

Psoriatic Arthritis: Disease State



Module 1:

Overview of Psoriatic Arthritis (PsA)



Objectives



- To understand the most important clinical features of PsA
- To understand the heterogeneity of the disease
- To understand how psoriatic arthritis is diagnosed

PsA=Psoriatic Arthritis.

What is Psoriatic Arthritis?

- Psoriatic arthritis (PsA) is a chronic autoimmune inflammatory disease that presents with inflammation of the joints and enthesitis, often associated with psoriasis^{1,2}
- It mainly affects the peripheral joints, but may also affect the spine, and/or sacroiliac joints²
- PsA is part of the family of spondyloarthropathies, which includes^{3,4}:
 - Ankylosing spondylitis (radiographic and nonradiographic)
 - Reactive arthritis
 - Inflammatory bowel disease-related arthritis
 - Undifferentiated spondylitis
 - Juvenile spondyloarthritis

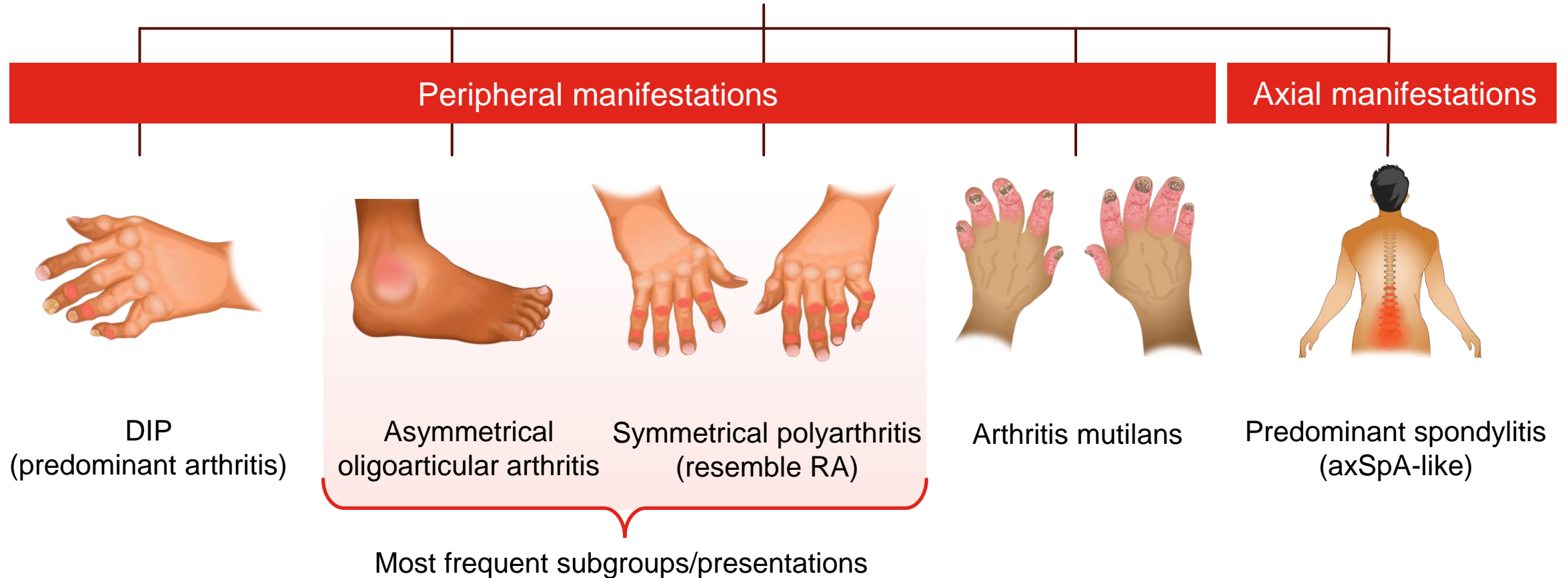
DIP=Distal Interphalangeal; PIP=Peripheral Interphalangeal; PsA=Psoriatic Arthritis.

1. <https://rheumatology.org/patients/psoriatic-arthritis> (Accessed October 23, 2025). 2. Umezawa Y. *J Dermatol*. 2021;48(6):741-749.

3. Kishimoto M, et al. *Best Pract Res Clin Rheumatol*. 2021;35(2):101670. 4. Brent LH. <https://emedicine.medscape.com/article/332945-overview?form=fpf> (Accessed October 23, 2025).

Traditional Subtypes of PsA

Five subtypes of PsA according to Moll and Wright^{1,2}

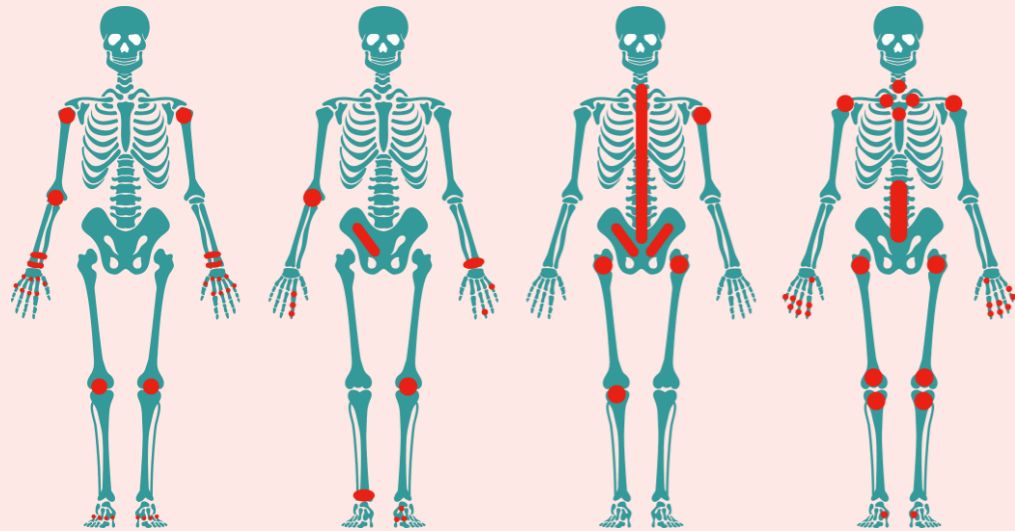


axSpA=Axial Spondyloarthritis; DIP=Distal Interphalangeal; PsA=Psoriatic Arthritis; RA=Rheumatoid Arthritis.

1. Acosta Felquer ML, FitzGerald O. Clin Exp Rheumatol. 2015;33(5 Suppl. 93):S26-S30. 2. Kishimoto M, et al. Best Pract Res Clin Rheumatol. 2021;35(2):101670.

Joint Involvement in PsA

Joints affected in different forms of arthritis¹⁻⁸

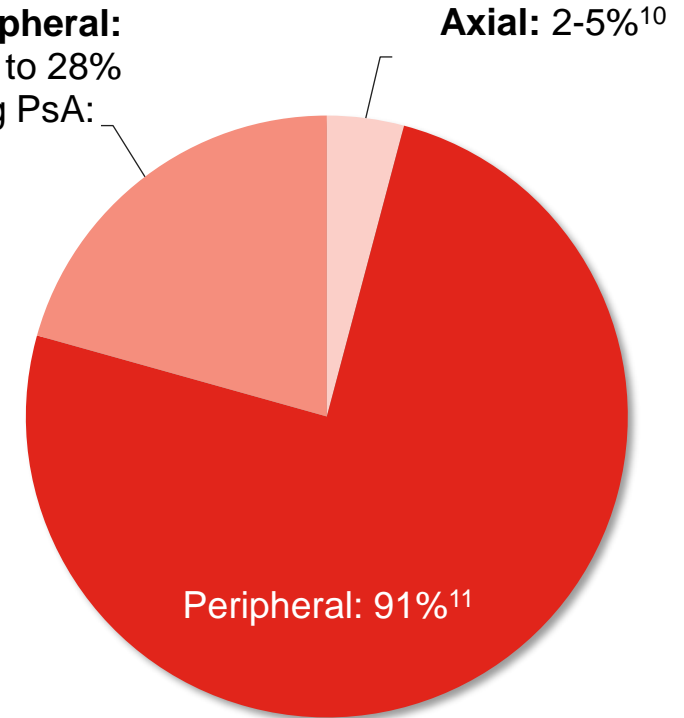


RA PsA AS OA

For patients who develop joint damage,
it may be disabling^{1,2}

Distribution of joint involvement in PsA

Axial and peripheral:
In early PsA: 5 to 28%
In longstanding PsA: 25 to 70%⁹



AS=Ankylosing Spondylitis; OA=Osteoarthritis; PsA=Psoriatic Arthritis; RA=Rheumatoid Arthritis.

1. Belasco J, Wei N. *Rheumatol Ther.* 2019 Sep;6(3):305-315. 2. Saalfeld W, et al. *Rheumatol Ther.* 2021;8(4):1493-1517. 3. Mohammed RHA, Bhutta BS. Hand and wrist rheumatoid arthritis. In: StatPearls [Internet]. Treasure Island, FL: StatPearls Publishing; 2023. <https://www.ncbi.nlm.nih.gov/books/NBK560890> (Accessed October 23, 2025). 4. Umezawa Y. *J Dermatol.* 2021;48(6):741-749. 5. Ebrahimiadib N, et al. *J Ophthalmic Vis Res.* 2021;16(3):462-469. 6. Abramoff B, Caldera FE. *Med Clin North Am.* 2020;104(2):293-311. 7. Acosta Felquer ML, FitzGerald O. *Clin Exp Rheumatol.* 2015;33(5 Suppl. 93):S26-S30. 8. Sudol-Szopińska I, et al. *J Ultrason.* 2016 Mar;16(64):65-77. 9. Floris A, et al. *Front Genet.* 2021;12:689984. 10. Poddubnyy D, et al. *Semin Arthritis Rheum.* 2021;51(4):880-887. 11. López-Medina C, et al. *RMD Open.* 2021;7(1):e001450.

Symptoms in the Peripheral Joints

- Structural joint damage from PsA can be assessed on conventional radiographs, whereas other symptoms (enthesitis, dactylitis, onycholysis) cannot^{1,2}
- The radiographic features of PsA can be grouped into^{1,3}:
 - Destructive changes:
 - Erosions, “pencil in cup”
 - Osteolysis
 - Proliferative changes:
 - Bone production
 - Joint fusion (ankylosis)

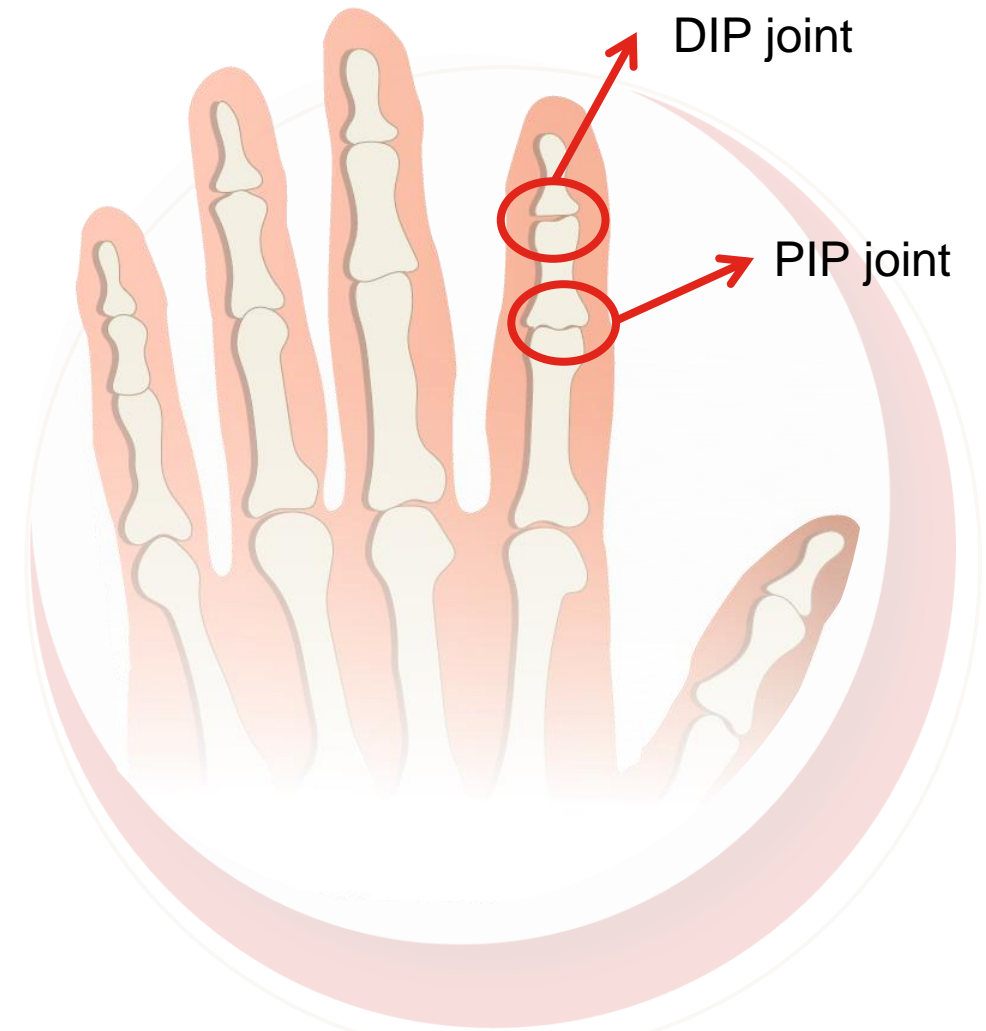


PsA=Psoriatic Arthritis

1. van der Heijde D, et al. *Arthritis Res Ther.* 2020;22(1):18. 2. Bagel J, et al. *Am J Clin Dermatol.* 2018;19(6):839-852. 3. Crespo-Rodríguez AM, et al. *Insights Imaging.* 2021;12(1):121. 4. Tiwari V, Brent LH. Psoriatic Arthritis. In: StatPearls [Internet]. Treasure Island, FL: StatPearls Publishing; 2024. <https://www.ncbi.nlm.nih.gov/books/NBK547710/> (Accessed October 23, 2025).

Structural Changes in PsA

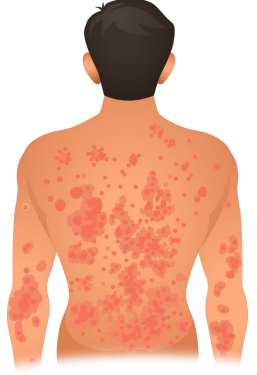




- Inflammation drives structural damage in AS, PsA, OA, and RA, but pathogenic pathways and patterns of damage differ¹
- In each of these conditions, patients can suffer from significant joint damage¹ and subsequent disability over time²
- Structural changes in PsA are characterized by an asymmetrical presentation and usually involve joints such as the PIP joints¹
- In contrast to rheumatoid arthritis, PsA can also involve the DIP joints¹
- Osteoproliferative changes are often found; these are considered indicative of PsA^{1,3}



AS=Ankylosing Spondylitis; DIP=Distal Interphalangeal; OA=Osteoarthritis; PIP=Proximal Interphalangeal; PsA=Psoriatic Arthritis; RA=Rheumatoid Arthritis.

1. Senthelal S, et al. In: StatPearls [Internet]; 2023. <https://www.ncbi.nlm.nih.gov/books/NBK518992/> (Accessed October 23, 2025). 2. James L, et al. *Ther Adv Musculoskelet Dis.* 2024;16:1759720X241295920. 3. Hermann S, et al. *Diagnostics.* 2022;12(3):618.

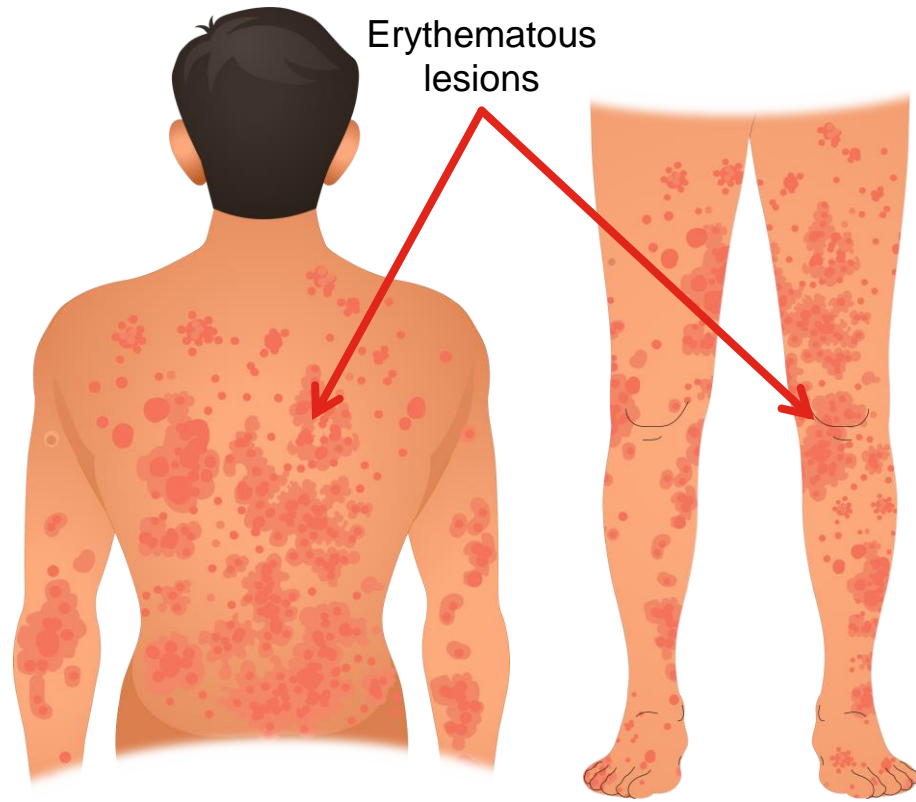
Skin and Other Non-joint Involvement in PsA

Extra-articular Manifestations ^{1,2} :					
	<p>Psoriasis</p>	<p>Enthesitis</p>	<p>Dactylitis</p>	<p>Nail changes</p>	<p>Uveitis</p>
	<p>With or without obvious psoriatic skin lesions^{1,3}</p>	<p>Inflammation at tendon or ligament attachment to bone⁴</p>	<p>Swelling of an entire digit⁶</p>	<p>Nail plate crumbling, onycholysis and nail pitting⁷</p>	<p>Inflammation of the tissues^a that comprise the uveal tract, eye redness, and eye pain⁸</p>
Prevalence:	<p>(Population, N=2540) BSA = 0: 31.4%¹ BSA >0 to ≤3: 26.3% BSA >3 to <10: 20.2% BSA ≥10: 22.1%</p>	<p>Range: 6.3 to 72%⁵ Pooled estimate: 30%</p>	<p>Range: 1.5 to 59%⁵ Pooled estimate: 25%</p>	<p>Range: 26 to 92%⁵ Pooled estimate: 60%</p>	<p>Range: 0.2 to 17%⁵ Pooled estimate: 3.2%</p>

^aIris, ciliary body, and choroid. BSA=Body Surface Area; PsA=Psoriatic Arthritis

1. Tillett W, et al. *Rheumatol Ther.* 2020;7(3):617-637. 2. Tiwari V, Brent LH. Psoriatic Arthritis. In: StatPearls [Internet]. Treasure Island, FL: StatPearls Publishing; 2024. <https://www.ncbi.nlm.nih.gov/books/NBK547710/> (Accessed October 23, 2025). 3. Taniguchi A and Kamatani N. *APLAR Journal of Rheumatology.* 2007; 10: 306–309. 4. Schett G, et al. *Nat Rev Rheumatol.* 2017;13:731-741. 5. Pittam B, et al. *Rheumatology (Oxford).* 2020;59(9):2199-2206. 6. Kaeley GS, et al. *Semin Arthritis Rheum.* 2018;48(2):263-273. 7. Sandre MK, et al. *Semin Arthritis Rheum.* 2014;44(2):162-169. 8. Fotiadou C, et al. *Psoriasis (Auckl).* 2019;9:91-96.

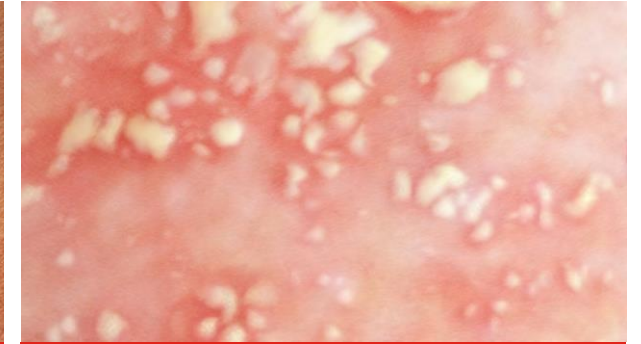
Skin Involvement in PsA



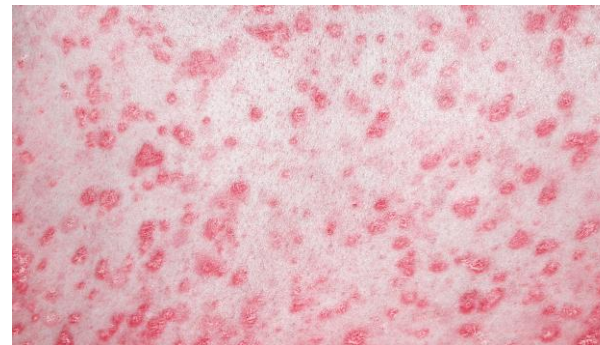
Plaque psoriasis



Inverse psoriasis



Pustular psoriasis



Guttate psoriasis



Erythrodermic psoriasis

PsA=Psoriatic Arthritis

Nair PA, Badri T. In: StatPearls [Internet]. Treasure Island, FL: StatPearls Publishing; 2023. <https://www.ncbi.nlm.nih.gov/books/NBK448194/> (Accessed October 23, 2025).

Enthesitis in PsA

- Enthesitis is an inflammation of the tendon and ligament insertion sites into the bone and is an early manifestation of PsA
- Enthesitis encompasses both inflammatory and structural changes
- Can be detected by ultrasonography and MRI
 - Thickened tendon and increased tissue blood flow (ultrasonography)

MRI=Magnetic Resonance Imaging; PsA=Psoriatic Arthritis.
Schett G, et al. *Nat Rev Rheumatol.* 2017;13:731-741.

Enthesitis in the left Achilles tendon



Did You Know...?

Enthesis is a Greek word for the insertion of tendons, ligaments, and joint capsule fibers into bone

Dactylitis in PsA



- MRI studies suggest that dactylitis is an inflammation of the flexor tendons
- Joint involvement is seen on radiographs in about 50% of patients
- Dactylitis can be acute (tender) or chronic (swollen, non-tender)

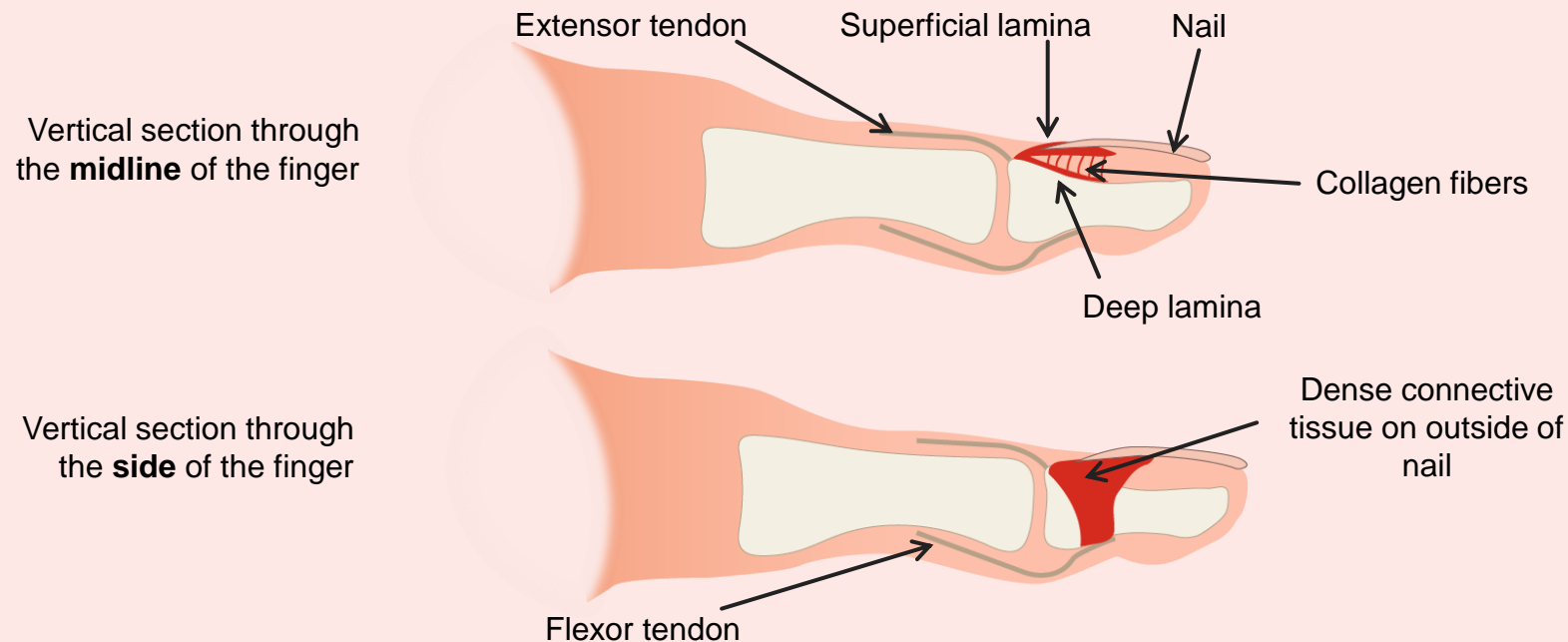
MRI=Magnetic Resonance Imaging; PsA=Psoriatic Arthritis.
Kaeley GS, et al. *Semin Arthritis Rheum.* 2018;48(2):263-273.



The Leeds Dactylometer

Nail-Joint Connection

- Psoriasis patients with nail changes are more likely to show signs of enthesitis on ultrasonography than those without¹
- Nail disease may be the link between the skin disease of psoriasis and joint inflammation in PsA¹⁻⁴



PsA=Psoriatic Arthritis.

1. Cunha JS, et al. *J Rheumatol*. 2017;44(5):688-690. 2. Perrin C. *Am J Dermatopathol*. 2020;42(12):911-915. 3. McGonagle D, et al. *Dermatology*. 2009;218:97-102. 4. Enthesitis, enthesopathy and the nail in psoriatic arthritis. https://www.enthesis.info/pathology/nail_in_psoriatic_arthritis.html (Accessed October 23, 2025).

Nail Changes in PsA

Nail matrix disease:



Pitting



Leukonychia



Nail plate crumbling



Red spots on the lunula

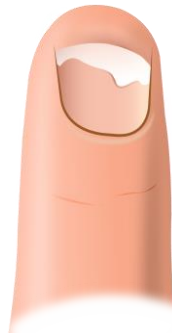


Onychorrhexis

Nail bed disease:



Oil spot changes



Onycholysis



Subungual hyperkeratosis



Splinter hemorrhages

Uveitis in PsA

- Inflammation of the uvea: The iris, ciliary body, and choroid^{1,2}
- May be anterior, posterior, or intermediate (or pan)^{1,2}
- Uveitis seen with PsA is usually¹⁻³:
 - Insidious onset
 - Anterior and intermediate
 - Bilateral
- Some studies suggest that uveitis may precede PsA, appearing after psoriasis but before joint involvement, proposing it as a potential precursor in the disease sequence of PsA¹



Diagnosis can be made with a thorough eye examination²

PsA=Psoriatic Arthritis.

1. Fotiadou C, et al. *Psoriasis (Auckl)*. 2019;9:91-96. 2. Duplechain A, et al. In: StatPearls [Internet]. Treasure Island, FL: StatPearls Publishing; 2023. <https://www.ncbi.nlm.nih.gov/books/NBK540993/> (Accessed October 23, 2025). 3. Merola JF, et al. *RMD Open*. 2018;4(2):e000656.

Disease Course

- PsA-related arthritis tends to progress over time, and remission is relatively uncommon¹
- PsA leads to¹⁻³:
 - Joint deformity
 - Bone erosion
 - Decreased functionality
- PsA is associated with an increased risk of mortality⁴

PsA=Psoriatic Arthritis.

1. Paine A, et al. *Calif Tissue Int.* 2018;102(5):559-574. 2. Merola JF, et al. *RMD Open.* 2018;4(2):e000656. 3. Tiwari V, Brent LH. Psoriatic Arthritis. In: StatPearls [Internet]. Treasure Island, FL: StatPearls Publishing; 2024. <https://www.ncbi.nlm.nih.gov/books/NBK547710/> (Accessed October 23, 2025). 4. Leung YY. *J Rheumatol.* 2022;49(2):128-131.