

Appendix materials

Appendix 1 The preliminary pool of items for CARE-radiology with the results of the Delphi survey.

Item	Mean score \pm standard deviation
1. Title	
● Important diagnosis and imaging features should be reflected in the title	7.93 \pm 1.72
● Diagnostic method-related words, such as CT, MR, etc., should be included in the title	8.29 \pm 1.18
● The title should include "case report" and the number of cases	7.14 \pm 1.86
2. Keywords	
● The keywords should contain 3-6 terms, including "case report" and diagnosis-related words	7.96 \pm 1.50
● Avoid general and repetitive keywords, and consider using MeSH or ICD-11 disease terms	8.43 \pm 0.96
● Abbreviations should not be used unless they are commonly used in the field	8.39 \pm 0.99
3. Abstract - structured or non-structured	
● Introduction: What is unique about the case and what contribution does it make to current scientific research?	8.18 \pm 1.33
● Major imaging features of the patient	8.57 \pm 0.84
● What "valuable" experiences does the case report provide?	8.71 \pm 0.66
4. Introduction	
● Provide appropriate background information	7.86 \pm 1.27
● Briefly summarize the uniqueness of this case and cite relevant medical literature for reference	8.25 \pm 0.89
5. Case Information	
● Patient's age	8.75 \pm 0.52
● Patient's gender	8.68 \pm 0.55
● If relevant, report the patient's region and ethnicity	8.04 \pm 1.29
● If relevant, report the patient's occupation	7.86 \pm 1.63
● If relevant, report the patient's weight and height	7.50 \pm 1.77
● If relevant, report the patient's major medical history and family history, including menstrual history, childbirth history, feeding history, smoking and drinking history, transfusion history, concomitant diseases, and relevant genetic information	8.36 \pm 0.87
6. Clinical Course	
● Development process of the disease and any treatment or medication that may have changed the imaging performance	8.46 \pm 0.69
● If possible, it is recommended to present the timeline of the disease in the form of a chart	7.43 \pm 1.57

Item	Mean score \pm standard deviation
7. Diagnosis Evaluation	
● Diagnostic methods, such as physical examination, including professional and relevant general examinations, relevant laboratory tests, imaging examinations, investigations, etc.	8.61 \pm 0.63
● Diagnostic challenges	7.86 \pm 1.08
● Diagnostic reasoning, including other diagnoses considered	8.43 \pm 0.84
● Surgical and pathological diagnosis results, if applicable	8.86 \pm 0.36
● If the diagnosis is beyond the scope of the practicing physician, include diagnoses from other medical institutions and how the practicing physician verified those diagnoses	7.68 \pm 1.59
● If applicable, report prognostic features	8.29 \pm 1.12
8. Imaging Results	
● Describe important imaging findings, typical features, and important imaging pictures, and the main points of image recognition	8.86 \pm 0.45
9. Image Details	
● Details of the equipment, parameters, software, and settings used to obtain the images	7.18 \pm 1.76
● Author's viewing and evaluation of the images should be provided in the text	6.75 \pm 1.76
● The resolution and magnification of the image or any modifications/enhancements (such as adjustments to brightness, color balance, or magnification, image smoothing, and staining) should be described in the text or legend	6.93 \pm 2.16
● Patient identification information (name, patient number, hospital name) must be removed to ensure anonymity	8.86 \pm 0.59
● Labels/tags should be used to identify key information in the image and defined or footnoted in the legend	8.11 \pm 1.77
● Evaluator's profession, years of experience, and whether or not they have received training should be evaluated	7.32 \pm 1.56
10. Follow-up and Outcome	
● If available, report clinical and patient evaluations of the outcome	8.39 \pm 0.99
● Important follow-up diagnoses and other test results	8.57 \pm 0.69
● Adverse reactions and unexpected events	7.79 \pm 1.75
11. Discussion	
● Basis for conclusion	8.71 \pm 0.53
● Discuss relevant medical literature	8.46 \pm 0.69
● Advantages and limitations of this case	8.54 \pm 0.84
● Generalizability/applicability	8.36 \pm 0.68
● Discussion of the significance for practice, education, and research	8.39 \pm 0.63
12. Conclusion	

Item	Mean score \pm standard deviation
● Main experiences gained	8.61 \pm 0.69
13. Patient Perspective	
● Patients should share their views on the treatment received	6.36 \pm 1.85
14. Informed Consent	
● If necessary, patients should have the right to informed consent	7.96 \pm 1.55
● Ethics must be considered if necessary	8.29 \pm 1.08
15. Funding	
● Need to describe funding sources and other support, such as the supply of instruments and equipment, and the role of funders	7.32 \pm 1.87
16. Conflict of Interest	
● Disclosure of conflicts of interest should be made	8.14 \pm 1.27

Appendix 2 Demographics information of the experts who participated in the survey

Full name	Discipline/Interests	Country/Area	Institution
Consensus group experts			
Xin Lou	Radiology Dept.	China	Chinese PLA General Hospital
Bing Lv	Radiology Dept.	China	Fuwai Hospital
Ximing Wang	Radiology Dept.	China	Shandong Provincial Hospital Affiliated to Shandong First Medical University
Liming Xia	Radiology Dept.	China	Tongji Hospital, Tongji Medical College of Huazhong University of Science and Technology
Junfang Xian	Radiology Dept.	China	Beijing Tongren Hospital
Lei Xu	Radiology Dept.	China	Beijing Anzhen Hospital
Huadan Xue	Radiology Dept.	China	Peking Union Medical College Hospital
Shu Yang	Methodologist	China	Chengdu University of TCM
Dexin Yu	Radiology Dept.	China	Qilu Hospital of Shandong University
Longjiang Zhang	Radiology Dept.	China	Jinling Hospital, Medical School of Nanjing University
Li Fan	Radiology Dept.	China	Shanghai Changzheng Hospital
Yinghui Jin	Methodologist	China	Zhongnan Hospital of Wuhan University
Liangru Ke	Radiology Dept.	China	Sun Yat-sen University Cancer Center
Huanjun Wang	Radiology Dept.	China	The First Affiliated Hospital, Sun Yat-sen University
Linlin Zhang	Editor	China	Editorial Office of Chinese Journal of Radiology
Yi Dai	Radiology Dept.	China	Peking University Shenzhen Hospital
Ling Hu	Editor	China	Editorial Office of Chinese Journal of Radiology
Xiaojuan Shi	Editor	China	Editorial Office of Chinese Journal of Radiology
Hongyue Tao	Radiology Dept.	China	Huashan Hospital, Fudan University
Yao Wang	Radiology Dept.	China	Yunnan Cancer Hospital
Xiaojuan Xiao	Radiology Dept.	China	The Eighth Affiliated Sun Yat-sen University
Hairui Xiong	Radiology Dept.	China	Shenzhen Children's Hospital
Yun Zhang	Radiology Dept.	China	West China Hospital, Sichuan University
Yanfang Ma	Reporting Guidelines	Hong Kong, China	Hong Kong Baptist University/Chinese EQUATOR Center
Yibo Tang	Radiology Dept.	China	Zhongshan Hospital, Fudan University
Qi Wang	Methodologist	Canada	McMaster University
Shiyu Wang	Radiology Dept.	China	Zhongshan Hospital, Fudan University

Full name	Discipline/Interests	Country/Area	Institution
Xinyue Yang	Radiology Dept.	China	Zhujiang Hospital of Southern Medical University
External review experts			
Alfonso Fiorelli	Thoracic Surgery	Italy	University of Campania "Luigi Vanvitelli"
David S. Riley	Integrative Medicine	USA	CARE Group
Fabio Davoli	Thoracic Surgery	Italy	S. Maria delle Croci Teaching Hospital
Hussein Elkhayat	Cardiothoracic Surgery	Egypt	Assiut University
Janne Estill	Global Health	Switzerland	University of Geneva
Marco Scarci	Cardiothoracic Surgery	UK	Imperial College Healthcare NHS Trust
Nuria M. Novoa	Thoracic Surgery	Spain	Puerta de Hierro University Hospital-Majadahonda
Robert Fruscio	Obstetrics and Gynecology	Italy	University of Milan-Bicocca
Ryuichi Waseda	Breast and Pediatric Surgery	Japan	Fukuoka University
Susan L Norris	Practice Guidelines	USA	Oregon Health & Science University
Tanel Laisaar	Lung Clinic	Estonia	Tartu University Hospital
Tomaž Štupnik	Medical Faculty	Slovenia	University of Ljubljana

Appendix 3 Suggestions from the experts during the Delphi survey with responses

1. Title
<p>Comments (n=10):</p> <p>Expert 1: Important diagnoses and imaging features are sometimes complex and not easy to express in the title; Reply: Thank you for your suggestion. The imaging features have been removed and modified to focus points based on other experts' suggestions, while important diagnoses are retained.</p> <p>Expert 2: The title should be concise and clear at a glance; Reply: Thank you for your suggestion.</p> <p>Expert 3: I don't think the number of cases needs to be reflected in the title; Reply: Thank you for your suggestion. The case number has been removed.</p> <p>Expert 4: The title should emphasize the imaging diagnosis, diagnostic method, and number of cases; Reply: Thank you for your suggestion. All others are retained except for the case number.</p> <p>Expert 5: Important diagnoses must be included, but important imaging features do not necessarily need to be reflected in the title; Reply: Thank you for your suggestion. The imaging features have been removed and modified to focus points.</p> <p>Expert 6: As a research design type, the case report should appear in the title, but the importance of sample size is secondary; Reply: Thank you for your suggestion. The case number has been removed.</p> <p>Expert 7: It is suggested to change the term "imaging features" to "characteristic imaging findings"; Reply: Thank you for your suggestion. The imaging features have been removed and modified to focus points.</p> <p>Expert 8: Important diagnoses and imaging features may affect the length of the title; Reply: Thank you for your suggestion. The imaging features have been removed and modified to focus points.</p> <p>Expert 9: 1. These are all related to the title, but 1 and 3 suggest that they should appear in the title, while 2 does not. It is suggested to unify the requirements. 2. The requirement in point 3 to report the number of cases may be too strict. Just like RCT does not require reporting the sample size in the title, it may be more appropriate to put this requirement in the abstract. Reply: 1. Thank you for your suggestion. It has been modified.</p>
2. Key Words
<p>Comments (n=6):</p> <p>Expert 1: The keywords should highlight the central content of the disease and avoid using abbreviations as much as possible; Reply: Thank you for your suggestion. We have mentioned the abbreviations, and disease keywords have been added.</p> <p>Expert 2: It is suggested to include the pathological diagnosis of the disease in the keywords; Reply: Thank you for your suggestion. Pathological diagnosis keywords have been added.</p> <p>Expert 3: The keywords should include the imaging manifestations of the disease or its characteristics reported in the case report; Reply: Thank you for your suggestion. Disease keywords have been added.</p> <p>Expert 4: For the explanation of keywords, in fact, the title can also follow this requirement. It is suggested to emphasize which categories should be included in the keywords, such as diseases, interventions, categories, etc. Reply: Thank you for your suggestion. Disease keywords have been added, but intervention classification is not suitable for CARR.</p> <p>Expert 5: "1. It is suggested not to explicitly specify the number of keywords because they need to be in accordance with the journal's requirements, and only the content that needs to be included in the keywords should be specified; 2. It is not recommended to have the last two items as separate entries. They can be sub-items of the previous one, or they can also be considered for merger." Reply: Thank you for your suggestion. The suggestions for keywords are generally similar to those of most journals.</p>

This item is adapted from CARE, and merging the last two items can be considered.
3. Abstract – (structured or unstructured)
<p>Comments (n=6):</p> <p>Expert 1: For the middle question, many imaging literature now not only focus on the imaging features of diseases but also on the value of new technologies and the diagnostic and prognostic value of imaging techniques. Reply: Thank you for your suggestion. The value of new technologies for diagnosis and prognosis has been added.</p> <p>Expert 2: The conclusion in the abstract should be concise, with emphasis on the role of the case report. Reply: Thank you for your suggestion.</p> <p>Expert 3: The introduction can be not too long and can be placed at the end as a "take-home message." Reply: Thank you for your suggestion.</p> <p>Expert 4: The contribution to current scientific research is somewhat abstract, and I think it can be omitted. The significance of the imaging report is mainly reflected in the last point, "valuable experiences to learn from." Reply: Thank you for your suggestion.</p> <p>Expert 5: Is there any duplication in the contributions of Question 1 and the valuable experiences to learn from in Question 3? Reply: Thank you for your suggestion. Question 1 focuses on the characteristics of the case itself or highlights the innovation of the article, while Question 3 is a summary of the case report.</p> <p>Expert 6: Some structured abstracts of journals do not have an introduction, and the scope of related content is too wide, which may not be suitable for introducing in the abstract. Reply: Thank you for your suggestion. The introduction mainly informs readers of the uniqueness of the article.</p>
4. Introduction
<p>Comments (n=5):</p> <p>Expert 1: The sentences should be concise, and detailed discussions should be placed in the discussion section. Reply: Thank you for your suggestion. It has been modified.</p> <p>Expert 2: The definition of background information is not very clear. Reply: Thank you for your suggestion. It has been modified.</p> <p>Expert 3: The background information should mainly reflect the uniqueness of the case compared to other cases, rather than broad background information. Reply: Thank you for your suggestion. It has been modified.</p> <p>Expert 4: It is suggested to explain in detail which elements should be included in the background information, such as disease epidemiology/burden? Reply: Thank you for your suggestion. It has been modified.</p> <p>Expert 5: It is suggested to clearly define what aspects should be included in the background information; otherwise, it is too general, and the second item can also be considered background information to some extent. Reply: Thank you for your suggestion. It has been modified.</p>
5. Cases Information
<p>Comments (n=5):</p> <p>Expert 1: The patient's current clinical symptoms should be reflected, and if there is a sudden increase or decrease in weight, it should be mentioned. Reply: Thank you for your suggestion. It has been added to the section of Primary concerns and symptoms of the patient.</p> <p>Expert 2: Can the weight and height of the reported case be replaced with BMI? Reply: Thank you for your suggestion. It has been added.</p> <p>Expert 3: "1. It is suggested to merge the first five items; 2. There is a lack of item on the current clinical</p>

<p>manifestations of the case; 3. It is suggested to change the last item to "report the patient's main medical history and family history, including menstrual history, obstetric history, feeding history, smoking and alcohol history, transfusion history, comorbidities, and other important relevant information" (because according to the normal clinical process, clinical manifestations and medical/family history should be clarified). Reply: Thank you for your suggestion. 1 has been modified, 2 has been mentioned, and 3 has been changed to "if relevant" because some may not necessarily apply to the reported case.</p>
<p>6. Clinical courses</p>
<p>Comments (n=5):</p> <p>Expert 1: If presented in the form of graphs or charts, it is recommended to provide detailed explanations. Reply: Thank you for your suggestion. We will add explanations in the document.</p> <p>Expert 2: It is suggested to choose the information to report based on the significance of the reported case. Reply: Thank you for your suggestion.</p> <p>Expert 3: The development process of the disease should be concise, with emphasis on the treatment that may change the imaging findings. Reply: Thank you for your suggestion. It has been modified.</p> <p>Expert 4: For the first item, it is suggested to change it to: If the patient has had multiple examinations (such as before and after intervention, follow-up results), the changes in imaging and the timing of the examination should be presented. Reply: Thank you for your suggestion. It has been modified.</p> <p>Expert 5: For the first item, it is suggested to change it to: Report the development process of the disease and the treatment or medication that may change the imaging findings. Reply: Thank you for your suggestion. It has been modified.</p>
<p>7. Diagnostic Assessment</p>
<p>Comments (n=6):</p> <p>Expert 1: It is difficult to quantify the challenges of a case, especially for rare cases. Reply: Thank you for your suggestion. We have made it an optional item and not required for reporting.</p> <p>Expert 2: Pathology and imaging should be compared point-to-point as much as possible. Reply: Thank you for your suggestion.</p> <p>Expert 3: This section may need to refer to references to express. Reply: Thank you for your suggestion. When writing the article, we will provide explanations with appropriate references.</p> <p>Expert 4: Feels like the items "Diagnostic challenges" and "Diagnostic reasoning" are a bit repetitive. The difficulty in diagnosis and differential diagnosis is precisely the challenge of diagnosis. If relevant, gene testing results should also be included. Reporting prognostic features is important, but it should not be included in the diagnostic evaluation. At the same time, I would like to raise a question: if a case does not have a clear clinical diagnosis or even characteristic clinical manifestations, but has relatively unique imaging findings that differ from existing diseases or normal structures of an organ, how should the diagnostic evaluation be presented? Can some recommendations be provided in the guidelines? Reply: Thank you for your suggestion. We have modified some of the content accordingly. For cases with unclear diagnosis, it may not be possible to write a case report.</p> <p>Expert 5: For "Diagnostic challenges," it is suggested to write it in Chinese as "Diagnosis difficulties," and for "Diagnostic reasoning," it is suggested to change it to "Diagnosis analysis." This is more in line with Chinese habits. Reply: Thank you for your suggestion.</p> <p>Expert 6: Does the last item specifically refer to prognostic features in imaging? Reply: Thank you for your question. It does not specifically refer to imaging.</p>
<p>8. Imaging Findings</p>
<p>Comments (n=2):</p>

<p>Expert 1: Pay attention to summarizing typical features, and for images, it is recommended to find typical levels and features. Reply: Thank you for your suggestion. We fully agree.</p> <p>Expert 2: If possible, it is recommended to include the main points of image recognition, important imaging findings or typical features, and the correlation between these feature changes and the pathological or pathophysiological changes of the disease, that is, the reasons for these feature changes. Reply: Thank you for your suggestion. The mentioned content should be covered in the discussion section.</p>
<p>9. Images details</p>
<p>Comments (n=6):</p> <p>Expert 1: In the second item, it is mentioned to provide the situation for authors to view and evaluate images, but the reference is not clear, and the specific meaning is not understood. Reply: Thank you for your question. It has been deleted.</p> <p>Expert 2: The penultimate item cannot be fully understood. Reply: Thank you for your question. This item mainly refers to labeling key information in the image and explaining its meaning or using a footnote below the figure. We have modified the Chinese translation.</p> <p>Expert 3: I don't think the reason for emphasizing the last item is valid because I believe that images are objective, and their features should not vary based on the diagnostician's level of expertise. Reply: Thank you for your suggestion. After discussion, we believe that different levels of experience can affect people's understanding of images, which can impact image interpretation and even the selection of which levels to present.</p> <p>Expert 4: Is it possible that hospital information cannot be hidden? Reply: Thank you for your suggestion. Here, it mainly refers to the information on the patient's image, which can be deleted.</p> <p>Expert 5: "1. It is suggested to adjust the order of the items, with the third to last item being moved forward as the patient's age, gender, and other parts involve this issue. As a case report, protecting the patient's privacy should be a top priority. 2. Regarding the last item, what about the evaluator's learning curve?" Reply: Thank you for your suggestion. We have adjusted it to the first item.</p>
<p>10. Follow-up and Outcomes</p>
<p>Comments (n=2):</p> <p>Expert 1: I feel like the item "If relevant, report prognostic features" should be placed more appropriately in the diagnostic evaluation section. Reply: Thank you for your suggestion. Prognostic features are different from follow-up and outcome reports. Prognostic features refer to predictions made before treatment, while follow-up and outcomes refer to results after treatment.</p> <p>Expert 2: Are there still cases where "not available" is possible for the first item? Reply: Thank you for your suggestion. Since it is a diagnostic case report, the outcome may not necessarily be reported.</p>
<p>11. Discussion</p>
<p>Comments (n=2):</p> <p>Expert 1: The discussion of relevant literature should be detailed, with a focus on highlighting the advantages of this case. Reply: Thank you for your suggestion. It has been modified accordingly.</p> <p>Expert 2: "Additional note: Should the follow-up report include the time of follow-up? Should the last item also include the significance of policies?" Reply: Thank you for your suggestion.</p>
<p>12. Conclusions</p>
<p>13. Patient Perspective</p>
<p>14. Informed Consent and Ethics</p>
<p>15. Funding</p>

16. COI

Comments (n=3):

Expert 1: It is difficult to obtain the patient's perspective in practical work. Reply: Thank you for your suggestion. This item mainly reflects a higher requirement for case reports, and we have added prerequisite conditions.

Expert 2: Informed consent should be mandatory, not "if necessary." If it is missing, an explanation is needed as to why it is missing. Reply: Thank you for your suggestion. It has been modified accordingly.

Expert 3: Informed consent should be mandatory for all biomedical research involving humans, right? If it must be mentioned, it is recommended to merge it and not have too many separate items. Reply: Thank you for your suggestion. We have considered merging some of the items.

Other suggestions and comments on the CARR reporting guidelines (n=5):

Expert 1: This content is too focused on describing disease imaging features, and there are relatively few studies that purely describe imaging signs. At least in the Chinese Journal of Radiology, this is the case. Reply: Thank you for your suggestion. Overall, case reports for imaging diagnoses generally describe imaging features first, and then explore their significance and impact on practice in the discussion section. The items in our reporting guidelines currently cover both parts.

Expert 2: It is important to gather and analyze similar cases in the future. Reply: Thank you for your suggestion.

Expert 3: For a case report, all of the above items are actually important, but the word count limit needs to be considered. Reply: Thank you for your suggestion. After completion, we will mention your suggestion in the discussion section.

Expert 4: Different diseases have different emphases on providing medical history, making it difficult to ensure uniformity. Reply: Thank you for your suggestion. The reporting guidelines can only provide general guidance, and specific judgment and reporting should still be based on actual situations.

Expert 5: It is recommended not to have too many items. Reply: Thank you for your suggestion. We will delete and merge items later.