
Certificate in Psycho-Oncology (United Kingdom)

Neurological And Musculoskeletal Complications

Afferent Nerve Damage – injury to sensory pathways that convey pain, temperature, and proprioceptive information from the periphery to the central nervous system. Related terms: sensory neuropathy, deafferentation. Damage may arise from surgical resection, radiation scarring, or chemotherapy agents such as platinum compounds. Patients often report numbness, tingling, or loss of joint position sense, which can increase fall risk. In psycho-oncology practice, screening for altered sensation should be incorporated into routine assessments. A challenge is distinguishing treatment-related loss from disease progression, especially when imaging is equivocal.

Analgesic-Induced Myopathy – muscle weakness and atrophy resulting from prolonged use of opioid or non-opioid analgesics. Related terms: opioid-induced endocrinopathy, steroid myopathy. Chronic opioid therapy can suppress testosterone and cortisol, leading to reduced muscle mass. An example is a breast cancer survivor on high-dose morphine who develops difficulty climbing stairs. Clinicians can mitigate risk by rotating analgesics, incorporating physical therapy, and monitoring hormone levels. The main difficulty lies in balancing adequate pain control with preservation of functional capacity.

Ataxia – lack of coordinated muscle movement, often manifesting as gait instability or dysmetria. Related terms: cerebellar dysfunction, vestibular ataxia. Ataxia may result from cerebellar metastases, paraneoplastic antibodies, or neurotoxic chemotherapy (e.G., Vincristine). A patient with lung carcinoma may present with a wide-based gait and frequent falls. Intervention includes vestibular rehabilitation, balance training, and, when appropriate, dose reduction of the offending agent. The unpredictable onset of ataxia poses a therapeutic timing challenge.

Axonal Degeneration – progressive loss of the axon's structural integrity, leading to impaired nerve conduction. Related terms: distal axonopathy, Wallerian degeneration. Frequently observed in taxane-related peripheral neuropathy, axonal degeneration can cause distal weakness and sensory loss. A colon cancer patient receiving paclitaxel may develop foot drop. Early detection via nerve conduction studies enables dose modification and initiation of neuroprotective strategies such as vitamin E supplementation. However, subclinical degeneration may escape routine clinical detection.

Bone Metastasis – spread of malignant cells to skeletal tissue, causing structural compromise and pain. Related terms: skeletal-related event, osteolytic lesion. Common in breast, prostate, and lung cancers, bone metastases can precipitate fractures, hypercalcemia, and spinal cord compression. A prostate cancer patient may experience severe back pain that worsens at night. Management includes bisphosphonates, radiotherapy, and multidisciplinary rehabilitation to preserve mobility. The main challenge is coordinating oncologic and musculoskeletal care to prevent functional decline.

Brachial Plexopathy – injury to the network of nerves that innervate the upper limb, often resulting in weakness, sensory loss, and pain. Related terms: radiation-induced plexopathy, surgical plexus injury. Radiation therapy for head-neck cancers can cause delayed fibrosis of the brachial plexus. A patient may present with inability to abduct the shoulder and numbness over the lateral forearm. Early physiotherapy focusing on range-of-motion and strength can limit disability. Distinguishing radiation-induced plexopathy from tumor recurrence remains a diagnostic hurdle.

Balance Impairment – reduced ability to maintain postural stability during static or dynamic activities. Related terms: postural sway, proprioceptive deficit. Contributing factors include neuropathy, cerebellar involvement, and deconditioning. A lymphoma survivor may report feeling “unsteady” when walking on uneven surfaces. Intervention strategies involve balance training, assistive devices, and environmental modifications. The heterogeneity of underlying causes makes individualized treatment planning essential.

Cancer-Related Fatigue – persistent sense of exhaustion not proportional to activity level, often exacerbated by treatment. Related terms: CRF, psychosocial fatigue. Fatigue can be amplified by anemia, cytokine release, and muscle wasting. For example, a breast cancer patient undergoing chemotherapy may find it impossible to complete a short walk without stopping. Exercise prescriptions, energy-conservation techniques, and cognitive-behavioral therapy can alleviate symptoms. A major challenge is patient adherence, as severe fatigue may limit participation in interventions.

Chemotherapy-Induced Neuropathy – peripheral nerve damage caused by cytotoxic agents, manifesting as sensory loss, pain, and motor weakness. Related terms: CIPN, neurotoxic chemotherapy. Platinum compounds, taxanes, and bortezomib are common culprits. A patient receiving oxaliplatin may develop burning sensations in the hands and difficulty buttoning shirts. Dose reduction, symptomatic treatment with duloxetine, and early occupational therapy are practical measures. The unpredictable severity and delayed onset complicate patient counseling.

Corticosteroid Myopathy – steroid-associated muscle weakness, typically affecting proximal muscles. Related terms: steroid-induced myopathy, glucocorticoid myopathy. High-dose dexamethasone used for cerebral edema can precipitate difficulty rising from a chair. Management includes tapering steroids when feasible, resistance training, and monitoring of serum creatine kinase. The need for steroids to control life-threatening edema often outweighs the desire to preserve muscle strength, creating a therapeutic dilemma.

Craniotomy Sequelae – neurological and musculoskeletal complications following surgical removal of intracranial tumors. Related terms: post-operative paresis, skull-base reconstruction. Patients may experience focal weakness, spasticity, or shoulder girdle strain due to positioning. A glioma patient may develop shoulder pain from prolonged neck extension during surgery. Early mobilization, physiotherapy, and ergonomic adjustments are key. The variability of surgical approaches makes standardized post-operative protocols challenging.

Carpal Tunnel Syndrome – compression of the median nerve at the wrist, leading to numbness, tingling, and hand weakness. Related terms: median nerve entrapment, occupational neuropathy. Chemotherapy-induced edema and repetitive motions can predispose cancer survivors to CTS. A patient undergoing breast cancer radiotherapy may develop hand symptoms that interfere with daily tasks. Splinting, ergonomic counseling, and, if needed, surgical release are effective. Recognizing CTS early prevents chronic disability.

Dexamethasone-Induced Myopathy – proximal muscle weakness resulting from prolonged high-dose dexamethasone therapy. Related terms: steroid myopathy, glucocorticoid-induced atrophy. Often seen in patients receiving steroids for brain metastases or spinal cord compression. Example: A patient reports difficulty climbing stairs after two weeks of dexamethasone 8 mg daily. Strategies include tapering when clinically safe, resistance exercise, and nutritional support. The urgency of steroid use for neurologic emergencies often limits opportunities for early mitigation.

Deep Vein Thrombosis (Musculoskeletal Risk) – formation of a clot in deep veins, frequently associated with immobility and lower-limb muscle atrophy. Related terms: DVT, venous stasis. Cancer patients with reduced mobility due to neuropathy are at heightened risk. A colorectal cancer survivor with leg swelling may develop a DVT, complicating rehabilitation. Prophylactic anticoagulation, compression stockings, and early ambulation are essential. Balancing bleeding risk from anticoagulants against clot prevention remains a clinical conundrum.

Dysesthesia – abnormal, often unpleasant sensation such as burning, tingling, or “pins and needles.” Related terms: paresthesia, hyperesthesia. Frequently reported in CIPN and radiation-induced neuropathy. A patient may describe “electric shocks” in the feet after receiving carboplatin. Management includes pharmacologic agents (gabapentin, duloxetine) and sensory re-education. The subjective nature of dysesthesia can make severity assessment difficult.

Encephalopathy – diffuse brain dysfunction presenting with altered cognition, attention, and sometimes motor deficits. Related terms: cancer-associated encephalopathy, metabolic encephalopathy. Causes include paraneoplastic antibodies, hypercalcemia, and chemotherapy neurotoxicity. A lung cancer patient may develop confusion and mild gait instability. Intervention involves treating the underlying cause, cognitive rehabilitation, and psychosocial support. The multifactorial etiology often requires interdisciplinary collaboration.

Erector Spinae Spasms – involuntary contractions of the back extensor muscles, causing localized pain and restricted movement. Related terms: muscle spasm, back strain. May arise from prolonged bed rest, steroid-induced osteoporosis, or post-radiation fibrosis. A patient with thoracic spine metastasis may report severe lumbar tightness. Stretching, heat therapy, and low-dose muscle relaxants can provide relief. Chronic spasm may lead to secondary postural changes, complicating treatment.

Exercise Intolerance – reduced capacity to perform physical activity due to fatigue, deconditioning, or cardiopulmonary limitations. Related terms: reduced VO₂ max, functional decline. Common in patients

receiving anthracyclines or experiencing anemia. A patient may be unable to walk more than a few minutes without dyspnea. Graded exercise programs, aerobic conditioning, and anemia management improve tolerance. Determining safe intensity levels without exacerbating fatigue is a frequent barrier.

Facet Joint Pain – localized discomfort arising from degeneration or inflammation of the spinal facet joints. Related terms: zygapophyseal joint pain, spinal arthropathy. Radiation to the spine and prolonged immobilization can accelerate facet degeneration. A breast cancer survivor may develop low-back pain that worsens with extension. Management includes physiotherapy, joint-specific exercises, and, if needed, facet-block injections. Differentiating facet pain from metastatic bone pain is diagnostically challenging.

Fatigue-related Musculoskeletal Strain – overuse injuries caused by compensatory postures when patients try to conserve energy. Related terms: post-fatigue overuse, compensatory strain. For example, a patient who avoids standing may develop hip flexor tightness due to prolonged sitting. Education on pacing, ergonomic adjustments, and targeted stretching can prevent strain. The subtle onset often leads to delayed recognition.

Fear-Avoidance Beliefs – cognitions that movement will cause injury or exacerbate symptoms, leading to activity restriction. Related terms: kinesiophobia, avoidance behavior. Cancer survivors with neuropathic pain may avoid walking, worsening deconditioning. Cognitive-behavioral interventions and graded exposure help modify these beliefs. Overcoming entrenched fear requires sustained therapeutic support.

Gait Disturbance – abnormalities in walking pattern, including reduced speed, asymmetry, or unsteady steps. Related terms: gait ataxia, gait apraxia. Causes include neuropathy, myopathy, spinal cord compression, and cerebellar metastases. A patient with peripheral neuropathy may adopt a “slapped” gait to compensate for foot sensory loss. Gait analysis, assistive devices, and balance training are practical approaches. The heterogeneity of contributing factors demands comprehensive assessment.

Guillain-Barré Syndrome (Paraneoplastic) – acute demyelinating polyneuropathy triggered by an immune response to tumor antigens. Related terms: paraneoplastic neuropathy, autoimmune neuropathy. Rarely associated with small-cell lung carcinoma. Presentation includes rapidly ascending weakness and areflexia. Prompt intravenous immunoglobulin therapy and supportive physiotherapy are lifesaving. Early recognition is hampered by the rarity of the condition in oncology settings.

Glucosamine Use – supplementation aimed at supporting joint cartilage, occasionally considered for cancer-related arthralgia. Related terms: joint health supplement, osteoarthritis adjunct. Evidence for efficacy in oncology-related joint pain is limited. A breast cancer patient on aromatase inhibitors may try glucosamine for knee discomfort. Clinicians should discuss the lack of robust data and potential drug-supplement interactions. The challenge lies in managing patient expectations while avoiding unnecessary costs.

Hyperalgesia – heightened sensitivity to painful stimuli, often a consequence of opioid tolerance or

chemotherapy. Related terms: allodynia, opioid-induced hyperalgesia. A patient receiving high-dose morphine may report pain that is disproportionate to the underlying pathology. Strategies include opioid rotation, non-opioid analgesics, and neuromodulatory techniques such as transcutaneous electrical nerve stimulation. Distinguishing hyperalgesia from disease progression requires careful clinical judgment.

Hip Fracture Risk – increased susceptibility to proximal femur fracture due to osteoporosis, metastasis, or steroid use. Related terms: osteoporotic fracture, pathologic fracture. Cancer survivors on long-term glucocorticoids or with lytic lesions face heightened risk. Preventive measures include bisphosphonate therapy, weight-bearing exercise, and fall-prevention education. The challenge is balancing anti-resorptive treatment against potential renal toxicity in patients with compromised kidney function.

Headache (Neuropathic) – pain arising from nerve irritation, often described as burning or throbbing, distinct from vascular headaches. Related terms: trigeminal neuralgia, neuropathic cephalgia. Radiation to the skull base can precipitate neuropathic headache. A patient may describe “electric shock” sensations behind the eye. Gabapentin, nerve blocks, and cognitive coping strategies are effective. The overlap with tension-type headache may confound diagnosis.

Immune Checkpoint Inhibitor Myositis – inflammatory muscle disease triggered by PD-1/PD-L1 or CTLA-4 blockade. Related terms: ICI-related myopathy, autoimmune myositis. Presents with proximal weakness, elevated creatine kinase, and sometimes concurrent myocarditis. A melanoma patient on pembrolizumab may develop difficulty rising from a chair. Prompt immunosuppression, discontinuation of the ICI, and physiotherapy are crucial. The rarity and rapid progression of cardiac involvement make early detection imperative.

Infiltrative Myopathy – muscle weakness caused by direct tumor invasion or metastatic deposits within muscle tissue. Related terms: muscle metastasis, neoplastic myopathy. Rare but documented in sarcoma and lung cancer. A patient may experience a palpable, tender mass in the thigh with associated weakness. Imaging (MRI) and biopsy confirm diagnosis. Treatment focuses on systemic therapy and targeted physiotherapy to preserve function. The infrequency of this complication often leads to delayed recognition.

Intracranial Pressure Effects – neurological deficits resulting from elevated pressure within the skull, including headache, vision changes, and motor weakness. Related terms: ICP, papilledema. Tumor bulk, edema, or obstructive hydrocephalus can raise ICP. A patient with posterior fossa metastasis may develop gait instability and arm weakness. Management includes corticosteroids, ventriculoperitoneal shunting, and careful monitoring of neurologic status. The need for urgent neurosurgical intervention can limit the opportunity for early rehabilitation.

Joint Stiffness – reduced range of motion in a synovial joint, often secondary to immobilization, radiation fibrosis, or arthritic changes. Related terms: contracture, capsular tightening. A patient receiving radiation to the shoulder may develop limited abduction. Stretching protocols, manual therapy, and heat application improve mobility. Persistent stiffness can lead to secondary muscle weakness, complicating functional

recovery.

Jerk Reflex Hyperexcitability – exaggerated reflex response, often observed in upper motor neuron lesions. Related terms: hyperreflexia, Babinski sign. May occur in spinal cord compression from vertebral metastasis. A patient may demonstrate brisk knee-jerk reflexes. Neurological assessment guides urgency of oncologic intervention. Rehabilitation focuses on spasticity management and functional training. Differentiating hyperreflexia from peripheral nerve irritation is essential for accurate diagnosis.

Kyphosis – forward curvature of the thoracic spine, leading to stooped posture and reduced pulmonary capacity. Related terms: postural kyphosis, vertebral collapse. Can result from vertebral compression fractures, osteoporosis, or prolonged corticosteroid use. A patient may complain of back pain and difficulty breathing when bending forward. Physical therapy emphasizing extension exercises, bracing, and pain control are key. Progressive kyphosis may become irreversible without early intervention.

Kinesiophobia – fear of movement due to anticipation of pain or injury, frequently seen in cancer survivors with neuropathic pain. Related terms: fear-avoidance, activity avoidance. Leads to sedentary behavior and muscle deconditioning. A breast cancer survivor may avoid arm elevation after surgery, fearing lymphedema. Graded exposure, education, and cognitive-behavioral therapy help reduce fear. Overcoming entrenched avoidance requires consistent reinforcement.

Lhermitte’s Sign – electric-shock sensation radiating down the spine and limbs upon neck flexion, indicative of dorsal column involvement. Related terms: cervical myelopathy, demyelination. Often observed after cervical radiation or in paraneoplastic demyelinating disorders. A patient may report sudden “tingling” down the arms when looking down. Reducing neck flexion, spinal cord imaging, and, if needed, corticosteroid therapy are practical steps. The transient nature of the sign can lead to under-recognition.

Lymphedema-Related Musculoskeletal Issues – muscle fatigue, joint stiffness, and altered biomechanics due to fluid accumulation after lymph node dissection. Related terms: post-mastectomy lymphedema, swelling-induced restriction. Upper-limb swelling can limit shoulder range of motion and cause rotator cuff strain. Compression therapy, manual lymph drainage, and targeted exercise improve outcomes. Persistent edema may lead to chronic pain, complicating rehabilitation.

Lumbar Radiculopathy – nerve root compression in the lumbar spine causing leg pain, numbness, and weakness. Related terms: sciatica, nerve root irritation. Can result from vertebral metastases, epidural disease, or post-radiation fibrosis. A patient may present with shooting pain down the posterior thigh. Imaging guides oncologic treatment, while physiotherapy addresses muscular imbalances and pain modulation. The coexistence of metastatic disease often limits surgical decompression options.

Myalgia – muscle pain without overt weakness, frequently drug-induced. Related terms: muscle soreness, analgesic-related myalgia. Chemotherapy agents such as interferon- α can cause diffuse aching. A patient may describe “tightness” after each infusion cycle. NSAIDs, gentle stretching, and pacing activities provide

relief. Differentiating myalgia from early myopathy is vital to prevent progression.

Myasthenic Syndrome – autoimmune disorder characterized by fluctuating muscle weakness, sometimes triggered by immune checkpoint inhibitors. Related terms: ICI-related myasthenia, autoimmune neuromuscular junction disorder. Presents with ptosis, dysphagia, and generalized weakness. A patient on nivolumab may develop drooping eyelids that worsen with activity. Acetylcholinesterase inhibitors, immunosuppression, and close monitoring are required. Early identification prevents respiratory compromise.

Metastatic Bone Pain – nociceptive pain arising from tumor invasion of bone, often described as deep, aching, and worsened by movement. Related terms: osteolytic pain, skeletal metastasis pain. Common in breast, prostate, and lung cancers. Radiotherapy, bisphosphonates, and analgesics are standard treatments. Physical therapy focuses on maintaining mobility while minimizing pain. The challenge is balancing adequate analgesia with sedation that may impede participation in rehabilitation.

Muscle Weakness – reduction in force generation, which may be generalized or focal. Related terms: paresis, hypokinesia. Etiologies include steroid myopathy, chemotherapy neuropathy, deconditioning, and spinal cord involvement. A patient may struggle to lift a grocery bag after several cycles of chemotherapy. Strength training, nutritional optimization, and medication review are essential components of management. Identifying the predominant cause guides targeted therapy.

Neuropathic Pain – pain arising from direct injury to the somatosensory system, often described as burning, tingling, or electric-like. Related terms: central pain, peripheral neuropathic pain. Frequently seen with CIPN, radiation-induced nerve damage, and paraneoplastic neuropathy. A patient may report “pins and needles” in the feet that interferes with sleep. First-line treatments include duloxetine or gabapentin, complemented by psychosocial coping strategies. The heterogeneity of response necessitates individualized pharmacologic trials.

Nerve Compression Syndromes – focal entrapment of peripheral nerves leading to sensory and motor deficits. Related terms: carpal tunnel, ulnar neuropathy. Radiation fibrosis and tumor bulk can create compressive environments. A head-and-neck cancer survivor may develop ulnar nerve symptoms at the elbow. Early diagnosis through clinical exam and electrodiagnostic studies enables timely decompression or orthotic intervention. Persistent fibrosis may limit surgical success.

Neurotoxicity – adverse effects on the nervous system caused by therapeutic agents, manifesting as cognitive, sensory, or motor impairment. Related terms: chemotherapy-induced neurotoxicity, radiation neurotoxicity. Agents such as vincristine, cisplatin, and high-dose methotrexate are common culprits. A patient may develop slowed processing speed after high-dose methotrexate. Neuroprotective strategies include dose adjustment, supplementation (e.G., Folic acid), and cognitive rehabilitation. Monitoring is complicated by overlapping disease-related neurological changes.

Osteopenia – reduced bone mineral density, a precursor to osteoporosis, often accelerated by endocrine therapy and steroids. Related terms: low bone mass, bone demineralization. A post-menopausal breast cancer survivor on aromatase inhibitors may experience decreased bone density. Dual-energy X-ray absorptiometry (DEXA) screening, calcium-vitamin D supplementation, and weight-bearing exercise are recommended. The silent progression of osteopenia makes early detection critical.

Orthostatic Hypotension – drop in blood pressure upon standing, leading to dizziness and potential falls. Related terms: postural hypotension, autonomic dysfunction. Chemotherapy agents (e.g., Cisplatin) and autonomic neuropathy can precipitate this condition. A patient may feel light-headed after rising from a chair, increasing fall risk. Management includes gradual position changes, compression stockings, and adequate hydration. The interaction with fatigue and weakness complicates functional recovery.

Osteolytic Lesions – areas of bone destruction caused by metastatic tumor activity, leading to pain and structural weakness. Related terms: lytic metastasis, bone resorption. Common in renal cell carcinoma and multiple myeloma. Radiographs reveal “punched-out” defects. Bisphosphonates, radiotherapy, and surgical stabilization are therapeutic options. The risk of pathological fracture necessitates early orthopedic referral.

Peripheral Neuropathy – damage to peripheral nerves resulting in sensory loss, pain, and motor weakness. Related terms: CIPN, diabetic neuropathy. Platinum agents, taxanes, and vinca alkaloids are primary causes. A patient may develop numbness in the fingertips that interferes with fine motor tasks. Dose modification, symptom-targeted pharmacotherapy, and occupational therapy enhance functional independence. The delayed onset after treatment completion often leads to under-reporting.

Pain Catastrophizing – exaggerated negative mental set toward actual or anticipated pain, associated with heightened pain perception. Related terms: pain rumination, pain magnification. Cancer survivors with chronic neuropathic pain frequently exhibit catastrophizing, which can amplify disability. Cognitive-behavioral therapy, mindfulness, and education reduce catastrophizing scores. The interplay between emotional distress and pain intensity makes assessment essential for comprehensive care.

Prophylactic Physiotherapy – pre-emptive exercise and education program designed to prevent musculoskeletal complications during cancer treatment. Related terms: prehabilitation, preventive rehab. Initiated before surgery or radiotherapy to maintain strength, flexibility, and cardiovascular fitness. A patient scheduled for pelvic radiotherapy may receive core-strengthening exercises to mitigate later spinal pain. Evidence shows reduced length of hospital stay and improved quality of life. Implementing programs within busy oncology clinics remains a logistical challenge.

Quality of Life Impact – overall effect of neurological and musculoskeletal complications on a patient’s physical, emotional, and social well-being. Related terms: health-related QoL, functional status. Persistent pain, fatigue, and mobility limitations diminish daily enjoyment. Validated tools such as the EORTC QLQ-C30 capture these dimensions. Interventions targeting pain, fatigue, and psychosocial support improve scores. The subjective nature of quality-of-life assessments requires culturally sensitive interpretation.

Quadriceps Weakness – reduced strength of the thigh extensor muscle group, crucial for ambulation and transfers. Related terms: knee extension deficit, lower-limb paresis. Can result from spinal cord compression, chemotherapy-induced myopathy, or disuse atrophy. A patient may struggle to rise from a seated position without using hands. Resistance training, functional electrical stimulation, and gait training are effective. Monitoring progression is key, as weakness may signal underlying disease progression.

Radiation-Induced Myelopathy – delayed spinal cord injury following high-dose radiation, presenting with motor weakness, sensory loss, and sphincter dysfunction. Related terms: radiation myelopathy, delayed radiation injury. Typically manifests months to years after treatment of spinal metastases. A patient may develop progressive lower-extremity weakness and loss of bladder control. High-dose steroids, hyperbaric oxygen, and rehabilitation are employed, though prognosis is often poor. Early detection through MRI is essential but challenging due to subtle imaging changes.

Radiculopathy – irritation or compression of a spinal nerve root, causing radiating pain, sensory changes, and motor weakness. Related terms: nerve root compression, spinal nerve irritation. Can be caused by vertebral metastasis, epidural disease, or post-radiation fibrosis. A patient may report sharp pain down the arm following cervical spine irradiation. Conservative measures include physiotherapy and analgesics; surgical decompression may be required for progressive deficits. Differentiating radiculopathy from peripheral neuropathy is critical for appropriate management.

Reflex Abnormalities – changes in deep tendon reflexes, including hyperreflexia, hyporeflexia, or absent reflexes, indicating neurologic involvement. Related terms: neurologic signs, reflex testing. May signal upper motor neuron lesions (e.g., Spinal cord compression) or peripheral neuropathy. A patient with lumbar metastasis may exhibit brisk patellar reflexes. Systematic neurological examinations guide urgency of imaging and treatment. Reflex changes may be subtle, requiring experienced examiners.

Spasticity – velocity-dependent increase in muscle tone, often associated with upper motor neuron injury. Related terms: hypertonia, muscle stiffness. Can develop after spinal cord compression from vertebral metastasis. A patient may experience involuntary flexor spasms in the lower limbs, interfering with walking. Management includes stretching, oral baclofen, intrathecal baclofen pumps, and functional gait training. The balance between reducing tone and preserving voluntary movement is a therapeutic nuance.

Sarcopenia – age-related loss of skeletal muscle mass and function, accelerated by cancer treatment and inactivity. Related terms: muscle wasting, cachexia. Leads to frailty, falls, and decreased tolerance to therapy. A patient undergoing chemotherapy may lose >5% of lean body mass over a few weeks. Resistance exercise, protein supplementation, and anti-catabolic agents (e.g., Selective androgen receptor modulators) are emerging strategies. The multifactorial etiology makes standardized interventions difficult.

Skeletal-Related Events – complications of bone metastases, including pathological fracture, spinal cord compression, hypercalcemia, and need for radiation or surgery. Related terms: SRE, bone event. Occur in up to 40% of patients with advanced breast or prostate cancer. Early identification through imaging and

prophylactic treatment with bisphosphonates or denosumab reduces incidence. Rehabilitation focuses on preserving mobility after an event. Coordinating timely oncologic and orthopedic input is often logistically complex.

Seizure – uncontrolled electrical discharge in the brain, presenting with convulsions, altered consciousness, or focal neurological signs. Related terms: epileptic event, post-tumor seizure. May arise from cortical metastases, radiation necrosis, or metabolic disturbances. A patient with brain metastasis may experience a focal seizure with right-hand jerking. Antiepileptic drugs, seizure-trigger avoidance, and safety education are essential. The potential for medication interactions with chemotherapy adds a layer of complexity.

Shoulder Dysfunction – reduced range of motion, pain, and weakness in the glenohumeral joint, frequently after mastectomy or radiation. Related terms: post-mastectomy syndrome, adhesive capsulitis. Scar tissue, nerve injury, and lymphedema contribute to limited abduction and external rotation. A patient may be unable to raise the arm above 90 degrees, affecting dressing and hygiene. Early physiotherapy, manual therapy, and scar mobilization improve outcomes. Persistent dysfunction can lead to secondary cervical spine strain.

Tremor – rhythmic, involuntary oscillation of a body part, often seen in cerebellar involvement or medication side-effects. Related terms: intention tremor, medication-induced tremor. Can be exacerbated by steroids or certain anti-emetics. A patient may experience a fine hand tremor that interferes with writing. Treatment includes medication adjustment, beta-blockers, or occupational therapy adaptations. Distinguishing tremor from Parkinsonian features is important for accurate management.

Thromboembolic Events – formation of blood clots that can travel to pulmonary arteries, causing pulmonary embolism, or obstruct venous return. Related terms: DVT, VTE. Cancer-associated hypercoagulability, immobility from neuropathy, and central venous catheters increase risk. A patient with leg swelling may develop a pulmonary embolism, limiting exercise tolerance. Prophylactic anticoagulation, compression devices, and early mobilization are standard. Bleeding risk from concurrent therapies often complicates anticoagulant selection.

Thoracic Outlet Syndrome – compression of neurovascular structures between the clavicle and first rib, leading to upper-limb pain, paresthesia, and weakness. Related terms: costoclavicular syndrome, neurogenic TOS. May be precipitated by post-surgical scar tissue or repetitive overhead activities after breast surgery. A patient may report numbness in the ulnar distribution when raising the arm. Physical therapy focusing on posture, scalene stretching, and, if necessary, surgical decompression are interventions. Diagnosis is frequently missed due to overlapping symptomatology with brachial plexopathy.

Upper Limb Dysfunction – impairment of shoulder, arm, or hand function, encompassing pain, limited range, and weakness. Related terms: arm lymphedema, post-surgical restriction. Common after axillary node dissection and radiation. A patient may struggle with reaching overhead, impacting work and daily chores. Early mobilization, scar massage, and strengthening exercises are key. Persistent dysfunction may

necessitate occupational therapy for adaptive equipment.

Unexplained Neurological Symptoms – vague or atypical neurologic complaints without clear etiology on imaging or labs. Related terms: functional neurological disorder, somatoform symptom. May arise from anxiety, medication side-effects, or paraneoplastic phenomena. A patient may report “brain fog” and intermittent weakness without objective findings. Comprehensive assessment, reassurance, and psychosocial support often alleviate distress. The risk of over-investigation must be balanced against the need to exclude serious pathology.

Vertebral Compression Fracture – collapse of a vertebral body, frequently due to osteoporosis or metastatic involvement. Related terms: vertebral fracture, spinal collapse. Presents with acute back pain, height loss, and possible kyphosis. A patient on long-term glucocorticoids may experience sudden mid-back pain after a minor fall. Management includes analgesia, vertebroplasty, and osteoporosis treatment. Rehabilitation emphasizes core stabilization and safe movement patterns. The presence of metastatic disease may limit surgical options.

Vestibular Dysfunction – impairment of the inner ear or central pathways that maintain balance, leading to dizziness, vertigo, and unsteady gait. Related terms: labyrinthitis, cerebellar vertigo. Can be precipitated by ototoxic chemotherapy (e.G., Cisplatin) or brainstem metastases. A patient may report spinning sensations when turning quickly, increasing fall risk. Vestibular rehabilitation, medication adjustment, and fall-prevention strategies are effective. The overlap with fatigue and deconditioning can mask vestibular contributions.