

# BMI and lean body mass decline after allogeneic HSCT

4 October 2012

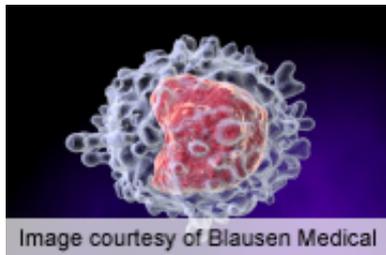


Image courtesy of Blausen Medical

In survivors of childhood hematologic malignancies who have received allogeneic hematopoietic stem cell transplantation, body mass index decreases significantly, mainly due to a reduction in lean, not fat, body mass, according to research published online Oct. 1 in the *Journal of Clinical Oncology*.

(HealthDay)—In survivors of childhood hematologic malignancies who have received allogeneic hematopoietic stem cell transplantation (alloHSCT), body mass index (BMI) decreases significantly, mainly due to a reduction in lean, not fat, body mass, according to research published online Oct. 1 in the *Journal of Clinical Oncology*.

Hiroto Inaba, M.D., Ph.D., of the St. Jude Children's Research Hospital in Memphis, Tenn., and colleagues conducted a [longitudinal study](#) involving 179 survivors of childhood hematologic malignancies who had received alloHSCT. The authors sought to evaluate changes in body mass and [body composition](#) over time.

After a median of 6.6 years of follow-up, the researchers found that BMI z scores declined significantly over time. Mean z scores for lean mass remained below normal levels and decreased significantly over time, while the mean z scores for fat mass were within population norms. Post-HSCT BMI and fat and lean mass z scores were strongly predicted by pre-HSCT BMI category and/or z score. Low BMI and low lean body mass were more frequently found in survivors who had

battled extensive chronic graft-versus-host disease. Older age at HSCT and receipt of T-cell-depleted grafts significantly predicted lower post-HSCT BMI. Compared with males, female patients had higher body fat and lower lean mass z scores, and black patients had higher fat mass z scores compared with white patients.

"In conclusion, we found a significant decline in BMI z scores after alloHSCT in survivors of childhood hematologic malignancies, primarily owing to a decrease in lean mass," the authors write. "We suggest that dietary education and exercise counseling are essential to improve the physical status and overall health of survivors with the risk factors identified in this study."

**More information:** [Abstract](#)  
[Full Text \(subscription or payment may be required\)](#)

Copyright © 2012 [HealthDay](#). All rights reserved.

APA citation: BMI and lean body mass decline after allogeneic HSCT (2012, October 4) retrieved 21 August 2022 from <https://medicalxpress.com/news/2012-10-bmi-body-mass-decline-allogeneic.html>

*This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.*