

AllergoOncology: Biomarkers and Refined Classification for Research in the Allergy and Glioma Nexus - a Joint EAACI-EANO Position Paper

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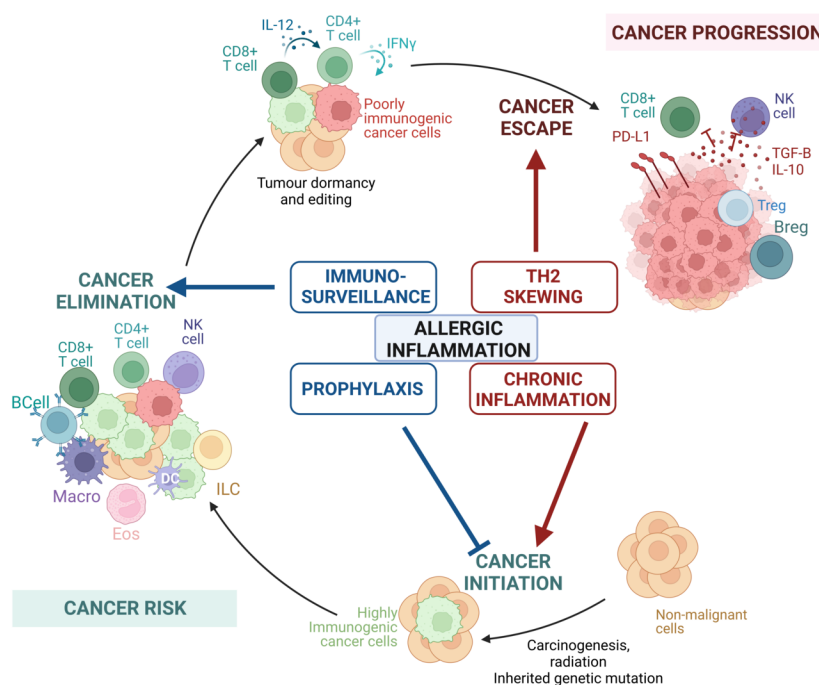
Abstract

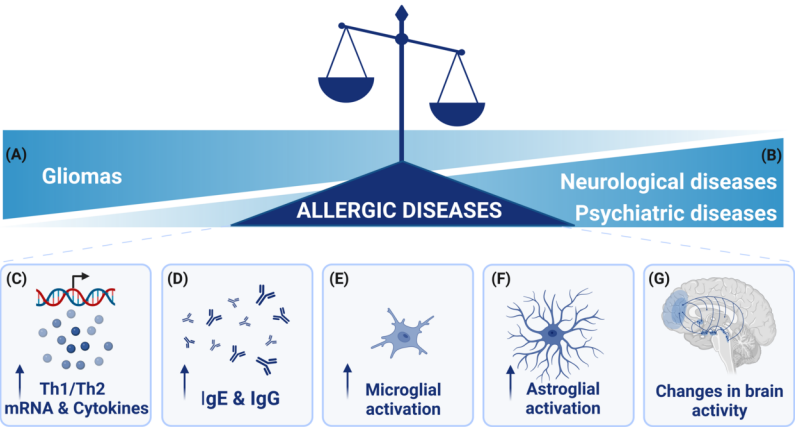
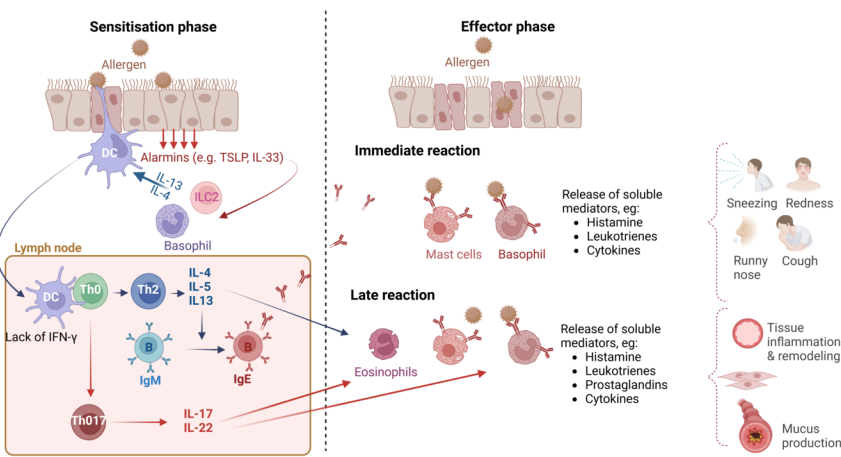
Epidemiological studies have explored the relationship between allergic diseases and cancer risk or prognosis in AllergoOncology. Some studies suggest an inverse association, but uncertainties remain, including in IgE-mediated diseases and glioma. Allergic disease stems from a Th2-biased immune response to allergens in predisposed atopic individuals. Allergic disorders vary in phenotype, genotype, and endotype, affecting their pathophysiology. Beyond clinical manifestation and commonly used clinical markers, there is ongoing research to identify novel biomarkers for allergy diagnosis, monitoring, severity assessment, and treatment. Gliomas, the most common and diverse brain tumours, have in parallel undergone changes in classification over

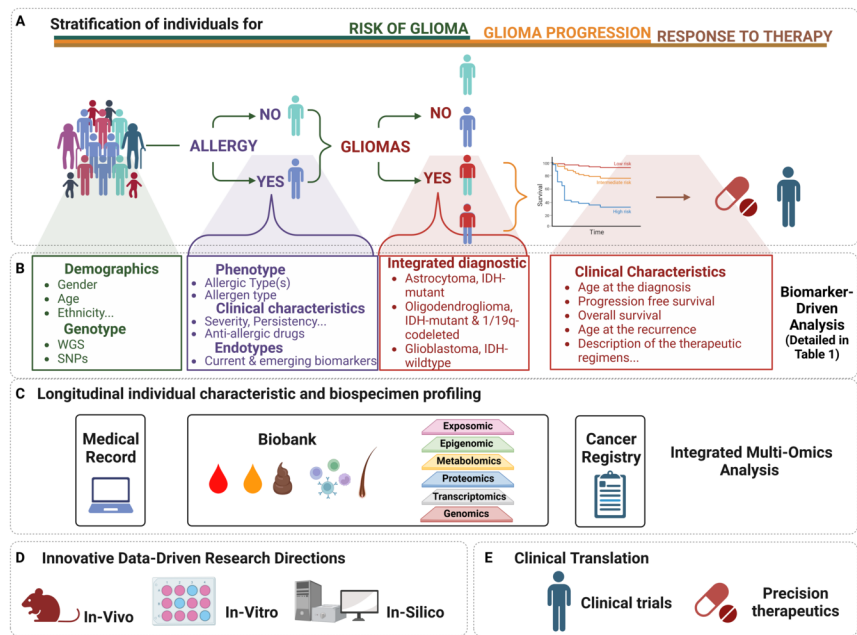
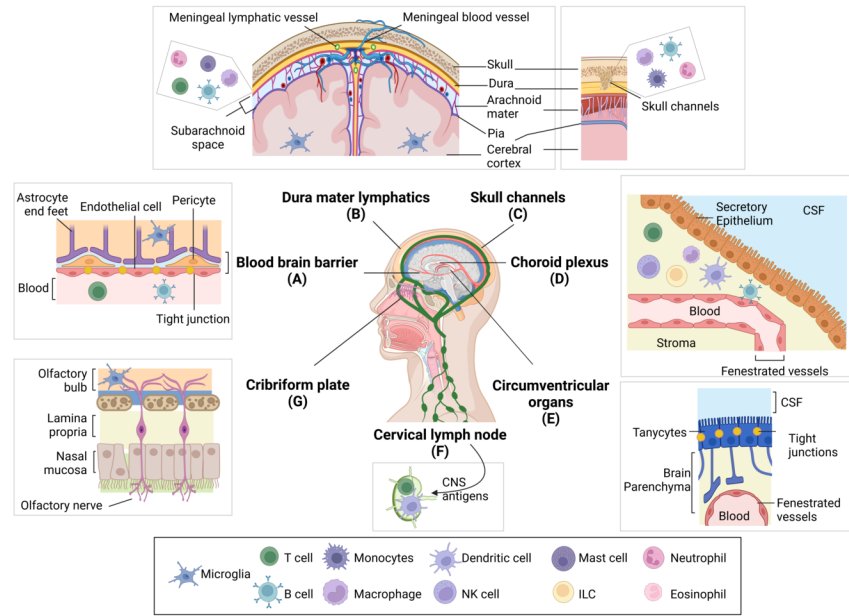
time, with specific molecular biomarkers defining glioma subtypes. Gliomas exhibit a complex tumour-immune interphase and distinct immune microenvironment features. Immunotherapy and targeted therapy hold promise for primary brain tumour treatment, but require more specific and effective approaches. Animal studies indicate allergic airway inflammation may delay glioma progression. This collaborative European Academy of Allergy and Clinical Immunology (EAACI) and European Association of Neuro-Oncology (EANO) Position Paper summarizes recent advances and emerging biomarkers for refined allergy and adult-type diffuse glioma classification to inform future epidemiological and clinical studies. Future research is needed to enhance our understanding of immune-glioma interactions to ultimately improve patient prognosis and survival.

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WHO classification

