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Sommario/riassunto	<p>Human red blood cells are formed mainly in the bone marrow and are believed to have an average life span of approximately 120 days. However, is it true for all red blood cells? What are the changes associated with red cell maturation, adulthood and senescence? What are the determinants of red cell life span and clearance? What are the mechanisms in control of red cell mass in healthy humans and patients with various forms of anemia? What are the markers of circulating red cell senescence and in cells during storage and transfusion? Within the life span may properties of red cells change leading to age-mixed circulating cell populations. Although these cells appear to be genetically terminated by the time they are released into the blood stream, they undergo surprisingly versatile modifications depending on the life-style and health conditions of a "human host". Numerous disorders are believed to be associated with facilitated ageing of red blood cells. "In vitro ageing" and damage of red blood cells during storage is yet one more important issue related to the risks and efficiency of blood transfusion. Many of the mechanisms behind such effects are far from being fully understood. In this context the Research Topic is set to include articles in the field of biochemical investigations, biophysical approaches, physiological and clinical studies related to red blood cell maturation and aging. This includes Original Research, Methods, Hypothesis and Theory, Reviews and Perspectives.</p>

