

Monocytes and macrophages are innate immune cells that reside and accumulate in atherosclerotic lesions but also in the healthy and injured heart and brain. The cells and their subsets pursue distinct functions in steady state and disease, and their tenure may range between hours to months. Some subsets are highly inflammatory, while others support tissue repair. The talk discusses current concepts of cell supply by the hematopoietic system, lineage relationships and systems' cross talk, highlights open questions, and describes imaging tools for studying monocytes, macrophages and their progenitors.