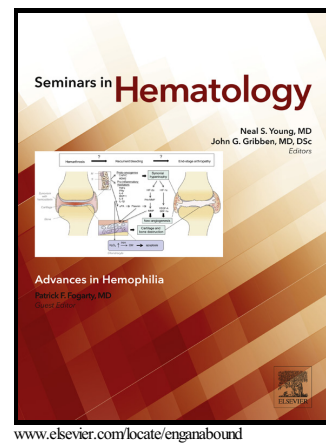


Author's Accepted Manuscript

Accumulation of DNA damage in the aged
hematopoietic stem cell compartment

Isabel Beerman



PII: S0037-1963(16)30118-4

DOI: <http://dx.doi.org/10.1053/j.seminhematol.2016.11.001>

Reference: YSHEM50904

To appear in: *Seminars in Hematology*

Cite this article as: Isabel Beerman, Accumulation of DNA damage in the aged hematopoietic stem cell compartment, *Seminars in Hematology*, <http://dx.doi.org/10.1053/j.seminhematol.2016.11.001>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Accumulation of DNA damage in the aged hematopoietic stem cell compartmentIsabel Beerman¹¹Translational Gerontology Branch, National Institute on Aging, NIH, Baltimore, MD, USA.

Supported in part by K01 AG050813-01A1

isabel.beerman@nih.gov
251 Bayview Blvd, Suite 100/ 10C220
Baltimore, MD 21224

Office: 410-558-8600

Fax: 410-558-8302

Abstract

Aging is associated with loss of functional potential of multiple tissue systems, and there has been significant interest in understanding how tissue specific cells contribute to this decline. DNA damage accumulation has been widely associated with aging in differentiated cell types. However, tissue specific stem cells were once thought to be a geno-protected population, as damage accrued in a stem cell population has the potential to be inherited by differentiated progeny as well as propagated within the stem cell compartment through self-renewal divisions. This review will discuss the evidence for DNA damage accumulation in the aged HSC compartment, potential drivers, and finally the consequences of the acquired damage.

Download English Version:

<https://daneshyari.com/en/article/5664403>

Download Persian Version:

<https://daneshyari.com/article/5664403>

[Daneshyari.com](https://daneshyari.com)