LETTER TO THE EDITOR EDİTÖRE MEKTUP

DOI: 10.31609/jpmrs.2025-111889

# Differential Diagnosis of Paraneoplastic Arthritis

## Paraneoplastik Artritin Ayırıcı Tanısı

Alperen İNCEOĞLU[a], Selda ÇİFTCİ İNCEOĞLU[b], Aylin AYYILDIZ[a]

[a]Başakşehir Çam and Sakura City Hospital, Department of Physical Medicine and Rehabilitation, İstanbul, Türkiye
[b]Health Sciences University Faculty of Medicine, Şişli Hamidiye Etfal Training and Research Hospital, Department of Physical Medicine and Rehabilitation, İstanbul, Türkiye

**Keywords:** Arthritis; knee; paraneoplastic arthritis

**Anahtar Kelimeler:** Artrit; diz; paraneoplastik artrit



*Dear Editor,*

We would like to share a case of paraneoplastic arthritis (PA) that we encountered recently in outpatient clinic and review current literature about PA. A 56-year-old male patient applied to our outpatient clinic with sudden-onset arthritis in his left knee. The patient had smoking history and high acute phase reactants, was diagnosed with lung adenocarcinoma. The patient had lymph node spread but no distant metastasis. PA was considered as the initial diagnosis, and treatment of the primary carcinoma was promptly initiated by the oncology department.

Paraneoplastic syndromes (PS) are not directly related to the tumor or its metastasis, but are caused by the immune system's response to mediators secreted from the tumor.[1] They can be seen in hematological malignancies and solid organ tumors.[2] Among lung cancers(LC), PS are most frequently seen in small cell LC. One of PS is PA.[1] PA can be polyarticular, oligoarticular or monoarticular.[2] A case series of 92 PA patients found that PA is often linked to LC among solid tumors, with the knee, ankle, and hand/wrist being the most commonly affected joints. Adenocarcinoma was found to be the most common cause of PA among LC.[2]

The characteristic features of PA have been described by Morel et al.[3] It has been stated that PA should be considered in cases of new-onset polyarthritis, smoking history, and presence of chronic disease. In another case-based review, it has been suggested that PA should be considered especially in cases of male gender, age 50 and above, polyarticular involvement that responds poorly to treatment, and seronegative for Rheumatoid Factor (RF) and

**Correspondence:** Selda ÇİFTCİ İNCEOĞLU
Health Sciences University Faculty of Medicine, Şişli Hamidiye Etfal Training and Research Hospital, Department of Physical Medicine and Rehabilitation, İstanbul, Türkiye
**E-mail:** seldavd@gmail.com

Peer review under responsibility of Journal of Physical Medicine and Rehabilitation Science.

***Received:*** 05 May 2025 ***Received in revised form:*** 17 Jun 2025 ***Accepted:*** 02 Sep 2025 ***Available online:*** 12 Sep 2025

Anti-Citrullinated Protein Antibodies(ACPA).4 PA should be considered in patients with mild to moderate isolated knee monoarthritis, a history of smoking, and those without psoriasis, spondyloarthropathy, osteoarthritis, and chondrocalcinosis and who are HLA-B27 negative. Synovial fluid analysis is recommended to exclude other causes. Gastrointestinal cancers, hematological malignancies, urinary system cancers, breast cancer and other cancers have been reported to develop PA.[4] Diagnosis in PA is mostly a diagnosis of exclusion. Clinical suspicion is an important step in diagnosis. A specific cancer screening has not been clearly determined in PA. Therefore, it is appropriate to perform age-appropriate cancer screenings. The first step in cancer investigation is to ask about local and systemic symptoms and history. These symptoms may include hemoptysis, dysphagia, a breast mass, postmenopausal bleeding, rectal bleeding, fatigue, headache or changes in bowel habits. The second stage is a systemic examination including lymph node examination. The next stage is laboratory tests including extensive biochemistry and complete blood count. Less invasive and low-radiation options can be preferred in imaging methods. Mammography and ultrasonography for breast, chest direct radiography for thoracic cancer, abdominal ultrasonography for abdominal symptoms can be performed. However, in cases that strongly suggest malignancy, computed tomography is also a preferred imaging method.[5] After the primary tumor is diagnosed and treated, remission is achieved in PA, symptoms may recur in the presence of metastasis.[4]

In conclusion, malignancy should be considered in middle-aged or older patients with arthritis who have a history of smoking and show poor response to conventional treatment.


### *Source of Finance*

*During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.*


### *Conflict of Interest*

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

### *Authorship Contributions*

*All authors contributed equally while this study preparing.*



## REFERENCES


1. Geng G, Yu X, Jiang J, Yu X. Aetiology and pathogenesis of paraneoplastic autoimmune disorders. Autoimmun Rev. 2020;19(1):102422. doi:10.1016/j.autrev.2019.102422
2. Kısacık B, Albayrak F, Balcı MA, Koc E. Paraneoplastic arthritis: a series of 92 cases. Rheumatol Oxf Engl. 2024;63(7):1923-6. doi:10.1093/rheumatology/kead500
3. Morel J, Deschamps V, Toussirot E, et al. Characteristics and survival of 26 patients with paraneoplastic arthritis. Ann Rheum Dis. 2008;67(2):244-7. doi:10.1136/ard.2007.070086
4. Al Khayyat SG, Conticini E, Falsetti P, et al. Paraneoplastic arthritides: an up-to-date case-based systematic review. Reumatologia. 2022;60(6):422-36. doi:10.5114/reum.2022.123672
5. Wilkinson AN. Cancer diagnosis in primary care. Can Fam Physician. 2021;67(4):265-8. doi:10.46747/cfp.6704265