Accurate diagnosis and tracking of active inflammation or erythema remains a challenge in a variety of inflammatory skin diseases, especially in the setting of natural and pathological pigment. Treatment decisions rely on the determination whether disease is stable or progressing. Visual assessment is subjective, and digital photography has a limited spectral sensitivity to clearly distinguish skin absorbers of interest. Here we present the feasibility of hyperspectral imaging in the visible spectral range to identify and segment erythema and pigment. We studied patients with a severe complication of the skin after a stem cell transplant. Additionally, we explore skin inflammation as the motion of individual immune cells in upper dermal microvessels by reflectance confocal videomicroscopy and report robust survival associations of a novel biomarker.