The REMARK checklist

	Item to be reported	Page no./Line no.	Section/Paragraph
INTRODUCTION			
1	State the marker examined, the study objectives, and any pre-specified hypotheses.	Page 5/Line 11-15, 18-20	Introduction/Paragraph 1
MATERIALS AND METHODS			
Patients			
2	Describe the characteristics (e.g., disease stage or co-morbidities) of the study patients, including their source and inclusion and exclusion criteria.	Page 6/Line 5-6, 11-14	Patient cohort/Paragraph 1,2
3	Describe treatments received and how chosen (e.g., randomized or rule-based).	Page 8/Line 16-18 Figure 1	Treatment patterns/ Paragraph 1 Figure 1
Specimen characteristics			
4	Describe type of biological material used (including control samples) and methods of preservation and storage.	NA for the absence of specimen	NA for the absence of specimen
Assay methods			
5	Specify the assay method used and provide (or reference) a detailed protocol, including specific reagents or kits used, quality control procedures, reproducibility assessments, quantitation methods, and scoring and reporting protocols. Specify whether and how assays were performed blinded to the study endpoint.	Page 6/Line 15-18	Patient cohort/Paragraph 3
Study design			
6	State the method of case selection, including whether prospective or retrospective and whether stratification or matching (e.g., by stage of disease or age) was used. Specify the time period from which cases were taken, the end of the follow-up period, and the median follow-up time.	Page 6/Line 5-6 Page 7/Line 10-14 Page 9/Line 5-6	Patient cohort/Paragraph 1 Statistical analysis/ Paragraph 1 Survival outcome and analysis/ Paragraph 1
7	Precisely define all clinical endpoints examined.	Page 6/Line 21 Page 7/Line 1-4, 10-14	Patient cohort/Paragraph 4 Statistical analysis/ Paragraph 1
8	List all candidate variables initially examined or considered for inclusion in models.	Page 6/Line 11-13	Patient cohort/Paragraph 2
9	Give rationale for sample size; if the study was designed to detect a specified effect size, give the target power and effect size.	NA for the enrollment of all observed cases	NA for the enrollment of all observed cases
Statistical analysis methods			
10	Specify all statistical methods, including details of any variable selection procedures and other model-building issues, how model assumptions were verified, and how missing data were handled.	Page 7/Line 8-21 Page 8/Line 1-5	Statistical analysis/ Paragraph 1
11	Clarify how marker values were handled in the analyses; if relevant, describe methods used for cutpoint determination.	Page 8/Line 1-3	Statistical analysis/ Paragraph 1
RESULTS			
Data			
12	Describe the flow of patients through the study, including the number of patients included in each stage of the analysis (a diagram may be helpful) and reasons for dropout. Specifically, both overall and for each subgroup extensively examined report the numbers of patients and the number of events.	Page 8/Line 8 Page 8/Line 16-17 Page 9/Line 4-5	Patient characteristics/ Paragraph 1 Treatment patterns/ Paragraph 1 Survival outcome and analysis/ Paragraph 1
13	Report distributions of basic demographic characteristics (at least age and sex), standard (disease-specific) prognostic	Page 8/Line 8-14	Patient characteristics/ Paragraph 1

Source: McShane LM, Altman DG, Sauerbrei W, Taube SE, Gion M, Clark GM: Reporting recommendations for tumor marker prognostic studies (REMARK). *J Natl Cancer Inst* 2005; 97: 1180-1184.

	variables, and tumor marker, including numbers of missing values.		
Analysis and presentation			
14	Show the relation of the marker to standard prognostic variables.	Page 9/Line 20-21 Page 10/Line 1-3	Survival of 215 patients with radical resection/ Paragraph 1
15	Present univariable analyses showing the relation between the marker and outcome, with the estimated effect (e.g., hazard ratio and survival probability). Preferably provide similar analyses for all other variables being analyzed. For the effect of a tumor marker on a time-to-event outcome, a Kaplan-Meier plot is recommended.	Page 10/Line 4-9 Page 10/Line 21 Page 11/Line 1-3	Survival of 215 patients with radical resection/ Paragraph 2 Recurrence analysis of 215 patients with curative resection/ Paragraph 1
16	For key multivariable analyses, report estimated effects (e.g., hazard ratio) with confidence intervals for the marker and, at least for the final model, all other variables in the model.	Page 10/Line 10-14 Page 11/Line 3-8	Survival of 215 patients with radical resection/ Paragraph 2 Recurrence analysis of 215 patients with curative resection/ Paragraph 1
17	Among reported results, provide estimated effects with confidence intervals from an analysis in which the marker and standard prognostic variables are included, regardless of their statistical significance.	Showed in Table 2/ Supplementary Table 2	Showed in Table 2/ Supplementary Table 2
18	If done, report results of further investigations, such as checking assumptions, sensitivity analyses, and internal validation.	Page 10/Line 13-14	Survival of 215 patients with radical resection/ Paragraph 2
DISCUSSION			
19	Interpret the results in the context of the pre-specified hypotheses and other relevant studies; include a discussion of limitations of the study.	Page 13/Line 17-21 Page 14/Line 3-10 Page 14/Line 18-21 Page 15/Line 2-6 Page 16/Line 10-17	Discussion/Paragraph 4 Discussion/Paragraph 5 Discussion/Paragraph 7
20	Discuss implications for future research and clinical value.	Page 15/Line 18-21 Page 16/Line 1-3	Discussion/Paragraph 6

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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.

Source: McShane LM, Altman DG, Sauerbrei W, Taube SE, Gion M, Clark GM: Reporting recommendations for tumor marker prognostic studies (REMARK). *J Natl Cancer Inst* 2005; 97: 1180-1184.