, anemia, protein depletion, weight loss, radiation enteritis, steroid-induced hyperglycemia, taste alterations.	K36. K. of acute and chronic nutritional complications of cancer and cancer treatments. K59. K. of alterations of laboratory values and biomarkers in cancer patients.
T38. Evaluate chronic and late effects of cancer and cancer treatment on nutrition status, e.g., neuropathy, treatment-related fatigue, anorexia, dysgeusia, xerostomia.	K63. K. of impact of pain and pain management in cancer patients. K64. K. of impact of fatigue and fatigue management in cancer patients. K66. K. of neurological and cognitive changes as a result of cancer and cancer treatment.
T43. Evaluate nutrition related quality of life issues that arise during cancer treatment, palliative care and post-treatment recovery, e.g., inability to prepare food, loss of taste, neuropathy.	K77. K. of nutrition-related treatment side effects that impact quality of life issues.
T44. Evaluate pain management and related side effects that impact nutrition intake.	

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V. *RISK REDUCTION (4%)* – This area encompasses the knowledge of current, evidence-based guidelines for lifestyle, nutrition and physical activity for cancer prevention, survivorship and chronic disease risk reduction. This section also includes knowledge of reliable resources to assist patients in implementing lifestyle related behavior change.

Tasks	Associated Knowledge
<p>T45. Identify resources to assist patients in implementing nutrition related behavioral and lifestyle changes.</p> <p>T46. Recommend lifestyle, nutrition and physical activity strategies for patients at risk for chronic disease and latent side effects of cancer treatment, e.g., osteoporosis, heart disease, diabetes.</p>	<p>K44. K. of nutrition and lifestyle issues related to survivorship.</p> <p>K68. K. of effect of diet, body weight and physical activity on risk for cancer and other chronic diseases.</p> <p>K69. K. of evidence-based/consensus guidelines on nutrition and physical activity for cancer prevention, e.g., American Cancer Society, American Institute for Cancer Research.</p> <p>K70. K. of evidence-based/consensus guidelines on nutrition and physical activity for survivorship, e.g., American Cancer Society, American Institute for Cancer Research.</p> <p>K71. K. of relationship among diet, cancer risk and cancer prevention.</p> <p>K72. K. of risk factors for cancers.</p>