Aging and cancer hallmarks as therapeutic targets

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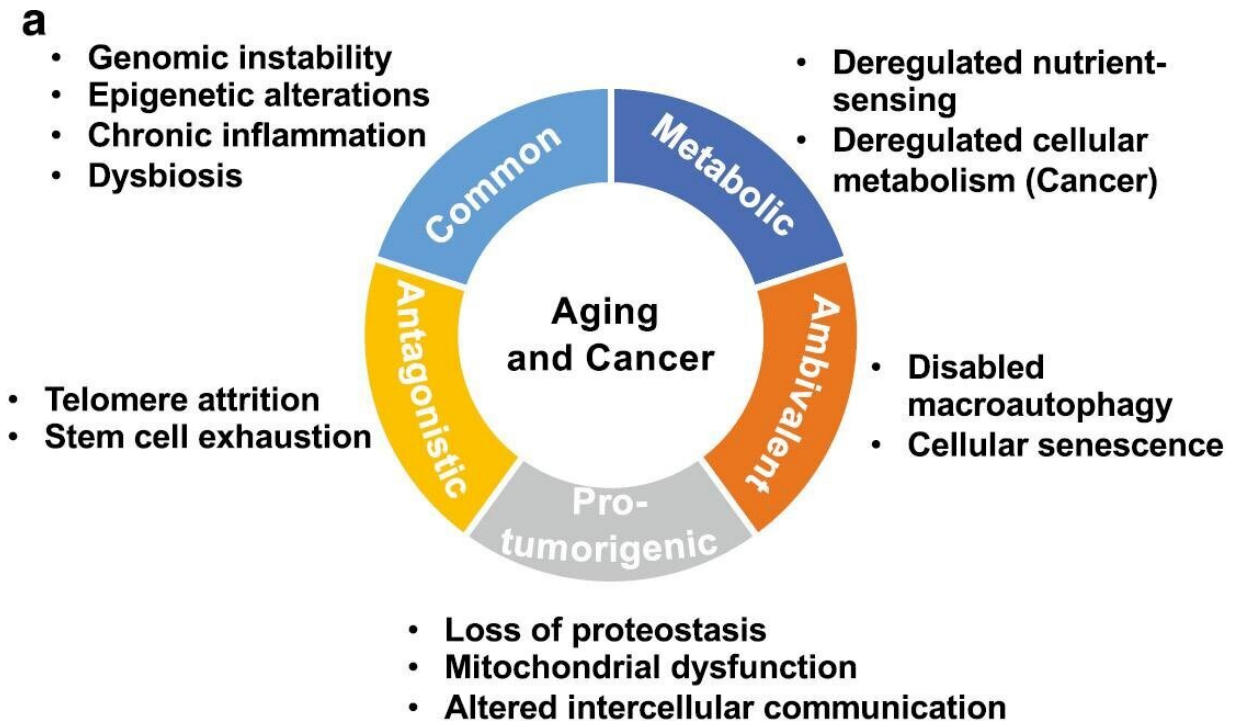

Crosstalk between aging and cancer hallmarks. (a) Aging hallmarks are categorized into five groups based on correlation with cancer hallmarks. (b) Hallmarks shared between aging and cancer (left column) or as unique to cancer (right column). Credit: *Acta Materia Medica* (2023). DOI: 10.15212/AMM-2023-0018

The prevalence of age-related diseases has been progressively increasing worldwide. The pathogenesis of these disorders, including cancer, is closely associated with an age-dependent decline in cellular functions. There are multiple layers of crosstalk between aging processes and oncogenesis. Therefore, a better understanding of the interplay between aging and cancer will facilitate the development of novel therapeutic intervention strategies for malignancies at advanced ages.

Recent review articles have concisely summarized and updated aging and cancer hallmark features and adequately discussed the interplays at both the cellular and molecular levels. Because aging and cancer share several key mechanisms that define the hallmarks, targeting shared features, such as cellular senescence, may be beneficial for cancer prevention and treatments.

Notably, senolysis, an innovative therapeutic intervention for selectively removing senescent cells, holds great promise for developing new therapeutic approaches for cancers and other age-related diseases, such as viral infections and cardiovascular diseases.

The authors of this article published in *Acta Materia Medica* briefly summarize the recently updated knowledge on aging and cancer hallmarks, as well as the advances in senolysis for age-related conditions.

More information: Jingchao Wang et al, Aging and cancer hallmarks as therapeutic targets, *Acta Materia Medica* (2023). DOI: 10.15212/AMM-2023-0018