

risk. Nevertheless, we would like to address some points about the study.

Many factors affect PVR, such as bladder hypocontractility; a large bladder diverticulum; bladder stones; and bladder outlet obstruction (BOO) due to anatomic, neurological, or functional causes.<sup>2</sup> However, the study did not include imaging modalities such as ultrasonography to exclude BOO, diverticulum, or stones. An obstruction may cause incomplete bladder emptying. In a study examining factors related to PVR, all possible causes of high PVR should be considered carefully. Without excluding obstruction, it is hard to conclude that the only factor affecting PVR is a history of pelvic or back surgery. Moreover, surgical procedures (nerve-sparing or not) are important in development of bladder dysfunction, but the authors did not mention surgical procedures. Nor did they provide information regarding history of pelvic radiotherapy. They stated that individuals with a history of bladder cancer were excluded but did not mention rectal cancer or cervical cancer, which might have involved pelvic radiotherapy. Radiation exposure could have affected bladder emptying.<sup>3</sup>

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## ACKNOWLEDGMENTS

**Conflict of Interest:** The editor in chief has reviewed the conflict of interest checklist provided by the authors and has determined that the authors have no financial or any other kind of personal conflicts with this paper.

**Author Contributions:** Sumer, Arik, Aycicek, Kara, Canbaz: design of the letter, manuscript preparation. Ulger: review of letter.

**Sponsor's Role:** None.

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## RESPONSE TO SUMER AND COLLEAGUES

*To the Editor:* Sumer and colleagues' letter<sup>1</sup> about our article<sup>2</sup> addressed important points about potential risk factors for high postvoid residual (PVR) urine in women with overactive bladder (OAB) symptoms. The purpose of

our study was to identify factors documented in the medical records of women who attended a urogynecological clinic that could be readily detected through careful history-taking in the primary care setting. It is not feasible to conduct specialized diagnostic urodynamic tests that can identify bladder outlet obstruction (BOO) and bladder hypocontractility due to neurogenic causes in this setting.

Cognizant of the importance of anatomical BOO and bladder hypocontractility, factors associated with both were included. For example, advanced pelvic organ prolapse and anti-incontinence surgery, factors associated with BOO, were included.<sup>3,4</sup> It was noted in the article that a limitation of the study was the absence of information in the medical records about the specific type of anti-incontinence surgery.

Detrusor underactivity (bladder hypocontractility) refers to inadequate bladder contractile function, which can result from damage of nerves that innervate the bladder, detrusor muscle damage, or sensory deficit. Therefore neurological diseases such as multiple sclerosis (MS), Parkinson's disease, stroke, spinal cord injury, pelvic surgery, and herniated disc<sup>5</sup> were included in the analyses.

Bladder diverticula and bladder stones were not included because they are far more common in men than women from BOO caused by benign prostatic hyperplasia.<sup>6,7</sup> In addition, women with bladder diverticula or bladder stones often have a history of repeated urinary tract infections (UTIs). Because common symptoms of UTIs are urinary frequency and urgency,<sup>8,9</sup> which are defining symptoms of OAB, women with a history of repeated UTIs were excluded from the study.

Regarding pelvic radiotherapy, women who had radical hysterectomies and who had cervical cancer and therefore may have had radiation were excluded, but rectal cancer diagnoses and treatments could not be included in the analyses because there was no documentation of a history of rectal cancer in the medical records reviewed. Sumer and colleagues are correct that other factors may play a role in high PVR in women. Further research is needed in the primary care setting, where many women first report and receive pharmacological treatment for OAB symptoms. It is important for clinicians to be aware of the relationship found between back or pelvic surgery and high PVR before prescribing antimuscarinics.

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## ACKNOWLEDGMENTS

**Conflict of Interest:** The authors declare no competing interests.

**Authors Contributions:** Park: concept and design of letter, preparation of manuscript. Palmer: revision and final approval of manuscript.

**Sponsor's Role:** None.

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## EFFECT OF MULTIMODAL EXERCISE PROGRAM ON PHYSICAL FUNCTION, FALLS, AND INJURIES IN OLDER WOMEN

*To the Editor:* The research of Patil and colleagues<sup>1</sup> is valuable as they showed that multicomponent exercise programs decreased the incidence of medically attended injuries due to the falls, but there are some points that should be addressed.

First of all, there was no information whether any control group participants exercised during the intervention. Although the research team did not recommend it, these individuals may have started an exercise program themselves. So, any participants who participated in a regular exercise program should have been excluded at the end of the study.

Second, sarcopenia, which is characterized by low muscle mass and strength, confers greater risk of falls. Inadequate nutrition, especially with low protein intake, is a well-known precipitating factor for sarcopenia.<sup>2</sup> Protein intake, which can directly affect the parameters evaluated in the study (e.g., leg extensor muscle strength, walking speed), was not assessed.

Moreover, individuals with cognitive impairment were excluded, but there was no information about Mini-Mental State Examination scores at the end of the 24 months. Two years is a long enough for an individual aged 70 and older to develop cognitive impairment. Also, the effects of exercise on cognitive function are well known,<sup>3</sup> so it can be seen whether exercise improves cognitive function.

Finally, polypharmacy and some medications such as benzodiazepines and antidepressants are known to increase the risk of falls, therefore evaluation of the number of drugs and drugs that may affect fall rates could directly influence the results of the study.

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## ACKNOWLEDGMENTS

**Conflict of Interest:** The editor in chief has reviewed the conflict of interest checklist provided by the authors and has determined that the authors have no financial or any other kind of personal conflicts with this paper.

**Author Contributions:** Aycicek, Canbaz, Arik, Kara, Sumer: design of the letter, manuscript preparation. Ulger: review of letter.

**Sponsor's Role:** None.

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## RESPONSE TO AYCICEK AND COLLEAGUES

*To the Editor:* We thank Aycicek and colleagues for their letter concerning our study.<sup>1</sup> Changes in physical activity were monitored in both study groups at baseline and at 6, 12, 18, and 24 months using the Community Health Activities Model Program for Seniors (CHAMPS) physical activity questionnaire for older adults. Daily number of steps was also monitored over the entire 24-month study period using a pedometer. We therefore obtained a fairly objective picture of participants' exercise-related activities. Although total amount of physical activity did not differ between groups, exercisers engaged in a significantly greater amount of moderate-intensity physical activity per week, approximately corresponding to the duration of the exercise intervention. That being said, controls were not restricted from participating in exercise programs of their choice, but the supervised exercise intervention was specially designed for preventing falls, and it is unlikely that the controls followed a similar program independently.

A previously published article showed that the prevalence of sarcopenia in this study population was low (0.9–2.7%) at baseline.<sup>2</sup> During the intervention, mean total body lean mass and fat mass changed only slightly in both groups.<sup>3</sup> In Finland, mean protein intake of healthy community-dwelling older women has been found to be sufficient according to recommended levels,<sup>4</sup> so protein intake was not assessed. Moreover, mean dietary calcium was