Table 2. Systemic Hemodynamics in Healthy Controls and Patients with Alzheimer's Disease (AD) Before and After Treatment with Galantamine

	Mean ± Standard Deviation		
Hemodynamics[‡]	Healthy Controls n = 20	People with AD Before Treatment with Galantamine n = 21	People with AD Treated with Galantamine n = 20
Heart rate, beats per minute	60.3 ± 7.6	69.5 ± 11.5*	67.3 ± 13.0
Blood pressure, mmHg			
Mean	77.2 ± 11.9	87.9 ± 18.8*	79.3 ± 13.2[†]
Systolic	120.1 ± 18.9	133.8 ± 28.6	124.0 ± 22.9
Diastolic	56.2 ± 10.7	65.6 ± 16.1*	58.9 ± 11.7[†]

$P<.05$ compared with *healthy controls, [†]people with AD before treatment with galantamine. [‡]Assessed from 5 minutes of measurement during sitting rest.

people with AD (12.3 ± 6.2 mmHg) than in controls (16.9 ± 8.2 mmHg, $P=.02$; relative change: AD 15.2 ± 8.1%, control 20.0 ± 10.1%, $P=.06$). Galantamine did not influence this orthostatic BP response (BP drop after treatment 12.7 ± 7.0 mmHg, $P=.72$ compared with baseline). The orthostatic HR response was identical in controls (10.5 ± 4.7 bpm) and people with AD (pretreatment 8.9 ± 7.9 bpm, posttreatment 10.7 ± 5.2 bpm, all $P>.20$) (Table 2).

DISCUSSION

It was unexpectedly found that orthostatic tolerance was preserved, if not enhanced, in AD. Enhanced sympathetic tone may explain this, given the high BP and HR at baseline in AD. Galantamine lowered resting BP but did not affect orthostatic tolerance or HR. This suggests that negative effects of ChEIs on autonomic control of BP and HR do not mediate the reported greater incidence of syncope in people with AD treated with galantamine.[1]

Arenda H. E. A. van Beek, MSc
Jaap C. Sijbesma, MD
Marcel G. M. Olde Rikkert, MD, PhD
Jurgen A. H. R. Claassen, MD, PhD
Radboud University Nijmegen Medical Centre
Department of Geriatric Medicine and Alzheimer Centre Nijmegen
Nijmegen, the Netherlands

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ELDERLY BREAST CANCER SURVIVORS ACCURATELY SELF-REPORT KEY TREATMENT INFORMATION

To the Editor: Prior studies have shown that tumor registry and administrative databases, including the National Cancer Institute Surveillance Epidemiology End Results (SEER) registry and Medicare data, provide valid, accurate, and complete information on various treatment modalities for women with breast cancer.[1–3] Another alternative to obtain this information is patient self-report. Three studies have shown that breast cancer survivors can accurately recall important treatment information,[4–6] but these studies were small and included largely younger women. Validation of self-report of breast cancer treatments specifically in elderly women is important, because more than 40% of women with breast cancer are diagnosed at age 65 and older. The current study sought to determine whether a population-based cohort of older breast cancer survivors could accurately recall important treatment information.

The study cohort consisted of 3,083 community-dwelling women aged 65 to 89 residing in four states (California, Florida, Illinois, New York) who underwent initial breast cancer surgery in 2003 and completed a telephone survey

Table 1. Agreement Between Self-Report and Medicare Claims for Initial Treatment of Breast Cancer

Treatment	Correct, %	Kappa (95% CI)	%			
			Sensitivity	Specificity	PPV	Negative Predictive Value
Receipt of radiation therapy	97.9	0.95 (0.94–0.96)	97.6	98.6	99.3	95.3
Receipt of chemotherapy	96.8	0.90 (0.88–0.92)	90.0	98.6	94.5	97.4
Type of surgery*	92.8	0.83 (0.81–0.85)				
BCS			99.5	79.7	90.3	98.7
Mastectomy			79.7	99.5	98.7	90.3
Receipt of breast reconstructive surgery	99.1	0.90 (0.86–0.94)	90.2	99.6	90.8	99.5

Excluding missing values: radiation therapy (n = 3), chemotherapy (n = 6), type of breast surgery (n = 25), and reconstructive surgery (n = 5).
*"Best case" scenario for type of breast surgery (see text for explanation): proportion correct = 98.2%, kappa = 0.96 (95% confidence interval (CI) = 0.95–0.97), sensitivity for mastectomy = 95.9%, positive predictive value (PPV) for mastectomy = 98.9, PPV for breast-conserving surgery (BCS) = 97.9.

approximately 30 months after the surgery.[7] Self-reported data regarding treatment (breast surgery, radiation therapy, chemotherapy, and reconstructive surgery) were validated against Medicare claims data from 1 month before diagnosis until the time of the survey.[8] Agreement was assessed using the Cohen kappa statistic.[9]

The mean age of the women when they completed the survey was 76.1 ± 5.5 (range 67–93); 94% were Caucasian, and the majority were healthy (65% with no comorbidities). Half were married, and 92% had at least a high school degree. Median annual household income in 2004 was $29,000. According to Medicare claims, 66% underwent breast-conserving surgery (BCS), 67% underwent radiation therapy, and 21% received chemotherapy. Only 4.6% (n = 143) underwent breast reconstruction surgery.

Assuming Medicare claims as the criterion standard, the validation of each item on the self-report questionnaire is summarized in Table 1. Overall, agreement was excellent for the four treatments examined. Kappa values varied between 0.83 for type of breast surgery and 0.95 for receipt of radiation therapy. Sensitivity (80–99%), specificity (98–99%), positive and negative predictive values (90–99%) of self-report were high for all four treatments. Proxy response, patient age group, and educational status did not significantly affect accuracy of self-report (data not shown).

Agreement for type of breast surgery was probably higher than what is reported. Of the 2,207 women who self-reported undergoing BCS, 214 had Medicare claims for mastectomy; 171 (80%) of these 214 women also had claims for BCS. Therefore, these 171 women presumably underwent initial BCS followed by mastectomy at a later date and were identified by the Medicare claims algorithm[8] as total mastectomy cases. The survey did not capture these 171 women as undergoing eventual mastectomy, because a positive response to the BCS survey item was erroneously programmed to skip the next item about mastectomy. Therefore, these 171 women were placed in the BCS self-report group. If these 171 women are recategorized as self-reported total mastectomy cases, then the sensitivity of self-report for mastectomy increases from 79.7% to 95.9%, and the kappa improves from 0.83 to 0.96 (95% confidence interval = 0.95–0.97). These values would represent the "best case" scenario, and the true agreement probably falls somewhere between those reported in Table 1 and this "best case" scenario.

These results confirm the validity of self-report described in previous smaller studies in elderly breast cancer survivors[6] and younger women.[4,5] Several factors may explain the disagreement between self-report data and Medicare claims in the current study. From a survey standpoint, errors may be attributed to biased self-report, recall, or unclear wording of the survey items. It was attempted to limit this bias by providing brief descriptions of each type of treatment, referencing the time frame of treatment, and wording questions at the eighth-grade level. Although it was assumed that the Medicare claims data were correct, there are limitations of Medicare data regarding accuracy of coding, completeness of claims, and the potential for underreporting due to care provided by other agencies.[1,3]

In summary, this study demonstrates that a population-based cohort of more 3,000 elderly breast cancer survivors accurately reported general information regarding several key cancer treatments 2 to 3 years later. Details regarding stage of disease and treatment would probably still need to be obtained from other sources, but for investigators performing survey studies in breast cancer survivors that require only broad key treatment information (quality-of-life or patient satisfaction studies), patient self-report appears to be an excellent, lower-cost alternative for obtaining this.

Tina W. F. Yen, MD, MS
Division of General Surgery

Rodney A. Sparapani, MS
Changbin Guo, BS
Division of Biostatistics

Joan M. Neuner, MD, MPH
Department of Medicine

Purushottam W. Laud, PhD
Division of Biostatistics

Ann B. Nattinger, MD, MPH
Department of Medicine
Center for Patient Care and Outcomes Research
Medical College of Wisconsin
Milwaukee, Wisconsin

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SELF-REPORTED VERSUS MEASURED HEIGHT AND WEIGHT IN THE HEALTH AND RETIREMENT STUDY

To the Editor: The global obesity epidemic has posed a major threat to population health.[1] Given that weight change and obesity have been linked with health outcomes, physical functioning, and quality of life,[2,3] accurate population surveillance data on the trend of weight change and obesity has remained important for public health efforts to combat the obesity epidemic. In large-scale population-based studies, self-reported height and weight have been used to derive body mass index (BMI) for classifying obesity categories.[2–5] Despite the cost savings and the general high correlation between self-reported and measured height and weight, important differences may have continued to exist in the estimated obesity prevalence, but the most recent study on the reporting accuracy of height, weight, and BMI measures used data from 1988 to 1994 from the National Health and Nutrition Examination Survey.[6] Therefore, the concordance between self-reported versus measured height, weight, and BMI was assessed using the 2006 data from a nationally representative sample of U.S. adults.

METHODS

The data collected from 6,799 participants of the Health and Retirement Study (HRS), a biennial longitudinal survey of U.S. adults aged 51 and older were examined.[7] Information on self-reported height and weight was collected during interviews at each wave from 1992 to 2006. In 2006, the HRS also collected physical measures of height and weight.[8] Height was measured without shoes and recorded in inches to the nearest quarter inch. Weight was measured using a Healthometer 830 kiloliter scale (without shoes and with light clothing; Jarden Corporation, Rye, NY) and recorded to the nearest half pound.[8] Trained interviewers took all measurements. Mean differences between the self-reported and measured height and weight were evaluated. In addition, sensitivity and specificity of obesity classification based on self-reported data were assessed.

RESULTS

On average, respondents (men and women) overreported their height by 1% to 2% and underreported their weight by 1% to 3%, resulting in an underestimation of BMI of approximately 4%. Mean reporting errors of height tended to increase slightly with age for men and women ($P<.001$), whereas underreporting of weight decreased with age for both sexes ($P<.001$). As a result, the underestimation of BMI increased slightly with age (Table 1).

The prevalence of obesity was underestimated by 6% to 12% for all age and race and ethnicity groups and both sexes. The prevalence of overweight was overreported by 1% to 5% for all but women aged 80 and older. Obesity classification based on self-reported measures demonstrated high specificity (97–99%) across all age, sex, and racial and ethnic groups, but sensitivity was low and tended to decrease with age. Sensitivity decreased from 76% for men aged 50 to 59 to 46% for those aged 80 and older and from 83% to 57% in women.

DISCUSSION

As expected, older age was associated with decreased concordance between self-reported and measured height, whereas reporting accuracy of weight increased as age increased. The overreporting of height may have occurred because of the onset of diseases (such as osteoporosis) during the study period.[9] In addition, the pattern of overreported height and underreported weight might indicate that social desirability affects reporting accuracy of height and weight.[10] Although the average absolute reporting errors for height and weight were small, population classification based on self-reported measures consistently underestimated the prevalence of obesity. With respect to the effect of race and ethnicity on the concordance between self-reported and measured height and weight, the current analysis did not indicate a significant difference in reporting bias between racial and ethnical subgroups.