

EVALUATION OF AUDIOVISUAL REPORTS TO ENHANCE TRADITIONAL EMERGENCY MUSCULOSKELETAL RADIOLOGY REPORTS

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The authors would like
to incorporate sound
in the presentation

Presenter: **Ivan R. B. Godoy M.D.**



INTRODUCTION

- Radiology reports are narrative texts with description of imaging findings.
- Recent PACS tools include hyperlinks and key images.
- In-person consultation with radiologist is optimal in challenging cases but may not be practical.



AUDIOVISUAL RADIOLOGY REPORTS

PURPOSE

To evaluate a video reporting tool that utilizes PACS integrated screen capture software for **musculoskeletal** imaging studies in the **emergency** department.

HYPOTHESIS

Referring orthopedic surgeons would find that audiovisual reports:

Add value to conventional reports

May increase **engagement** with radiology staff

Facilitate **understanding** of imaging **findings** from urgent MSK cases

MATERIALS AND METHODS

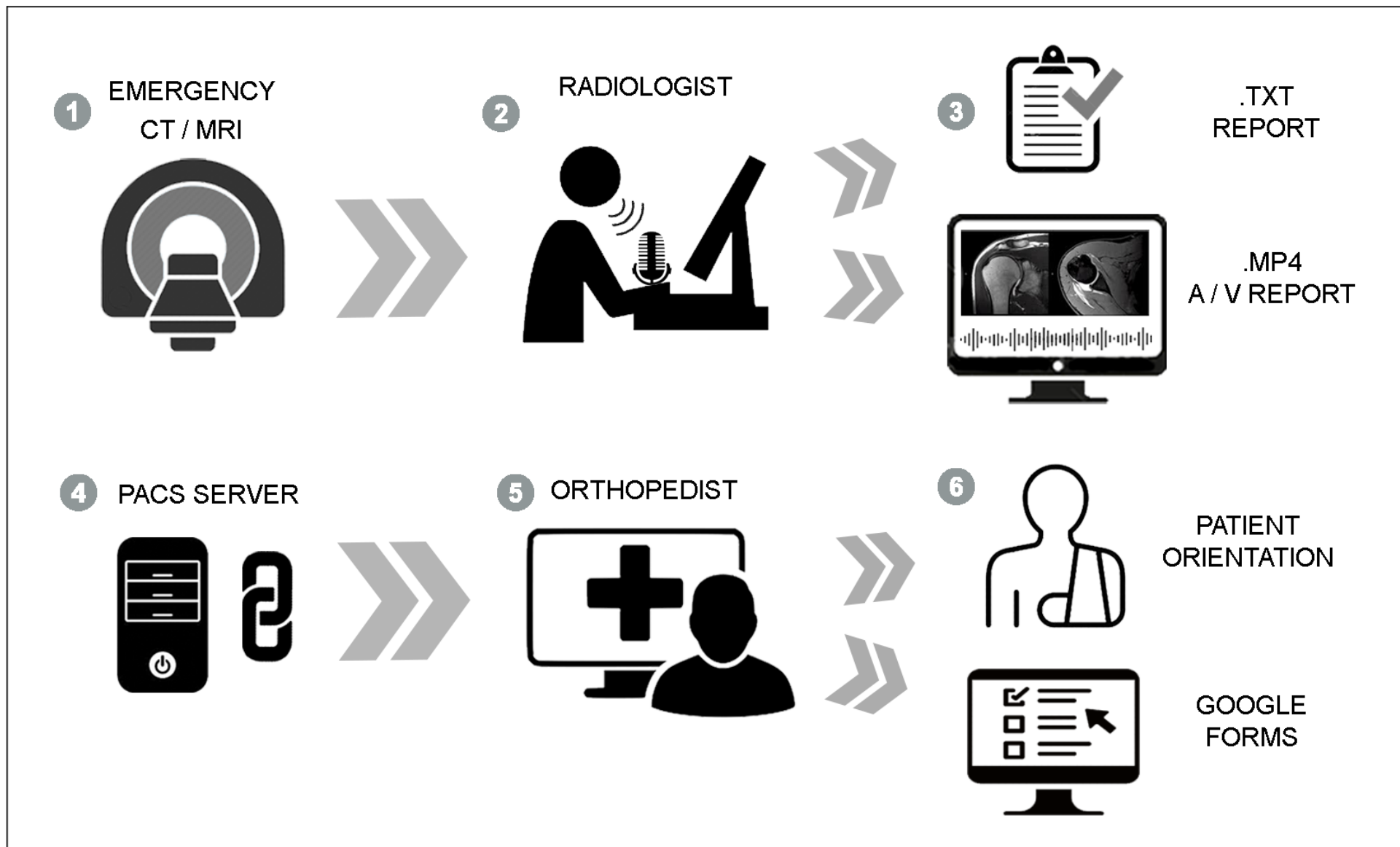
**Urgent msk cases (47)
from Emergency
department**

**Radiologists (7) prepared
audiovisual and
traditional text reports**

**Orthopedic surgeons (9)
evaluated audiovisual and
text reports – 2
questionnaires**

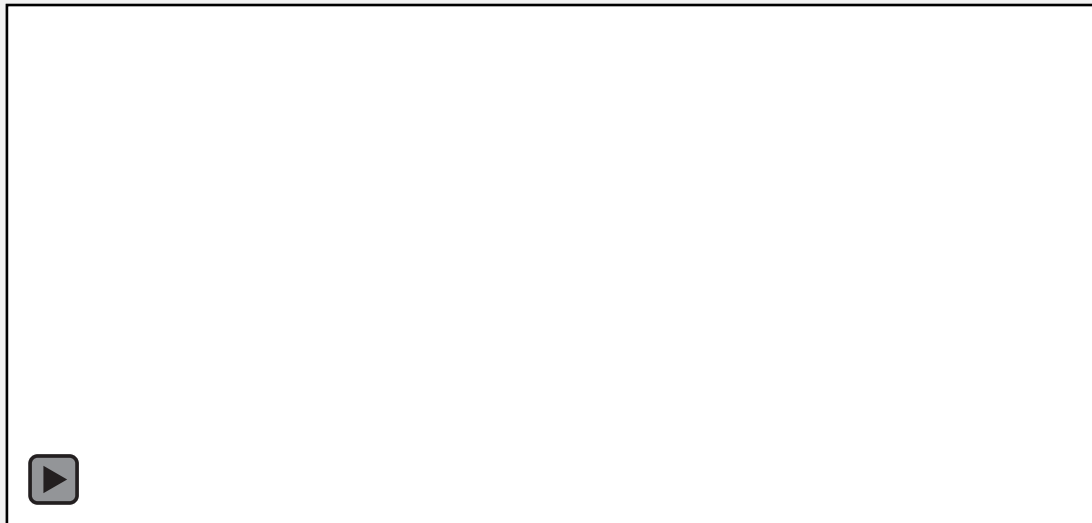
- Audiovisual reports generated for all CT and MRI msk exams during **2 months**
- Created using: Screencast-O-Matic screen capture software (Seattle, WA)
- All cases **anonimized**
- The orthopedic surgeons could evaluate audiovisual reports and answer the questionnaires for more than one case, depending on schedule and seniority

Summarized steps of the workflow

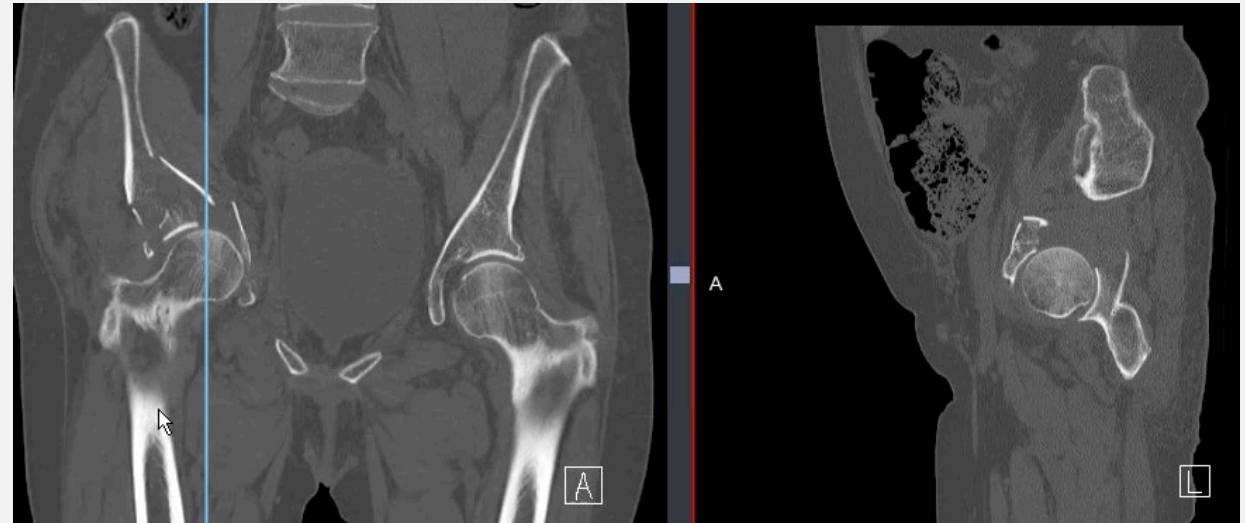


EXAMPLES OF AUDIOVISUAL REPORTS

Knee pain after mild trauma

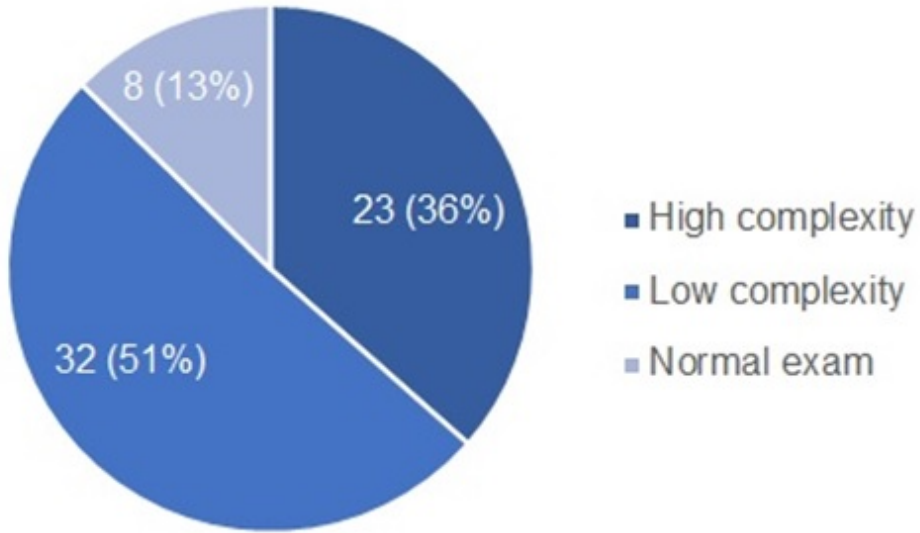


High-energy hip trauma



RESULTS

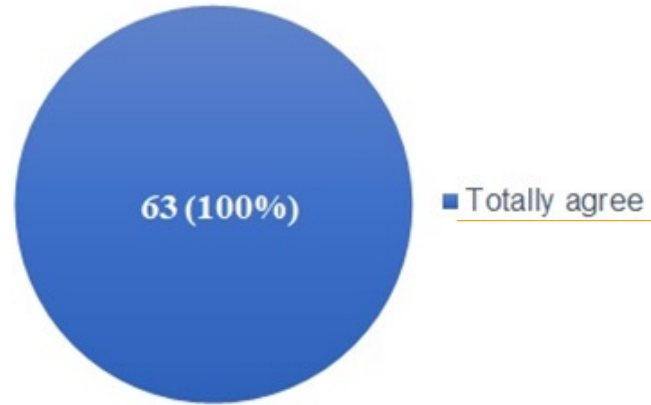
Fig. 1 Classification of cases by levels of complexity



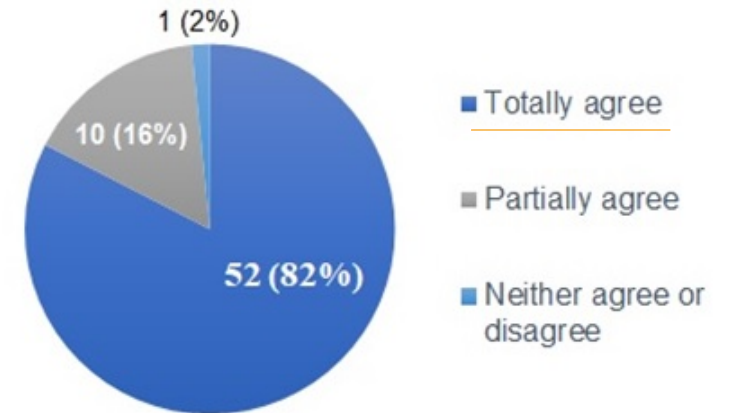
Data were summarized using simple frequencies and relative (percentages) and represented by bar graphs and pie charts. Fisher's exact test was applied to analyze the associations between the questions and the degree of complexity of the cases.

Fig. 2 Distribution of answers given to questions 1, 3 and 6 of the questionnaire

The audiovisual report answers the clinical suspicion



The audiovisual report make the alterations more understandable than the traditional report



I would forward this audio-visual report to the patient and family members

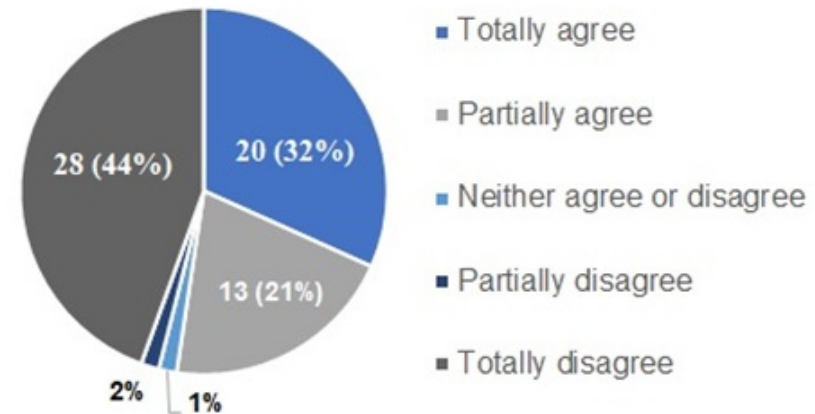
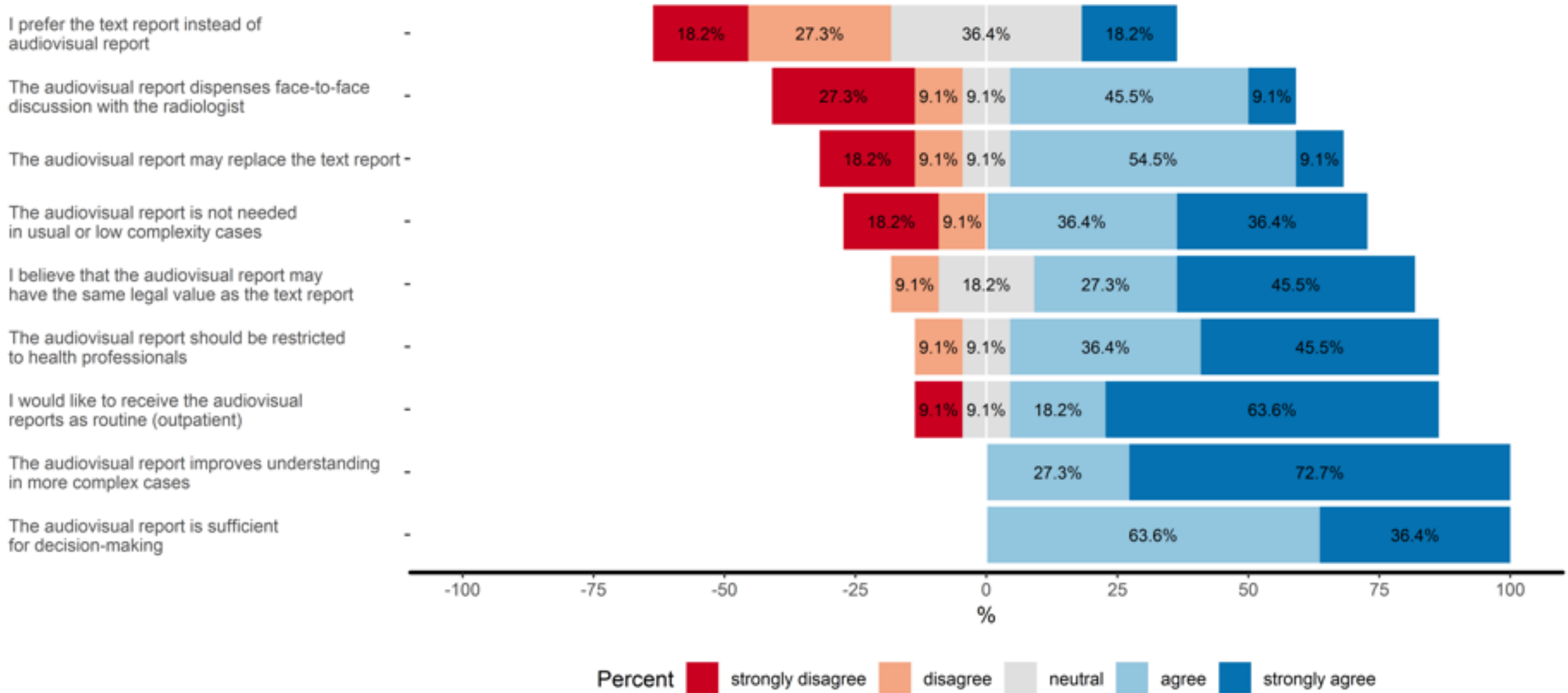


Fig. 5 Distribution of answers given to questions of the second questionnaire

About your experience with audiovisual report



AUDIOVISUAL RADIOLOGY REPORTS

FUTURE PERSPECTIVES

Future studies to reduce redundancy with traditional text reports

Widespread adoption in non-urgent cases and other radiology specialities – **profitable activity**



Photo by:
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Thank you! ivanrbgodoy@gmail.com