

Conditions	Distinguishing Features	Features Mimicking Pressure Injury	Diagnostics	Photo
Vasculitic Conditions and Vascular Insufficiency Disorders				
Vascular Ulcers	<p>Poorly-healing wound with signs and symptoms of localized hypoperfusion.</p> <p>Ulceration with delayed healing.</p>	<p>Lateral malleolus wound that may appear to be secondary to minor pressure injury from ill-fitting footwear or orthopedic devices.</p> <p>May be mistaken for stage 3, 4, unstageable, or deep tissue injuries (DTIs).</p>	<p>Duplex ultrasonography of the peroneal and other arteries.</p> <p>Catheter angiography</p> <p>Ankle-brachial index</p> <p>X-ray to rule out osteomyelitis older than 21 days. Magnetic resonance imaging (MRI) or bone scans will reveal acute osteomyelitis.</p>	
Lower extremity arterial disease (LEAD)	<p>Painful, intact areas of shiny, red, or purple discoloration that progress to ulceration with slough and necrosis.</p> <p>Lower back, hip, buttock, or thigh pain.</p>	<p>In the initial presentation, areas may appear purple or red discoloration over intact skin, similar to DTI. As the condition progresses, may mimic unstageable PU/I.</p>	<p>Vascular diagnostic imaging including computerized-tomodensitometry angiography (CTA) and magnetic resonance angiography (MRA).</p> <p>History and physical examination.</p>	
Calciophylaxis	<p>Indurated, painful, firm plaques or ulcers that may have a purpuric appearance and evolve into necrotic lesions with eschar.</p> <p>Commonly found on the back, abdomen, and upper legs. Superimposed infection may also be present.</p>	<p>Initial presentation may be confused for a DTI.</p> <p>Necrotic lesions and regions of black eschar may present similarly to infected PIs or DTIs particularly when calciophylaxis nodules arise in areas exposed to pressure.</p>	<p>Detailed history, including review for end-stage renal disease, renal replacement therapy, and physical examination.</p> <p>Punch biopsy from the lesion margins.</p>	

Autoimmune Disease				
Bullous Pemphigoid	<p>Affects persons 70 years of age and older.</p> <p>Pruritus and blister formation are hallmarks. Eczematous plaques, papular or cutaneous lesions may also develop.</p> <p>Lesions usually have symmetrical distribution.</p>	<p>Bullae with serous or hemorrhagic drainage may mimic a stage 2 PI or DTI.</p>	<p>Detailed history and physical examination.</p> <p>Punch biopsy</p>	
Infections				
Rectocutaneous Fistula	<p>An atypical tract between the rectum and the skin within the rectal vault. The condition arises as a complication of disease, direct or indirect trauma, or a surgical procedure. Skin is initially intact, though the patient may complain of pain relieved by defecation.</p> <p>As the condition progresses the area will present with a full-thickness wound or painful perirectal abscess.</p>	<p>Perirectal abscess often presents with intact skin and redness similar to stage 1 PU/I.</p> <p>Later manifestations may appear with yellow sloughy necrosis mimicking unstageable PU/I.</p>	<p>Review of relevant history and clinical exam.</p> <p>Computed tomography (CT)</p> <p>Enema studies</p>	
Cutaneous manifestations of COVID-19	<p>Varying appearances ranging from clear to hemorrhagic blisters, erythematous lesions, and purple discolorations at any anatomical</p>	<p>COVID-19-associated lesions may mimic stage 1 or 2 PU/I, or DTIs.</p>	<p>Detailed patient history and assessment with high index of suspicion for onset, evolution, and resolution, usually without scar formation.</p>	

	<p>location.</p> <p>Areas most prone to developing the lesions include acral locations and extremities, though they may also appear in the vicinity of pressure-prone regions.</p>		<p>Evaluation for COVID-19 diagnosis via laboratory testing.</p>	
Pyomyositis	<p>The condition results from the infection of skeletal muscle tissue.</p> <p>Progresses in three distinct phases (invasive, seeding of infection within skeletal muscle groups, and SIRS).</p> <p>Initial presenting symptoms are vague and easily missed.</p> <p>The latter phase carries a significant risk for sepsis and multi-system organ failure.</p>	<p>Earlier symptoms of a woody edema with erythema can be mistaken for stage 1 PU/I.</p> <p>Later manifestations, including necrosis, can lead to a diagnosis of an unstageable PU/I.</p>	<p>A detailed history and physical examination, with particular attention for reports of vigorous exercise, intravenous drug use (IVDU), blunt force trauma, HIV, immunodeficiency, malnutrition, and diabetes.</p> <p>MRI is the gold standard. May also consider CT or ultrasound.</p> <p>Wound cultures obtained intraoperatively to identify the causative agent.</p>	
Necrotizing Soft Tissue Infections	<p>Underlying soft tissue infection with gangrenous necrosis resulting in subcutaneous emphysema and frothy purulence.</p>	<p>Black eschar with underlying necrosis may present similar to an unstageable PU/I.</p>	<p>History and physical examination.</p> <p>Presence of fat-stranding on CT</p>	
Cancerous Conditions				
Marjolin's Ulcer	<p>Aggressive skin neoplasm arising from scar tissue. The area is recalcitrant with reopening weeks, months, or years after the healing from the initial insult.</p>	<p>Ulceration with incomplete healing may appear as PU/I associated, especially when occurring in a region subjected to friction and shearing forces.</p>	<p>Biopsy</p> <p>Positron emission tomography (PET) scan to evaluate for metastasis.</p>	

	May manifest as chronic ulcerations with a cauliflower-like friable surface with epibole at the margins.			
Coagulopathies				
Cold Agglutin Disease	Signs and symptoms consistent with cutaneous ischemia associated with cold exposure, including acrocyanosis.	Purpura and ecchymosis without coinciding trauma or hematologic abnormalities or dry necrosis, including black eschar as seen with severe frostbite, may resemble a DTI or unstageable PU/I despite lack of pressure to the area.	Laboratory tests including cold agglutinin test. Vascular Doppler studies including flowmetry and ultrasound. Capillary microscopy	
Warfarin-Induced Skin Necrosis (WISN)	An erythematous lesion with progression to a painful, full-thickness wound and skin necrosis. Commonly occurs in areas with significant amounts of adipose tissue. History of recent or distant warfarin therapy. More likely in patients placed on initially high doses of warfarin.	Initial lesions present similarly to stage 1 PU/I. As the condition progresses to purple discoloration, may mimic a DTI. Evolution may resemble stage 3 PU/I with necrosis. This misdiagnosis is more likely if there is a concern for pressure in an area at risk for prolonged exposure to pressure such as the buttocks.	History and clinical presentation. Skin biopsy	
Thrombocytopenic Purpura	Hemorrhagic lesions ranging from pinpoint petechiae to widespread non-blanchable ecchymosis.	Purpuric lesions may appear to be consistent with DTI, due to their propensity to situate in areas of dependency such as the buttocks.	A thorough history, including investigation for hematological conditions. Physical assessment and evaluation of the pattern of distribution of purpura. Complete blood count (CBC)	

Traumas				
<p>Morel-Lavallée</p>	<p>A closed degloving injury resulting from blunt force trauma with shearing.</p> <p>Commonly appears in the greater trochanteric region.</p> <p>Immediate or delayed pain and swelling of the affected area.</p>	<p>Purpuric discoloration with evidence of compromised underlying tissue closely mimics a DTI.</p>	<p>Magnetic resonance imaging (MRI)</p>	
<p>Burns</p>	<p>Described by depths of tissue damage ranging from partial thickness to full-thickness tissue damage. Presentation ranges in color from bright to deep red, and black and may also manifest as blisters or bullae.</p> <p>Cultured epithelial autographs (CEA) used for full-thickness burns covering $\geq 50\%$ TBSA may fail, especially over pressure prone areas.</p>	<p>Failure of CEA used to treat full-thickness burns may mimic a stage 3 or 4 PU/I.</p>	<p>A detailed history and physical exam.</p> <p>Serial wound photography of all areas affected by the burn, starting on admission.</p>	
Multisystem organ dysfunction/failure (MOD)				
<p>Skin Changes at Life's End (SCALE)</p>	<p>A complication of prolonged hypoperfusion resulting in skin changes.</p> <p>Usually seen in patients with multi-system organ dysfunction or failure.</p> <p>May occur at any anatomical location but commonly present in acral regions or sacrococcygeal area.</p>	<p>Early manifestations may mimic stage 1 PU/I.</p> <p>Progression of the condition closely mimics a DTI.</p>	<p>History of, or current, multi-system organ dysfunction (MODS).</p> <p>Hemodynamic instability with hypoxia.</p> <p>Evaluation of clinical progression including sudden onset and rapid deterioration of areas of concern.</p>	

