

Supplementary information S1 | Disorders associated with eosinophilia and/or eosinophil accumulation in organs and tissues

Category	Disorder	Description / Comments
Respiratory	Allergic bronchopulmonary aspergillosis (ABPA)	Hypersensitivity to aspergillus observed in patients with pre-existing asthma
	Allergic rhinitis	Allergic inflammation of the nasal passages; commonly known as “hay fever”
	Asthma	Chronic inflammatory disease of the airways; may be allergic or non-allergic
	Chronic rhinosinusitis	Inflammation of the membrane lining the paranasal sinuses; lasting more than 12 weeks
	Eosinophilic bronchitis	Eosinophils in the airway associated with chronic cough; unlike asthma, no airway hyperresponsiveness
	Eosinophilic pneumonia	Loeffler’s syndrome; eosinophils in the alveoli from any known or unknown cause
	Nasal polyposis	Eosinophilic inflammation of the mucosae of the nasal and paranasal sinuses typically associated with rhinitis and asthma
Gastrointestinal	Eosinophilic gastroenteritis	Rare condition; patchy or diffuse eosinophilic infiltration of gastrointestinal tissue associated with non-specific symptomatology
	Eosinophilic esophagitis	Allergic inflammatory disorder of the esophagus; eotaxin-3 is prominent biomarker
	Inflammatory bowel disease	Complex heterogeneous inflammatory disorders with impact on small intestine and colon
Dermatologic	Atopic dermatitis	Non-contagious, chronic pruritic skin disorder
	Bullous pemphigoid	Autoimmune skin disorder
	Eosinophilic cellulitis	Wells’ syndrome; recurrent granulomatous skin disease with eosinophilia
	Eosinophilic folliculitis	Ofuji disease; papules associated with hair follicles, seen most commonly in association with HIV disease
Hypereosinophilic syndromes (HES)	Myeloproliferative HES	Chronic eosinophil leukemia; frequently associated with FIP1L1/PDGFRA and other gene fusions
	Lymphocytic variant HES	Results from aberrantly activated CD3 ⁺ CD4 ⁺ T lymphocyte clone
	Gleich’s syndrome	Episodic angioedema associated with eosinophilia
	NERDS syndrome	Nodules–eosinophilia–rheumatism–dermatitis–swelling syndrome; some features similar to HES
Vascular	Kawasaki’s disease	Arteritis associated with eosinophilia
	Churg–Strauss syndrome	Autoimmune vasculitis associated with eosinophilia and granulomata
Infection	Helminth	Eosinophils recruited by Th2 cytokines elicited in response to helminth infection
	Fungus	Notable eosinophilia in response to <i>Coccidioidomycosis</i>
	Virus	Respiratory Syncytial virus (RSV) in infants, HIV at end stages in association with low CD4 ⁺ T cells
Immunologic / neoplastic	Omenn syndrome	Autosomal recessive severe combined immunodeficiency; autoreactive T cells
	Kimura’s disease	Inflammation of the skin, cervical lymph nodes, and salivary glands
	Hodgkin’s lymphoma	Lymphoma; can include prominent eosinophilia in primary lymph node lesions
Muscular / connective tissue	Eosinophilic fasciitis	Shulman’s syndrome; eosinophilic inflammation of the fascia and skin, typically of arms and legs
	Inflammatory myopathic syndromes	Eosinophilic inflammation of muscle tissue; related to trauma, helminth, or idiopathic
	Eosinophil–myalgia syndrome	Muscle pain, eosinophilic inflammation correlated to ingestion of L-tryptophan
	Toxic oil syndrome	Pulmonary pathology and myalgias associated with ingestion of a tainted commercial rapeseed oil product
	Calpain-3 mutations	Mutations in the gene encoding calpain-3 lead to muscle tissue dysfunction and eosinophilia
Ocular	Allergic conjunctivitis	Atopic keratoconjunctivitis, a severe form of this disorder, can cause blindness
Iatrogenic	Cytokine infusion therapy	Examples include interleukin-2 (melanoma and renal cancer) and GM-CSF (myeloid reconstitution after transplant)
	Drug-reaction	DRESS syndrome; Drug Reaction/ Rash with Eosinophilia and Systemic Symptoms; also characterized by long latency after receiving etiologic agent; associated with significant mortality
	Graft-vs.-host disease (GvHD)	Complication of allogeneic transplant; transplanted cells attack host tissue
	Vaccine hypersensitivity reaction	Pulmonary eosinophilia observed in response to formalin-fixed RSV antigen vaccine