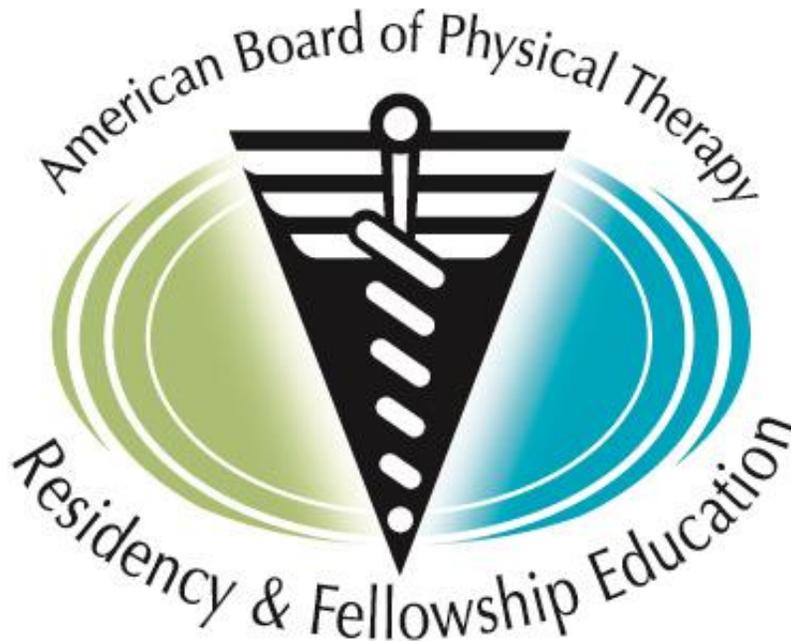


American Board of Physical Therapy Residency and Fellowship Education



Description of Residency Practice Oncology

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Preamble

The American Board of Physical Therapy Residency and Fellowship Education (ABPTRFE), a board-appointed group of the American Physical Therapy Association (APTA), has created the following Description of Residency Practice (DRP) to reduced unwarranted curriculum variability; provide residents minimum consistency in learning experiences for that area of practice; and streamline the accreditation process for reporting.

This DRP is the product of collaborative work by ABPTRFE and the APTA Physical Therapy Outcomes Registry staff, and is based on feedback received from members of the American Board of Physical Therapist Specialties (ABPTS) and directors of residency programs. Feedback was analyzed and incorporated into the DRP as ABPTRFE refined the document.

While all programs are required to meet the comprehensive curriculum and program requirements as outlined within the *ABPTRFE Quality Standards for Clinical Physical Therapist Residency and Fellowship Programs*, the purpose of the DRP is to: (1) establish a consistent curriculum expectation for residency programs within the same area of practice, and (2) provide consistency in program reporting for accreditation processes. The DRP allows flexibility for programs to incorporate additional learning experiences unique to the program's environment that are beyond the minimum standard expectations.

The DRP for each residency area will undergo revalidation at least once every 10 years. The process for revalidation will be a collaborative process with ABPTS, for specialty areas recognized by ABPTS, and will occur as part of the revalidation of that specialty area by ABPTS.

I. Type of Program

Oncology is a clinical area of practice.

II. Learning Domain Expectations

A residency program must have a curriculum inclusive of the learning domains identified within that area's current validated analysis of practice.

The following information is extracted directly from chapter 2 of the *Oncology Description of Specialty Practice*.¹ Reference numbers have been maintained from the original document and can be found there.

A. Knowledge Areas of Oncology Practice

Foundation Sciences

- Anatomy
- Physiology
- Cancer biology
- Cancer pathophysiology
- Cellular biology (eg, changes associated with cancer treatment and cancer disease)
- Neurophysiology
- Radiation physics

Clinical Sciences

- Pharmacology (eg, chemotherapy pharmacokinetics, pain medication, hormonal agents)
- Kinesiology
- Pathokinesiology (eg, altered joint mechanics after radiation therapy tissue changes)
- Exercise physiology (eg, consideration for immunosuppressed conditions, altered hemodynamics, safety, consideration of cancer side effects, adaptation of exercise interventions for safety)
- Taxonomy of cancer rehabilitation principles (eg, preventive, restorative, supportive, palliative)
- Cancer tumor staging (using American Joint Commission on Cancer TNM classification)
- Tumor pathology
- Genetics and genomics (oncologic specific)
- Cancer control science and epidemiology (eg, prevention, screening, risk factor identification)
- Surgical oncology (eg, reconstructive surgeries)
- Medical oncology (eg, chemotherapeutic toxicities, hormonal agents, biological agents, targeted agents)
- Radiation oncology

¹ *Oncology Physical Therapy Description of Specialty Practice*. Alexandria, VA: American Physical Therapy Association; 2017. Reproduced with permission. © 2017 American Physical Therapy Association. All rights reserved.

- Laboratory tests (eg, blood counts specific to neutropenia and thrombocytopenia, inflammatory markers, tumor assays, including hormone receptor status)
- Diagnostic imaging (eg, cardiac, bone density, CT, MRI, PET scanning as used in metastatic workups)

Behavioral Sciences

- Developmental psychology (eg, body image after breast reconstruction)
- Social psychology (eg, depression, loss, survivorship, end-of-life issues)
- Communication theory (eg, methods of communication and nonverbal language related to loss, grief, and end of life for patient and caregivers)
- Teaching and learning theory (eg, learning styles, teaching methods, assessment of learning)
- Cultural competence
- Sexuality and cancer
- Policy issues in cancer
- Critical inquiry
- Evidence-based practice (eg, using interdisciplinary protocols and clinical practice guidelines from National Comprehensive Cancer Network, American Society of Clinical Oncology, and others)
- Consultancy roles and process

B. Professional Competencies of Oncology Physical Therapists

Professional Behavior

- Demonstrates professional behavior in interactions with patients, clients, families, caregivers, other health care providers, students, consumers, and payers.
- Adheres to legal practice standards, including federal, state, and institutional regulations related to patient or client care and fiscal management, as well as end-of-life wishes.
- Practices ethical decision-making that is consistent with APTA's Code of Ethics for the Physical Therapist.
- Participates in cancer-related, peer-assessment activities.
- Demonstrates sensitivity (cultural, religious, and social in professional interactions).
- Serves as provider of choice for oncologic physical therapist services.
- Provides primary, secondary, and tertiary prevention regarding cancer treatment and therapies, including side effects and late effects.
- Performs appropriate evaluation, goal setting, and treatment interventions for patients with cancer in the domains of preventive, restorative, supportive, and palliative rehabilitation based on the Dietz4 model for cancer rehabilitation.
- Provides patient education to patients and caregivers throughout the trajectory of cancer care (eg, information on health promotion; cancer prevention and screening; impairments, functional limitations, disability related to cancer or its treatment; long-term survivorship issues; end-of-life issues).
- Advocates for a patient's health care needs to other individuals or entities (eg, health care providers, payers).
- Participates in palliative and end-of-life care.

Professional Development

- Formulates and implements a plan for professional development in oncologic physical therapy based on self-assessment, practice guidelines, and feedback from others.
- Enhances knowledge and skill in oncologic physical therapy by participating in continuing professional development (eg, certifications, advanced degrees, continuing education, residency education, cancer-specialty certifications including ACSM cancer exercise specialist and LANA lymphedema specialist).
- Participates in gathering evidence for practice in oncology.

Communication

- Listens actively to patients, clients, family, and caregivers regarding needs at various points along the cancer continuum.
- Communicates proactively regarding the expected trajectory of cancer treatment and the role of physical therapy in disease management, using cancer survivorship care plans in compliance with the Commission on Cancer standards for survivorship care planning.
- Communicates with patients, clients, family, caregivers, practitioners, consumers, payers, and policy makers regarding the cancer survivorship care plan.
- Recognizes and respects cultural differences in treatment selection or denial during communication.

Social Responsibility

- Demonstrates appropriate use of resources and resource allocation in patient care.
- Demonstrates social responsibility, citizenship, and advocacy through work with community organizations (eg, American Cancer Society, LiveStrong).
- Provides physical therapist services to patients who are in palliative care and end-of-life stages.
- Provides physical therapist services to underserved and underrepresented populations, including pro bono work.

Leadership

- Participates actively in professional organizations and activities related to oncologic physical therapy (eg, WCPT Oncology Special Interest Group, ACRM Cancer Rehabilitation Networking group).
- Maintains current knowledge of the activities of national and international physical therapy organizations related to oncology (eg, WCPT Oncology Special Interest Group, International Lymphoedema Framework Project).
- Represents physical therapy and interacts with other professional organizations in activities related to physical therapy for a patient with cancer (eg, Commission on Cancer, Commission for Accreditation of Rehabilitation Facilities cancer specialty program, National Comprehensive Cancer Network, Centers for Disease Control and Prevention).
- Promotes development of participation in clinical residency programs in oncologic physical therapy.
- Represents physical therapy and interacts with health care providers through hospital tumor board meetings.

Education

- Uses appropriate teaching methods and provides evidence-based oncologic physical therapist

educational programs to a variety of audiences, including students, other health care professionals, general public, state and nationally elected officials, political groups, policy advocate groups, and third-party payers.

- Mentors physical therapists, physical therapist assistants, and students by participating in clinical education and research related to oncologic physical therapy.

Administration

- Remains current in payment and regulatory issues regarding public policy and delivery services across oncology settings (eg, inpatient and outpatient hospice, outpatient ambulatory, palliative care, prehabilitation, prospective surveillance care).
- Remains current in changes to economic drivers of health care (eg, Institute of Medicine reports, CMS regulatory changes).

Consultation

- Develops and implements programs to promote oncologic physical therapist services in hospital and community cancer centers in conjunction with current best practices, as outlined in the Commission on Cancer accreditation standards and CARF cancer rehabilitation specialty care program standards.
- Promotes expert consultation about oncologic issues to individuals, businesses, educational institutions, government agencies, legal entities, media outlets, and other organizations.
- Promotes lifespan care for oncologic patients by providing information on wellness, impairment, disease, disability, and health risks related to gender, culture, and lifestyle.
- Meets the needs of the oncologic patient or client through active involvement on multidisciplinary teams, such as tumor board teams and survivorship care plan teams, while respecting each team member's role.

Advocacy

- Assists oncologic patients and clients in obtaining access to health care and physical therapist services.
- Attempts to make the health care delivery system more responsive to the needs of oncologic patients and clients by promoting awareness through comprehensive cancer centers and CARF cancer rehabilitation specialty program standards.
- Aids oncologic patients and clients in developing the skills to advocate for themselves by identifying supportive services through programs such as Five Wishes.
- Assists oncologic patients in gaining access to resources that help them understand their health condition and manage it with consideration for late effects of cancer treatment.
- Provides health promotion information to patients and clients and the general public regarding cancer screening, cancer prevention, cancer impairment secondary prevention, and wellness throughout the cancer care continuum.
- Disseminates evidence-based information to patients and clients, colleagues, other health care providers, payers, policy groups, and research agencies.
- Seeks opportunities to advocate for cancer-related issues with policy and law-making bodies (eg, Women's Health and Cancer Rights Act, Agency for Health Care Research and Quality guidelines, Centers for Medicare and Medicaid Services).

Evidence-Based Practice

- Critically evaluates new information associated with oncology and cancer, including techniques, technology, legislation, and policy related to patient care.
- Critically evaluates research findings specific to oncologic physical therapist practice.
- Applies principles of evidence-based practice in oncology physical therapist practice through the Patient/Client Management Model, as well as through prevention, secondary prevention, and end-of-life care, including professional association clinical practice guidelines (eg, ASCO peripheral neuropathy intervention guidelines, NCCN cancer fatigue guidelines).
- Maintains up-to-date knowledge and skills by attending professional development opportunities, such as continuing education courses, scientific meetings and conferences, continuing education programs, and grand rounds, through cancer-specific organizations (eg, The American Society for Clinical Oncology, The National Comprehensive Cancer Network, The Commission on Cancer).
- Participates in collaborative or independent research contributing to the science associated with oncologic physical therapist practice.
- Participates in scholarly activities that advance the practice of oncologic physical therapy (eg, study groups, outcomes studies).

C. Psychomotor Skills of Oncology Physical Therapists in the Patient/Client Management Model

Dietz identified 4 categories of cancer rehabilitation that address the scope and course of cancer care: preventive services, restorative services, supportive services, and palliative services.⁴ The necessary functions that the oncologic physical therapist specialist routinely performs fall within these categories and are applied in practice using the framework of the *Guide to Physical Therapist Practice* Patient/Client Management Model. Dietz's⁴ categories are defined as:

Preventive services. Preventive rehabilitation lessens the effect of expected disabilities and, in the context of physical therapist practice, emphasizes patient education along with interventions to improve the patient's physical functioning and general health status. Both primary prevention (screening, exercise, and physical activity recommendations) and secondary prevention (prospective surveillance for subacute and late effects of cancer treatment) are germane for the oncologic specialist.⁵⁻⁸

Restorative services. Restorative rehabilitation aims to return patients with physical impairment and functional limitations to previous levels of physical, psychological, social, and vocational functioning. Oncologic rehabilitation restorative services are provided with consideration for the cancer disease process, disease treatment side effects and late effects, and concern for recurrence of disease; and in recognition that patients often experience an aggregate burden of impairment due to multimodal disease treatment.⁹⁻¹⁵

Supportive services. Supportive rehabilitation broadens the familiar restorative role of the physical therapist, as it promotes accommodation of disabilities incurred throughout treatment, seeks to teach compensatory strategies after permanent loss (eg, limb amputation), and provides ongoing therapy during disease recurrence and temporization efforts.^{12, 16-18}

Palliative services. Palliative rehabilitation aims to mitigate the impact of symptoms associated with advanced cancer and its side effects. According to the National Cancer Institute, palliative care should begin at the point of diagnosis and continue throughout all phases of the cancer experience.¹⁹⁻²¹

Examination

1. History

- Systematically gathers data from both the past and present related to why the individual is seeking the services of the physical therapist. Obtains patient history through interview and data from other sources (eg, questionnaires, medical records, and test results specific to cancer treatment and oncologic patient issues), including:
 - Medication interview (eg, type of chemotherapy, immunotherapy, hormonal agents)
 - Health status (eg, comorbidity, nutrition, depression individual self-report, family, or caregiver report)
 - Social environment (eg, living situation, family structure)
 - Functional status and activity level
 - Cancer disease characteristics (eg, type of primary cancer, stage of cancer, grade of cancer)
 - Current and past cancer treatment, including:
 - Surgery (extent of excision, lymph node removal)
 - Chemotherapy (agents used, adverse effects experienced)
 - Radiation therapy (field of radiation, delivery mechanism, dose response)
 - Hormone therapy (type of hormone, side effects experienced)
 - Biological therapy (type of agents used, side effect experienced)
 - Complementary medicine and therapies
 - Data from sources specific to the cancer diagnosis, including:
 - Imaging tests (eg, x-ray, CT scan, bone scan, MRI, PET scan, mammogram, Doppler, ultrasound)
 - Laboratory tests (eg, hemoglobin, platelets, absolute neutrophil count, CA-125 levels, PSA level)
 - Biopsy reports (histological grading, margin status, hormone receptor status)
 - Information regarding premorbid function and activity level

2. Systems review

- Assesses physiological and anatomic status (eg, cardiovascular and pulmonary, integumentary, musculoskeletal, neuromuscular systems), with consideration for the cancer disease process, side effects of cancer treatment, and possible recurrent disease. Appropriately examines communication affect, cognition, language, and learning style of the individual.

3. Tests and measures

- Selects and prioritizes tests and measures based on history, systems review, scientific merit, clinical utility, and physiologic or fiscal cost to the individual relative to

criticality of data. Performs tests and measures that have been validated in the cancer population, including:

- Aerobic capacity/endurance
 - Aerobic capacity during functional activities (eg, ADL scales, indexes, observations)
 - Aerobic capacity during standardized exercise test protocols (eg, ergometry, time/distance walk/run, treadmill tests, wheelchair tests)
 - Cardiovascular signs and symptoms in response to increased oxygen demand with exercise or activity, including pressures and flow; heart rate, rhythm, and sounds; oximetry; and superficial vascular responses (eg, angina, claudication and perceived exertion scales, electrocardiograph, observations, palpation)
 - Pulmonary signs and symptoms in response to increased oxygen demand with exercise or activity, including breath and voice sounds; cyanosis; gas exchange; and respiratory pattern, rate, ventilatory flow, force, and volume
 - Effects of other cancer-related medical and pharmacological interventions on aerobic capacity/endurance (eg, cardiotoxicity related to chemotherapy, pulmonary radiation fibrosis, cancer-related fatigue, myelosuppression, cachexia)
- Arousal, attention, and cognition
 - Arousal and attention (eg, adaptability tests, arousal and awareness scales, profiles, questionnaires)
 - Cognition, including ability to process commands (eg, safety awareness, management of home exercise program, interviews, mental state scales, observations, questionnaires)
 - Communication and language barriers
 - Consciousness, including dementia or delirium, acute mental status changes
 - Motivation and capacity to participate in intervention
 - Orientation to time, person, place, and situation
 - Effects of cancer-related medical and pharmacological interventions on attention, arousal, and cognition (eg, chemotherapy-related cognitive changes, whole brain radiation, paraneoplastic disorders, metastatic disease to the brain)
- Assistive and adaptive devices
 - Assistive or adaptive devices and equipment used during functional activities
 - Components, alignment, fit, and ability to care for the assistive or adaptive devices and equipment
 - Remediation of impairments, functional imitations, or disabilities with use of assistive or adaptive devices and equipment
 - Safety during use of assistive or adaptive devices and equipment
 - Assessment of financial and community resources to assist in obtaining devices, equipment, and home modification
 - Appropriate planning for use of assistive or adaptive devices based on the continuum of cancer care (eg, limb salvage, skin integrity following radiation therapy, neurotoxicity, lymphedema)
- Circulation

- Cardiovascular signs, including heart rate, rhythm, and sounds; pressures and flow; and superficial vascular responses (eg, auscultation, electrocardiography, girth measurement, observations, palpation, sphygmomanometry, ankle/brachial index, perceived exertion scales)
- Cardiovascular symptoms (eg, angina, claudication)
- Lymphatic system function (eg, girth and volume measurements, palpation, observation of skin texture, subclinical lymphedema)
- Physiological responses to position change, including autonomic responses, central and peripheral pressures, heart rate and rhythm, respiratory rate and rhythm, ventilatory pattern (eg, auscultation, electrocardiography, observations, palpation, skin color changes, sphygmomanometry, pharmacological signs and symptoms)
- Assessment of compromised or altered circulation due to cancer treatment (eg, vascularity of irradiated tissue; soft-tissue flaps for reconstructive procedures of neck, face, breast)
- Environmental, home, and work barriers
 - Current and potential barriers (eg, checklists, interviews, observations, questionnaires)
 - Physical space and environment (eg, ADA-compliance standards, observations, photographic assessments, questionnaires, structural specifications, technology-assisted assessments, videographic assessments)
 - Home assessment (eg, standardized tests for home assessment/modification, such as Home Assessment Profile)
 - Assessment of patient's willingness to change and fiscal resources to facilitate change
 - Assessment of environmental barriers to returning to work (eg, discrimination based on cancer diagnosis, genetic testing implications)
- Ergonomics and body mechanics
 - Ergonomics related to cancer and cancer treatment side effects seen in the oncologic population (eg, deformities and postural changes related to limb salvage, ROM and postural changes associated with radiation fibrosis, positional considerations with osseous fragility from bone metastasis)
 - Body mechanics during self-care, home management, work, community, or leisure actions, tasks, or activities (eg, ADL scales, instrumental activities of daily living [IADL] scales, observations, photographic assessments, technology-assisted assessments, videographic assessments)
 - Body mechanics with caregiver activities (eg, observation, environmental assessment, patient handling needs and safety with skeletal compromise from metastasis, safety with spinal cord tumor compression)
- Gait, locomotion, and balance
 - Balance during functional activities with or without the use of assistive, adaptive, orthotic, protective, supportive, or prosthetic devices or equipment (eg, ADL scales, IADL scales, observations for post-soft tissue reconstruction balance and core compromise, proprioceptive deficits due to neurotoxic chemotherapy, steroid myopathies)

- Balance (dynamic and static) with or without the use of assistive, adaptive, orthotic, protective, supportive, or prosthetic devices or equipment (eg, balance scales, dizziness inventories, dynamic posturography, falls scales, motor impairment tests, observations of proprioceptive deficits due to neurotoxic chemotherapy, chemotherapy-induced vestibular toxicity and ototoxicity)
- Gait and locomotion during functional activities on various surfaces with or without the use of assistive, adaptive, orthotic, protective, supportive, or prosthetic devices or equipment, footwear assessment (eg, ADL scales, IADL scales, gait indexes, mobility skill profiles, observations for post sarcoma limb salve gait and ambulation retraining, steroid myopathy)
- Gait and locomotion with or without the use of assistive, adaptive, orthotic, protective, supportive, or prosthetic devices or equipment (eg, footprint analyses, gait indexes, mobility skill profiles, wheelchair mobility safety for spinal cord compression)
- Safety during gait, locomotion, and balance (eg, confidence scales, diaries, falls risk assessment scales, functional assessment profiles, logs, reports)
- Integumentary integrity
 - Activities, positioning, and postures that produce or relieve trauma to the skin (eg, observations, identification of radiation field tissue changes, reconstructive tissue flap protection)
 - Assistive, adaptive, orthotic, protective, supportive, or prosthetic devices and equipment that may produce or relieve trauma to the skin (eg, observations, risk assessment scales, techniques and devices used to reduce skin trauma with transfers)
 - Skin characteristics related to cancer treatment, including blistering, continuity of skin color, dermatitis, trophic changes, mobility, sensation, temperature, radiation fibrosis, telangiectasia, skin dimpling, swelling, chemotherapeutic toxicity (eg, observations, palpation, photographic assessments)
 - Scar tissue assessment, including irradiated tissue adherence to underlying structures, cording or webbing from lymphadenectomy scars, coloration, and changes associated with local recurrence (eg, observation, palpation, photographic assessment)
- Integumentary integrity/wound assessment
 - Activities, positioning, and postures that aggravate the wound or scar, or that produce or relieve trauma (eg, observations, pressure-relief techniques)
 - Signs of infection (eg, cultures, observations, palpation)
 - Signs of local recurrence involving the skin or skin extrusion of tumor (eg, observation, photographic assessment)
 - Wound characteristics, including bleeding, contraction, depth, drainage, exposed anatomical structures, location, odor, pigment, shape, size, type, staging and progression, tunneling, and undermining (eg, digital and grid measurement, grading/classification, observations, palpation, photographic assessments, wound tracing)

- Wound scar tissue characteristics, including banding, pliability, sensation, and texture (eg, observations, scar-rating scales)
- Periwound assessment
- Joint integrity and mobility
 - Joint integrity and mobility (eg, apprehension, compression and distraction, drawer, glide, impingement, shear, and valgus/varus stress tests; arthrometry; palpation; capsular pattern)
 - Joint play movements, including end feel (joints of the axial and appendicular skeletal system) (eg, palpation, accessory movements, special tests)
 - Joint movement and functional activities (eg, pain assessment and/or alleviation, quality, substitution, orthotic needs)
 - Joint mobility in the presence of radiation fibrosis contracture or scar contracture
- Motor function (motor control and motor learning)
 - Dexterity, coordination, and agility (eg, coordination screens, motor impairment tests, motor proficiency tests, observations, videographic assessments)
 - Initiation, modification, and control of movement patterns and voluntary postures (eg, activity indexes, gross motor function profiles, neuromotor tests, observations, physical performance tests, postural challenge tests, videographic assessments)
- Performance (including strength, power, and endurance)
 - Muscle strength, power, and endurance (eg, dynamometry, manual muscle tests, muscle performance tests, physical capacity tests, technology-assisted assessments, timed activity tests)
 - Muscle strength, power, and endurance during functional activities (eg, ADL scales, IADL scales, functional muscle tests, observations, videographic assessments)
- Sensory integration
 - Sensorimotor integration, including postural, equilibrium, and righting reactions for chemotherapy-induced neurological compromise (eg, motor and processing skill tests, observations, postural challenge tests, reflex tests, sensory profiles, visual perceptual skill tests)
- Orthotic, protective, and supportive devices
 - Components, alignment, fit, and ability to care for the orthotic, protective, and supportive devices and equipment (eg, interviews, logs, observations, reports)
 - Orthotic, protective, and supportive devices and equipment use during functional activities (eg, ADL scales, IADL scales, functional scales, interviews, observations, profiles)
 - Remediation of impairments, functional limitations, or disabilities with use of orthotic, protective, and supportive devices and equipment (eg, activity status indexes, ADL scales, IADL scales, aerobic capacity tests, functional performance inventories, health assessment questionnaires, pain scales, videographic assessments)

- Safety during use of orthotic, protective, and supportive devices and equipment (eg, diaries, falls scales, interviews, logs, observations, reports)
- Pain
 - Pain, soreness, and nociception (eg, angina scales, analog scales, discrimination tests, pain drawings and maps, provocation tests, verbal and pictorial descriptor tests, pain journal)
 - Pain in specific body parts (eg, pain indexes, pain questionnaires, structural provocation tests)
 - Analysis of pain behavior and reaction(s) during specific movements and provocation
 - Analysis of pain behavior and reaction(s) associated with the cancer disease process, metastatic lesions, or procedural interventions associated with disease treatment or potential for disease recurrence
- Posture
 - Postural alignment and position (static and dynamic), including symmetry and deviation from midline (eg, grid measurement, inclinometry, observations, height assessment, videographic assessments)
 - Postural deviations related to cancer treatment, including tissue reconstruction procedures, breast implants, surgical excision of stabilizing muscles (eg, observation, contralateral muscle strength testing, inclinometry, videographic assessment)
- Prosthetic requirements
 - Components, alignment, fit, and ability to care for the prosthetic device (eg, interviews, logs, observations, pressure-sensing maps, skin checks, reports)
 - Prosthetic device use during functional activities (eg, ADL scales, IADL scales, functional scales, interviews, observations)
 - Remediation of impairments, functional limitations, or disabilities with use of the prosthetic device (eg, aerobic capacity tests, oximetry, activity status indexes, ADL scales, IADL scales, functional performance inventories, health assessment questionnaires, fear of falling scales, pain scales, technology-assisted assessments, videographic assessments)
 - Residual limb or adjacent segment, including edema, range of motion, skin integrity, and strength (eg, goniometry, muscle tests, observations, palpation, photographic assessments, skin integrity tests, technology-assisted assessments, videographic assessments, volume measurement)
 - Safety during use of the prosthetic device (eg, diaries, falls scales, interviews, logs, observations, reports)
- Self-care and home management
 - Ability to gain access to home environments (eg, barrier identification, observations, physical performance tests)
 - Ability to safely perform self-care and home management activities (eg, ADL scales, IADL scales, aerobic capacity tests, interviews, observations, fall scales)
- Ventilation and respiration/gas exchange

- Pulmonary signs of respiration/gas exchange, including breath sounds (eg, gas analyses, observations, oximetry)
- Pulmonary symptoms (eg, dyspnea, perceived exertion, observation, indexes, scales)
- Pulmonary volume reduction from organ excision (eg, dyspnea, perceived exertion, oximetry, gas analyses)
- Work (job/school/purposeful activity), community, and leisure integration or reintegration, including IADL
 - Ability to assume or resume work (purposeful activity), community, and leisure activities with or without assistive, adaptive, orthotic, protective, supportive, or prosthetic devices and equipment (eg, activity profiles, disability indexes, functional status questionnaires, IADL scales, observations, physical capacity tests)
 - Ability to gain access to work (purposeful activity), community, and leisure environments (eg, barrier identification, interviews, observations, physical capacity tests, transportation assessments)
 - Safety in work (purposeful activity), community, and leisure activities and environments (eg, diaries, falls scales, balance assessment, interviews, logs, observations, dexterity and coordination assessment, videographic assessment, environmental assessments)

Reexamination

Responds to emerging data from examinations and interventions by performing special tests and measures to evaluate progress, modify or redirect intervention (eg, recurrence of disease, potential new functional impairments associated with new treatment regimens).

- Responds to changes in cancer treatment delivery through the care continuum by performing tests and measures to evaluate the impact new treatment modalities have on the individual and the plan of care (eg, new chemotherapeutic agents introduced, radiation therapy introduced, hormonal or biological agents introduced) to modify or redirect intervention.
- Responds to changes consistent with late effects of cancer treatment by performing tests and measures to evaluate the impact of physical changes (eg, new onset swelling, new neurological changes, cardiotoxicity) to modify or redirect intervention and to guide referral to other health care providers.
- Responds to changes in the disease status of the individual by performing tests and measures to evaluate the impact of recurrent or progressed state of disease (eg, new organ metastasis, placement on clinical trial, move to palliative care plan) to modify or redirect intervention.

Evaluation

- Interprets data from examination (eg, identifies relevant, consistent, accurate data; prioritizes impairments; assesses patient's needs, motivations, and goals), with consideration for the cancer disease process, disease treatment side effects and late effects, and for recurrent disease.
- Determines when signs and symptoms that indicate referral to a physician or another health care provider is appropriate, based on specialized oncologic physical therapy knowledge and with recognition of oncologic emergencies.

Diagnosis

- Organizes data based on evaluation into recognized clusters, syndromes, or categories that consider the multisystem nature of the cancer disease process, side effects, and late effects.
- Establishes differential diagnoses based on awareness of cancer disease process, disorders and conditions associated with side effects and late effects of cancer treatment, and consideration for disease recurrence.
- Establishes differential diagnoses based on awareness of cancer disease process, disorders, and conditions associated with side effects and late effects of cancer treatment, and with consideration for disease recurrence, and determines the need to refer patients or clients to other health care providers.
- Establishes differential diagnosis based on the specialized skill set of the oncologic physical therapist that recognizes the aggregate burden of multiple impairments and multiple system involvement, associated with the cancer disease process and cancer treatment.
- Determines diagnostic practice pattern(s) that guide future patient or client management, and are amenable to physical therapist interventions.
- Considers physiological changes and atypical presentations with the cancer disease process that are specific to the diagnostic process.

Prognosis

- Uses knowledge of examination, evaluation, and diagnosis to determine patient or client prognosis.
- Considers the long-term prognostic effect of the cancer disease process, cancer treatment side effects and late effects, and comorbidities.
- Considers the prognostic effect of medical, social, and occupational history.
- Considers the prognostic impact of other medical interventions (eg, implanted devices, pumps, radiation therapy, chemotherapy).
- Considers the prognostic impact of depression, dementia, and other psychosocial issues (eg, fear, anxiety) when determining prognosis.
- Considers the prognostic effect of pharmacological interventions (eg, chemotherapeutic toxicities, supportive targeted agents, pain medication, steroids, other prescribed medications, over-the-counter medications, herbal supplements).
- Considers the prognostic effect of cultural considerations (eg, values, beliefs, ethnicity, religion, spirituality, sexual orientation, and special populations).
- Considers the patient's personal goals as they relate to the prognosis.
- Develops a plan of care that:
 - Prioritizes interventions related to the diagnosis, recovery process, patient or client goals, outcomes data, and resources.
 - Takes safety and patient, family, caregiver concerns; living arrangements; and financial situation into consideration.
 - Includes achievable patient or client outcomes within available resources and according to the administrative policies and procedures of the practice environment.
 - Considers quality of life in regard to end-of-life wishes, transitions, and advanced directives (eg, quality-of-life scales).

Intervention

- Coordination, communication, and documentation

- Interacts with patients, clients, family, caregivers, other health care providers, cancer survivorship groups, support groups, and community-based organizations for the purpose of coordinating activities to facilitate efficient and effective patient or client care.
- Coordinates the physical therapy patient-management process to include community resources, planning for conclusion of an episode of care, timely data transmission, and delivery of service across all settings of care and within the context of the survivorship care plan, as required by the Commission on Cancer accreditation standards.
- Communicates effectively with patients, clients, family, caregivers, practitioners, consumers, payers, and policymakers about cancer-related issues.
- Communicates the patient’s or client’s functional impairments and disabilities, along with the physical therapy plan of care, to the multidisciplinary oncology team through tumor board reports and survivorship
- Discusses rationale for physical therapist examination and intervention procedures, including use of current best evidence with patients, clients, family, caregivers, other health care professionals, and payers.
- Collaborates as a health care team member and leader to ensure that physical therapy is a part of an appropriate, culturally competent, comprehensive plan in the care of patients with cancer.
- Adapts communication to appropriate health literacy levels.
- Completes thorough, accurate, analytically sound, concise, and timely documentation that follows guidelines and specific documentation formats required by the practice setting (eg, communication with payer sources for maximizing treatment services and resources, legal protection of staff, patient, and/or facility)
- Patient- or client-related instruction.
 - Provides patient or client instruction about diagnosis, prognosis, and intervention strategies that address the nuances of cancer disease prognosis and side effects.
 - Provides instruction to increase the patient’s or client’s understanding of individual abilities, functional limitations, or disabilities.
 - Provides patient or client instruction regarding cancer disease screening recommendations.
 - Provides patient or client instruction aimed at risk reduction or prevention, as well as health promotion, including prospective surveillance for emerging impairments, early identification of late effects, and strategies to reduce risk for disease recurrence and late effects over the lifespan.
 - Assists patient or client in critically analyzing information that is available via the Internet or in the community.
 - Adapts instruction for the situation (eg, learning styles; actual practice by the patient, client, family, or caregiver; use of audio and visual aids; verbal, written, and pictorial instruction; culturally sensitive instruction).
 - Provides patient or client instruction in specialized areas of oncologic physical therapy (eg, risk for late effects of cancer treatment; radiation-related skin and tissue changes; impact of chemotherapeutic toxicities on cardiac, neurological, cardiopulmonary, and integumentary function; falls prevention; bone health; safety with exercise).
 - Maintains current knowledge regarding health indicators as identified by policy bodies (eg, US Health and Preventive Taskforce, Centers for Disease Control and Prevention,

National Cancer Institute) in order to provide education to patients, clients, family, caregivers, health professionals, and the public on the role of physical therapist interventions.

▪ Procedural interventions

Therapeutic exercise, including, but not limited to:

- Aerobic capacity/endurance conditioning or reconditioning with consideration for adverse cardiovascular and pulmonary side effects of cancer treatment (eg, gait/locomotion training, cycles, increased workload over time, treadmills, movement efficiency, energy conservation instruction or training)
- Balance, coordination, and agility training with consideration for treatment side effects and osseous fragility secondary to chemotherapy side effects, radiation therapy and hormonal therapies (eg, fall risk reduction and education, neuromuscular education or reeducation, integration of core strength and stability to balance, perceptual training posture awareness training, sensory training or retraining, standardized, programmatic, complementary exercise approaches, task-specific performance training)
- Vestibular training with consideration for neurotoxicity and ototoxicity related to chemotherapy
- Body mechanics and postural stabilization (eg, lifting techniques for caregivers, postural stabilization activities, posture awareness training) considering muscle flap procedures such as latissimus flap reconstruction, limb disarticulation procedures associated with sarcoma, postural alterations such as those associated with head, neck, and breast radiation therapy tissue changes
- Gait and locomotion training (eg, gait training; implement and device training; perceptual training; standardized, programmatic, and complementary exercise approaches; wheelchair mobility training; falls prevention)
- Neuromotor development training that considers chemotherapy side effects and late effects (eg, motor training, movement pattern training, constraint-induced movement therapy, neuromuscular education or reeducation)
- Strength, power, and endurance training for head, neck, limb, pelvic floor, trunk, and ventilator muscles (eg, active assistive, active and resistive exercises, aquatic programs, standardized, programmatic, complementary exercise approaches, task-specific performance training)

Functional training in self-care and home management that considers accommodation for energy conservation, cancer-related fatigue, and muscle-wasting syndromes related to hormonal therapies, including:

- Barrier accommodations or modifications (eg, environmental modification)
- Device and equipment use and training (eg, assistive and adaptive device or equipment training during ADL and IADL; orthotic, protective, or supportive device or equipment training during self-care and home management; prosthetic device or equipment training during ADL and IADL)
- Functional training programs (eg, simulated environments and tasks, transfer training, bed mobility, up from floor, task adaptation)
- Injury prevention or reduction (eg, self-care and home management use of devices and equipment, safety awareness training during self-care and home management,

home safety and energy conservation, falls prevention and education including use of devices to decrease injurious falls)

Functional training in work (purposeful activity), community, and leisure integration or reintegration, including but not limited to:

- Functional training programs (eg, simulated environment and tasks, task adaptation, task training, cardiopulmonary rehabilitation, dexterity and coordination, conditioning and reconditioning training)
- Injury prevention or reduction (eg, injury prevention education during work, community, and leisure integration or reintegration; injury prevention education with use of devices and equipment; safety awareness training during work, community, and leisure integration or reintegration)

Manual therapy techniques with consideration for contraindications associated with radiation therapy, skin extrusion of tumor, and swelling conditions, including:

- Manual lymphatic drainage
- Mobilization and manipulation (eg, soft tissue, spinal, and peripheral joints)
- Scar tissue mobilization

Prescription, application, and, as appropriate, fabrication of devices and equipment, including:

- Adaptive devices (eg, environmental controls, hospital beds, raised toilet seats, seating systems, ramps, lifts)
- Assistive devices (eg, canes, crutches, long-handled reachers, power devices, static and dynamic splints, walkers, wheelchairs)
- Orthotic devices (eg, braces, casts, shoe inserts, splints, graded compression garments), with consideration for cancer disease treatment, irradiated skin integrity, and chemotherapy sensory neuropathies
- Prosthetic devices (lower extremity and upper extremity), with consideration for cancer disease treatment, irradiated skin integrity, and limb changes following radiation therapy
- Protective devices (eg, braces, cushions, helmets, protective taping)
- Supportive devices (eg, compression garments, corsets, elastic wraps, mechanical ventilators, neck collars, serial casts, slings, supplemental oxygen, supportive taping)
- Individual and community financial resources to assist in obtaining appropriate devices

Airway clearance techniques, with consideration for obstructive tumors, pulmonary fibrosis, and inflammation, including:

- Breathing strategies (eg, assisted cough/huff techniques, postural drainage, paced breathing, pursed lip breathing, techniques to maximize ventilation)
- Manual and mechanical techniques (eg, assistive devices, chest percussion, vibration, shaking, chest wall manipulation)
- Positioning (eg, positioning to alter work of breathing, positioning to maximize ventilation and perfusion, pulmonary postural drainage, limb elevation to alleviate early swelling)

Integumentary repair and protection techniques with consideration for irradiated tissue, tumor extrusion, and scar tissue:

- Debridement, nonselective (eg, pulsatile lavage, autolytic, enzymatic, chemical debridement)
- Debridement, selective (eg, sharp debridement)
- Dressings, primary and secondary (eg, hydrogels, alginates, compression wraps)
- Negative pressure wound therapy
- Topical antibiotics
- Topical agents (eg, cleansers, creams, moisturizers, ointments, sealants)
- Coordination with other services (eg, hyperbaric treatment for radiation fibrosis, radiation oncology, dialysis, enterostomal therapy, diet)
- Positioning postintervention for safety
- Adherence to postoperative positioning restrictions to promote healing (eg, soft tissue reconstruction; muscle flap breast, head, and neck reconstruction; limb salvage procedures; skin grafts)
- Additional healing techniques and tools (eg, pressure relieving cushions, shoe inserts)
- Modalities (low-level light laser, electric stimulation, pulsatile lavage)

Outcomes Assessment

- Assesses patients and clients, individually and collectively, using valid and credible measures that consider practice setting, patient and client culture, and effect of societal factors, such as payment.
- Chooses appropriate outcomes measurement tools for oncologic physical therapy based on the patient's or client's needs and examination findings (eg, CARES cancer functional quality of life tools, PROMIS cancer-specific tools, NCCN distress thermometer, functional assessment of cancer therapies (FACT) tools).

III. Practice Settings

The clinical curriculum of all accredited residency programs must include a variety of practice settings, as noted below. A resident should experience a minimum of 5% of their time in each setting, as required by the *ABPTRFE Quality Standards for Clinical Physical Therapist Residency and Fellowship Programs*.

If a residency program is unable to provide each participant with an opportunity to engage in patient care activities within these settings, the program must provide additional learning opportunities (eg, observation, didactic, journal club, research) related to patient care within these settings for the minimum required hours noted above.

The minimum required practice settings for Oncology residency programs are:

- Acute care facility
- Inpatient rehabilitation facility
- Outpatient facility

- Skilled nursing facility

IV. Patient Populations

The clinical curriculum of all accredited residency programs must include a variety of patient populations, specific to sex and age group as listed below, for a minimum of 5% of the program hours required by the *ABPTRFE Quality Standards for Clinical Physical Therapist Residency and Fellowship Programs*.

If a residency program is unable to provide each resident with an opportunity to engage in patient care activities within these populations, the program must provide additional learning opportunities (eg, observation, didactic, journal club, research) related to patient care within these populations for the minimum required hours noted above.

The minimum required patient populations for Oncology residency programs are:

Age:

- Pediatrics (0-21 years of age)
- Adults (22-59 years of age)
- Geriatrics (60 years of age to end of life)

Sex:

- Female
- Male

V. Primary Health Conditions

The clinical curriculum of all accredited residency programs must include a variety of primary health conditions associated with the program’s area of practice (see below list).

If a residency program is unable to provide each resident with an opportunity to engage in patient care activities within the majority of these populations, the program must provide additional learning opportunities (eg, observation, didactic, journal club, research) related to patient care within these conditions.

The following template must be used when logging resident patient encounters as part of the residency curriculum. Patients evaluated, treated, or managed by the resident as part of the resident’s education throughout the course of the residency program should be included within the template. The patient’s primary health condition is only counted during the first patient encounter. **Patient encounters beyond the initial visit should not be included in the frequency count.**

Name of Resident:	
Primary Health Conditions Oncology	Number of Patients Evaluated, Treated, or Managed by the Resident as Part of the Program’s Curriculum
CARDIOVASCULAR SYSTEM	
Congestive heart failure	
Heart failure	
Inferior vena cava syndrome	
Superior vena cava syndrome	
PULMONARY SYSTEM	
Diffuse interstitial pulmonary fibrosis	
Dyspnea	
Primary malignant neoplasm of lung (eg, lung cancer)	
Secondary malignant neoplasm of lung	
ENDOCRINE SYSTEM	
Carcinoma of prostate (eg, prostate cancer)	
Genus scleroderma (fungus)	
Graft-versus-host disease	
Malignant neoplasm of breast (eg, breast cancer)	
Malignant neoplasm of uterus (eg, uterine cancer)	
Malignant tumor of cervix (eg, cervical cancer)	
Malignant tumor of kidney (eg, kidney cancer)	

Malignant tumor of ovary (eg, ovarian cancer)	
Malignant tumor of pancreas (eg, pancreatic cancer)	
Malignant tumor of stomach (eg, stomach cancer)	
Malignant tumor of thyroid gland (eg, thyroid cancer)	
Malignant tumor of urinary bladder (eg, bladder cancer)	
Suspected testicular cancer (eg, testicular cancer)	
Thrombocytopenic disorder	
INTEGUMENTARY SYSTEM	
Bacterial infection of skin	
Breast implant protrusion (eg, skin extrusion)	
Contracture (eg, soft tissue contracture)	
Contracture scar (eg, scar tissue adhesion)	
Cutaneous eruption (eg, rash)	
Malignant melanoma	
Malignant neoplasm of skin head and neck (eg, head and neck cancer)	
Radiation dermatitis	
Radiation injury with fibrosis	
Skin reaction	
Toxicity due to chemotherapy	
Toxicity due to radiotherapy	
NERVOUS SYSTEM	
Abnormal gait	
Bladder dysfunction	
Bowel dysfunction	
Central nervous system metastases	
Chemotherapy-induced peripheral neuropathy	
Cranial nerve disorder (disorder of accessory nerve)	
Dysfunction of vestibular system	
Dysphagia (eg, swallowing dysfunction)	
Facial palsy	
Falls	
Hemiparesis	

Impaired cognition	
Impotence (eg, erectile dysfunction)	
Malignant neoplasm of brain	
Multiple Myeloma	
Nerve plexus disorder (eg, brachial, lumbosacral, peripheral)	
Neuropathic pain	
Ototoxicity	
Paralysis	
Poor balance (eg, balance dysfunction)	
Post-mastectomy chronic pain syndrome	
Secondary malignant neoplasm of brain (eg, brain cancer)	
Speech dysfunction	
Spinal cord compression	
Suspected central nervous system cancer (eg, central nervous system cancer)	
Visuospatial agnosia	
MUSCULOSKELETAL SYSTEM	
Abnormal posture	
Avascular necrosis	
Axillary web syndrome	
Bone necrosis (eg, osteonecrosis)	
Cachexia	
Fibrosis (eg, vaginal)	
Frailty	
Headache	
Joint pain (eg, arthralgias, localized, spinal)	
Muscle atrophy	
Muscle pain (eg, myalgia)	
Muscle weakness	
Muscle tone spastic	
Osteopenia	
Osteoporosis	
Osteoradionecrosis	
Osteosarcoma of bone	

Pelvic girdle pain	
Sarcoma	
Secondary malignant neoplasm of bone (eg, bone metastasis)	
Steroid-induced myopathy	
Temporomandibular joint-pain-dysfunction syndrome	
INVOLVEMENT OF MULTIPLE SYSTEMS	
Anemia	
Dehydration	
Edema	
End of life care plan (eg, pain management, hospice care, palliative care, oncologic emergencies)	
Fatigue associated with malignant neoplastic disease	
Leukemia	
Lymphedema	
Malignant lymphoma (eg, lymphoma)	
Malignant tumor of large intestine (eg, colorectal cancer)	
Neutropenia	
Obesity	
Paraneoplastic syndrome	
Physical deconditioning	
Thrombocytopenic disorder	
Tobacco dependence syndrome	
OTHER	