STROBE Statement—checklist of items that should be included in reports of observational studies

Section/item	Item No	Recommendation	Reported on Page Number/Line Number	Reported on Section/Paragraph
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	Page2/Line 44-46	Abstract/Paragraph 1
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	Page2-3/Lines 40-64	Abstract/Paragraph 1-4
Introduction				
Background/ rationale	2	Explain the scientific background and rationale for the investigation being reported	Page3-4/Lines 69-103	Introduction/Paragraph 1-2
Objectives	3	State specific objectives, including any prespecified hypotheses	Page4/Lines 103-105	Introduction/Paragraph 2
Methods				
Study design	4	Present key elements of study design early in the paper	Page4/Lines 103-105	Introduction/Paragraph 2
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Page5/Lines 113-125	Methods/Paragraph 1-2
Participants	6	(a) ***Cohort study***—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up ***Case-control study***—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls ***Cross-sectional study***—Give the eligibility criteria, and the sources and methods of selection of participants	a.Page5/Lines 111-114 b.Page5/Lines 124-125 c.Page6-7/Lines 157-162	a.Methods/Paragraph 1 b.Methods/Paragraph 2 c.Methods/Paragraph 6
		(b) ***Cohort study***—For matched studies, give matching criteria and number of exposed and unexposed ***Case-control study***—For matched studies, give matching criteria and the number of controls per case	N/A	N/A
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	Page7Lines 163-171	Methods/Paragraph 7
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	Page5-7/Lines 111-181	Methods/Paragraph 1-8
Bias	9	Describe any efforts to address potential sources of bias	a.Page6/Lines145-149 a.Page7/Lines177-180	a.Methods/Paragraph 5 b.Methods/Paragraph 8
Study size	10	Explain how the study size was arrived at	Page5/Lines 111-113	Methods/Paragraph 1
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	N/A	N/A

Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	Page7-8/Lines 184–192	Methods/Paragraph 9
		(b) Describe any methods used to examine subgroups and interactions	Page8/Lines 186–192	Methods/Paragraph 9
		(c) Explain how missing data were addressed	N/A	N/A
		(d) ***Cohort study***—If applicable, explain how loss to follow-up was addressed ***Case-control study***—If applicable, explain how matching of cases and controls was addressed ***Cross-sectional study***—If applicable, describe analytical methods taking account of sampling strategy	Page5/Lines 111-114	Methods/Paragraph 1
		(e) Describe any sensitivity analyses	Page9/Lines 224-229	Result/Paragraph 4
Results				
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analyzed	a.Page8/Lines 196-197 b.Page8/Lines 200-202	a.Results/Paragraph 1 b.Results/Paragraph 2
		(b) Give reasons for non-participation at each stage	a.Page5/ Lines 114-119 b.Page6-7/ Lines 157-162	a.Methods/Paragraph 1 b.Methods/Paragraph 6
		(c) Consider use of a flow diagram	Page20/ Lines 474	Methods/Paragraph 1
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	a.Page8/Lines 196-197 b.Page8/Lines 200-202	a.Results/Paragraph 1 b.Results/Paragraph 2
		(b) Indicate number of participants with missing data for each variable of interest	N/A	N/A
		(c) ***Cohort study***—Summarise follow-up time (eg, average and total amount)	N/A	N/A
Outcome data	15*	***Cohort study***—Report numbers of outcome events or summary measures over time	N/A	N/A
		Case-control study—Report numbers in each exposure category, or summary measures of exposure	N/A	N/A
		Cross-sectional study—Report numbers of outcome events or summary measures	a.Page23/Lines 517 b.Page24/Lines 536	a.Results/Paragraph 2 b.Results/Paragraph 4
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	N/A	N/A
		(b) Report category boundaries when continuous variables were categorized	N/A	N/A
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	N/A	N/A
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Page9/Lines 224-229	Result/Paragraph 4
Discussion				
Key results	18	Summarise key results with reference to study objectives	Page9-10/Lines 234–238	Discussion/Paragraph 1
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Page14/Lines 329-359	Discussion/Paragraph 11

Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Page10-14/Lines 239–348	Discussion/Paragraph2-10
Generalisability	21	Discuss the generalisability (external validity) of the study results	N/A	N/A
Other information				
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	N/A	N/A

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Websites of PLoS Medicine at http://www.plosmedicine.org/ , Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.

Below are some of the reasons for not applicable items:

6(b)This study was a cross-sectional study and does not apply to this Item.

11. The purpose of this study was to explore the relationship between virtual non-calcium (VNCa) CT value and bone mineral density under different levels of calcium suppression index (CaSI). In the course of the study, the variable values were not further classified. In the future, we will focus on the evaluation value of specific VNCa CT values under the different levels of CaSI to bone mineral density, to establish cut-off values and measure bone mineral density.

12(c). This study focused on patients who have available abdominal non-enhanced DLCT and QCT examinations performed between study periods. During this period, all patients who met the inclusion and exclusion criteria were included in our study.

14(b). This study focused on patients who have available abdominal non-enhanced DLCT and QCT examinations performed between study periods. During this period, all patients who met the inclusion and exclusion criteria were included in our study.

14(c). This study was a retrospective cross-sectional study.

15. This study was a retrospective cross-sectional study.

16. This study was a retrospective cross-sectional study. The purpose of the research design was to explore the possibility of using VNCa technology to evaluate vertebral BMD. In this study, the correlation between VNCa parameters and BMD was calculated, excluding other covariates. Because this study may be the first to explore the relationship between the slope of the VNCa attenuation curve and BMD, there are no accurate values/critical values for measuring bone density using calcium suppression techniques. It can only be considered that the VNCa parameter has a certain possibility in bone density evaluation. This study only explored the correlation between calcium suppression parameters and bone density, without further adjusting for confounding factors, nor classifying continuous variables and reporting their class boundaries. Due to the lack of follow-up studies on the proportion of patients with fractures caused by decreased bone density, the conversion between relative risk and absolute risk was not estimated in this article.

21. As far as we know, the present study might be the first one to explore the relationship between the slope of the VNCa attenuation curve and BMD at different levels of CaSI. This study was a retrospective cross-sectional study. In the following work, we will focus on the large sample size and external validation of this study to demonstrate the practicality of the results.

22. This study has no funding.

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*As the checklist was provided upon initial submission, the page number/line number reported may be changed due to copyediting and may not be referable in the published version. In this case, the section/paragraph may be used as an alternative reference.