

JUDICIOUS USE OF KINASE INHIBITORS IN RHEUMATOLOGY PRACTICE

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The advent of kinase inhibitors has significantly transformed the therapeutic landscape in rheumatology, offering novel and effective options for managing autoimmune and inflammatory diseases. This presentation explores the judicious use of kinase inhibitors, emphasizing patient selection, monitoring strategies, and managing adverse effects. Kinases, particularly protein kinases such as Janus kinases (JAKs), play pivotal roles in cellular signaling pathways, influencing inflammation, immune response, and cell proliferation. The presentation begins by elucidating the mechanisms of action of different JAK subtypes and their roles in cytokine-mediated signaling pathways via the JAK-STAT pathway. It highlights the importance of differentiating between various JAK inhibitors, including first-generation inhibitors like tofacitinib, baricitinib, and peficitinib, and second-generation inhibitors such as upadacitinib, filgotinib, and deucravacitinib. These inhibitors vary in selectivity and therapeutic applications, necessitating careful patient-specific consideration. Key considerations for patient selection are discussed, including absolute contraindications such as active infections, malignancies, and severe organ failures, as well as conditions warranting cautious use, such as advanced age, cardiovascular diseases, and previous malignancies. To mitigate potential risks, the importance of comprehensive patient preparation, including infection screening, vaccination, and optimization of comorbid conditions, is emphasized. Detailed monitoring protocols are outlined, focusing on regular assessments of disease activity, drug toxicity, and laboratory investigations. Strategies for managing common adverse effects, including infections, cytopenias, elevated liver enzymes, and thrombo-embolic events, are presented. The presentation underscores the necessity of a multidisciplinary approach to patient care involving collaboration among rheumatologists, infectious disease specialists, and other healthcare providers. This presentation aims to optimize the use of kinase inhibitors in rheumatology by integrating scientific insights and clinical guidelines. It aims to enhance patient outcomes while ensuring safety and efficacy in treatment. This comprehensive approach seeks to balance therapeutic benefits with potential risks, thereby advancing the standard of care for patients with rheumatic diseases.

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