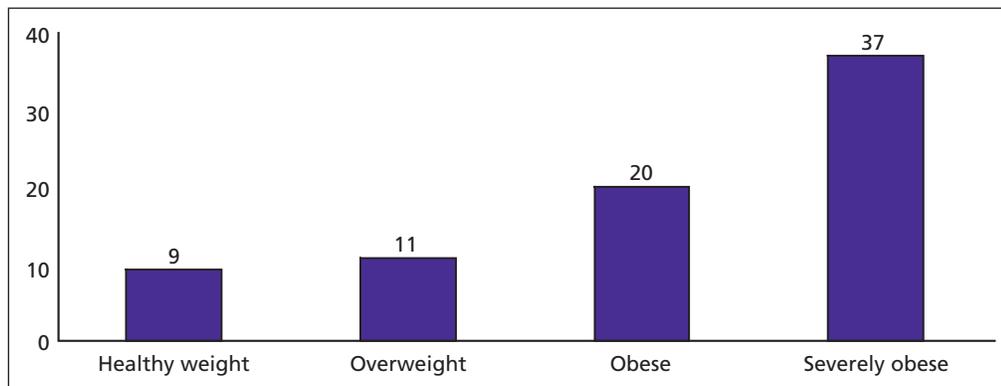


Obese Women Receiving Breast Cancer Chemotherapy Are Often Undertreated

Obesity both increases the risk for breast cancer and worsens the prognosis for treatment. The increased risk and poorer prognosis have been attributed to physiological factors, including higher blood levels of the hormone estrogen. However, the difference in prognosis—in terms of cancer recurrence and overall survival—between obese¹ women with breast cancer and their healthy-weight counterparts may actually be the result of inadequate doses of chemotherapy. The dosage of most chemotherapeutic drugs is based on the patient’s body surface area, determined from weight and height. Because concerns have been raised about the potential for toxic side effects if chemotherapeutic doses for obese women are increased to account for body weight, some doctors apparently base the doses they give obese women on their ideal weight, even though little evidence exists to support the concerns. By examining the medical files of 9,672 women treated between 1990 and 2001, a newly released study by RAND researchers sought to confirm whether obese women are in fact systematically undertreated for breast cancer. Their findings:

- Obese and overweight women received intentionally reduced doses of chemotherapy for breast cancer more frequently than women of healthy weight (see figure).
- Providers varied greatly in the use of dose reductions for overweight and obese women.
- Severely obese women had fewer severe side effects from chemotherapy, whether they received full or reduced doses.
- The women in this study were not followed long enough to determine whether the reduction of chemotherapy dosage was associated with an increased risk of recurrence or other long-term outcomes.

Percentage of Women in Each Weight Category Who Were Undertreated



¹ Overweight and obesity are defined on the basis of body mass index (BMI), a ratio of weight to height. Individuals whose BMI falls between 25 and 29.9 are considered overweight. Obesity is defined as a BMI of 30 or more. Severe obesity is defined as a BMI of 40 or more.

Washington External Affairs Office
703-413-1100 x5632 | wea@rand.org | www.rand.org/congress

RAND Offices Santa Monica • Washington • Pittsburgh • New York • Doha • Berlin • Cambridge • Leiden

RB-9141 (2005)

This product is part of the RAND Corporation research brief series. RAND fact sheets summarize published, peer-reviewed documents or a body of published work. The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.

© RAND 2005

www.rand.org



HEALTH

THE ARTS
CHILD POLICY
CIVIL JUSTICE
EDUCATION
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INTERNATIONAL AFFAIRS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
SUBSTANCE ABUSE
TERRORISM AND
HOMELAND SECURITY
TRANSPORTATION AND
INFRASTRUCTURE
WORKFORCE AND WORKPLACE

This PDF document was made available from www.rand.org as a public service of the RAND Corporation.

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work.

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

Support RAND

[Browse Books & Publications](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore [RAND Health](#)

View [document details](#)

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use.