Diagn Interv Radiol 2023; DOI: 10.4274/dir.2022.221713

INFORMATICS

ORIGINAL ARTICLE

Copyright@Author(s) - Available online at dirjournal.org.
Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

A snapshot of teleradiology practice in Turkey: the results of a survey among radiologists

Oğuz Dicle
Utku Şenol
Mustafa Nasuh Özmen
Üstün Aydıngöz

PURPOSE

This study featured a survey that offers a snapshot of various teleradiology practices in Turkey, a Group of Twenty country that has undertaken a major transformation of its health care system during the last two decades and is currently the world leader in terms of the combined number of per capita magnetic resonance imaging and computed tomography examinations performed (which represent the bulk of teleradiology services worldwide).

METHODS

The study data was collected from 4736 Turkish Society of Radiology (TSR) members via an electronic platform in the web environment through a questionnaire consisting of 24 questions. The survey was conducted in a 3-month time window (March–May 2021). Statistical tools were used for the analysis of the quantitative data.

RESULTS

Responses from 156 members of the TSR comprised the study data, revealing that teleradiology is used for various applications in Turkey. Almost half of the participants (49%) performed teleradiology only in the private sector. Half of the respondents (51%) stated that they reported images at home for multiple centers. Moreover, 38% of the participants had been reporting more than 50 examinations per day, and 74% of the respondents earned less than 0.50 Euro per examination they reported. The overall satisfaction with teleradiology among the teleradiologists was, on average, 4.7 out of 10 points.

CONCLUSION

The results are both promising for the future (i.e., concerning the propensity for adopting new technology) and alarming for the current state of affairs (i.e., insufficient radiologist reimbursement and lack of licensing and accreditation of teleradiology service providers). Periodic surveys performed in countries with different health care systems concerning financial, technical, and medicolegal aspects might reveal an up-to-date landscape of teleradiology practices worldwide and help guide local and regional decision-makers.

KEYWORDS

Teleradiology, survey, Turkey

From the Department of Radiology (O.D. ✉ odicle59@gmail.com), Dokuz Eylül University Faculty of Medicine, İzmir, Turkey; Department of Radiology (U.Ş.), Akdeniz University Faculty of Medicine, Antalya, Turkey; Department of Radiology (M.N.Ö., Ü.A.), Hacettepe University Faculty of Medicine, Ankara, Turkey.

Received 14 June 2022; revision requested 11 August 2022; accepted 05 October 2022.

Publication date: 05.01.2023

DOI: 10.4274/dir.2022.221713

Teleradiology continues to progress in line with both the technological developments and needs arising in the field of health care. It is now being used extensively in many parts of the world, including Turkey. However, there is a paucity of data on how teleradiology practices actually operate and whether these services are performed in accordance with standards.

As of 2022, Turkey's population of 84.3 million people put this Group of Twenty (G20) country in 17th place out of 235 countries, with its population making up 1.1% of the entire world.[1] Although a small part of the population uses extra coverage from private health insurance providers, Turkey's health care system is effectively "state-sponsored universal" –even encompassing the >4 million refugees in the country. The first comprehensive and fully digital

You may cite this article as: Dicle O, Şenol U, Özmen MN, Aydıngöz Ü. A snapshot of teleradiology practice in Turkey: the results of a survey among radiologists. *Diagn Interv Radiol.* 05 January 2023 DOI: 10.4274/dir.2022.221713 [Epub Ahead of Print].

departmental radiology applications in the country started in 2001. Over the last two decades, picture archiving and communication system (PACS) applications have spread to nearly all hospitals, making up most of the local teleradiology practice.

A bilingual (Turkish and English) electronic health information system called e-Nabız (e-Pulse in English), which was developed by the Turkish Ministry of Health in the last decade, has become one of the more advanced systems in the world. It collects all hospital records, including imaging-based services, across the country in a central database and shares them with health care professionals and patients.[2] This is especially striking in light of the fact that, according to data from the Turkish Ministry of Health and the Organization for Economic Cooperation and Development, Turkey ranks first and second in the world in terms of the number of magnetic resonance imaging (MRI) and computed tomography (CT) examinations per 1.000 people, respectively.[3,4] Currently, these two imaging modalities make up the vast majority of teleradiology applications worldwide in terms of the number of images reviewed. As part of this Big Data environment and central health care management, the first nationwide online radiological image distribution project was implemented in 2014. By the end of the first year, the coverage rate of the project in public hospitals had reached 98%.[5]

The first standards on teleradiology were published by the Turkish Society of Radiology (TSR) in 2010.[6] An updated version of the TSR standards was published in June 2021.[7] Of the nearly 5.000 active working radiologists in Turkey, the number engaged in teleradiology is unknown. There is still no licensing and accreditation of teleradiology services, which remain outside of reimbursement coverage through the universal health care system in Turkey.

This study aims to obtain cross-sectional information about the daily functioning of teleradiology in Turkey from the perspective of one group of its major stakeholders (i.e., the radiologists) and to seek clues that reflect the real picture in this G20 country. The research also sets out to check the radiologists' satisfaction level pertaining to the framework of teleradiology services in Turkey and to gauge how widely the standards of the national professional association of radiologists have been adopted.

Main points

- Teleradiology has different modes of use due to rapidly changing requirements.
- In Turkey, teleradiology has permeated health care services in diversified forms.
- Non-standard applications and low fees emerged as the most important problems.
- Widespread use of questionnaires might contribute to shaping the future of teleradiology.

Methods

A questionnaire that consisted of 24 questions was designed by the researchers. The researchers were four senior academic radiologists who were all members of the committee that prepared the TSR teleradiology standards. A free web-based platform was used for the survey templates and data collection.[8] At the start of the survey, it was explicitly stipulated that only "radiologists currently practicing teleradiology" were supposed to participate. This work was supported by the TSR. Ethics committee approval was received for the subject matter and the content of the questionnaire. The study was approved by the Ethics Committee of Dokuz Eylul University (reference no: 2021/11-27: 05.04.2021). All participants were informed of the aim and content of the study before taking part in the questionnaire, and their consent was obtained.

The respondents were asked to answer questions about their age, their mode of service (institutional vs. self-employed), their experience in radiology, the teleradiology infrastructure that was available to them, and their practical experience with teleradiology, including their teleradiology-based income. The participants were also asked to submit their opinions on the advantages and disadvantages of teleradiology. The survey link was sent through the mailing list of the TSR to all member radiologists (n = 4.736). Participants were informed about the purpose of the questionnaire. Data were automatically saved in the survey platform database. The survey was conducted within a three-month time window (March–May 2021). Free questionnaire statistical tools were used for the analysis of the quantitative data.[8] A 10-point Likert scale was used to understand the respondents' satisfaction level, where 10 represented the highest satisfaction level and 1 the lowest. Free text fields were also available to obtain the participants' opinions on their satisfaction with and acceptance of teleradiology. The survey is provided in Appendix 1.

Statistical analysis

Descriptive statistics for the continuous variables were calculated, and frequencies and percentages were given for the categorical variables. The Shapiro–Wilk test was used to check the normality assumption of the continuous variables. The Wilcoxon rank–sum (Mann–Whitney U) test was performed to compare continuous variables between groups. Pearson's chi-square test was used for the analysis of the categorical variables in groups. A *P*-value of less than 0.05 was considered statistically significant. All statistical analyses were performed IBM SPSS version 25.0 software (Chicago, IL, USA).

Results

In total, 153 radiologists participated in the online survey. This number corresponded to 3.2% of the 4,736 member radiologists of the TSR.[9] The demographic data are given in Table 1. Nearly half of the respondents (48%) were radiologists with more than 10 years of professional experience. The majority of the participants (76%) were male, with a somewhat overrepresentation of the male radiologists (60%) among the TSR membership.[10] Moreover, 74% of the participants were from non-academic centers. Three-quarters of the respondents (75%) reported that they had not received any teleradiology training, and the majority (76%) were unaware of the TSR Teleradiology Standards. Awareness of the TSR Teleradiology Standards was found to be statistically higher in the group with work experience of 4–9 years.

Almost half of the participants (49%) performed teleradiology only in the private sector ("private sector" denoted here also covered the companies to whom imaging services of public hospitals, or their reporting, were outsourced by the government). Additionally, 28% of the participants were working only in the public sector, while the remaining 23% stated that they work in both sectors.

When asked to reveal their workplace status and coverage of teleradiology services, half of the respondents (51%) stated that they reported images at home for multiple centers. The remainder performed teleradiology on-site for a single center (17%), on-site for multiple centers (14%), or at home for a single center (18%).

Approximately half of the respondents (51%) performed teleradiology services full-time in their routine practice. The majority of the participants (88%) had not given a writ-

ten confirmation that they would perform the teleradiology service according to certain standards. While 38% of the participants had been reporting more than 50 examinations per day, 29% serviced 11–50 examinations daily. In addition, 78% of the practitioners of teleradiology stated that their patients were not informed about their reports being made via teleradiology. A further 58% of the respondents could access their patients' clinical information at the time of reporting.

Half of the respondents (48%) could access their patients' previously archived images. While 65% of the participants stated that the examinations they reported were from other cities, 8% performed international reporting. According to the electronic survey records, the participants were from 23 different cities. The majority were from Istanbul (31.5%), Ankara (18.5%), Izmir (10.2%), and Antalya (5.5%).

Only 18% of respondents stated that they reported examinations with diagnostic monitors; the majority of the radiologists preferred standard personal computer monitors for reporting. Moreover, 35% of participants used a simple or basic electronic signature. In 37% of the reports, only the name of the reporting person was written, without any type of electronic or digital signature. Neither a signature nor a name was included in the reports of 28% of the participants.

Approximately 74% of the respondents stated that they earned less than 0.50 Euro per examination they reported, while 13% of the respondents received no fee-for-service payment (their service was covered under a fixed salary).

In total, 63% of the respondents' teleradiology service providers stored the radiological images. For the rest of the respondents, the acquisition site was responsible for the storage.

Structured reporting was preferred by most of the teleradiologists. However, a quarter of radiologists provided narrative reports with no differential diagnosis. Finally, 29% of the respondents inserted diagnostic codes (International Classification of Diseases, 10th Revision) in their teleradiology reports. All of the answers given for the "yes or no" survey questions are given in Table 2.

The overall satisfaction with teleradiology among the teleradiologists was, on average, 4.7 out of 10 points. Approximately 60% of the participants gave a score of 5 or higher. The mean values and statistical analyses for the satisfaction levels according to gender and affiliated institution are given in Table 3. Satisfaction levels were found to be higher among the female and academic participants. Among the reasons for the positive view regarding teleradiology, the item "bringing additional income" was the most frequently marked. The response rates for the other options are given in Figure 1. The statistical analysis showed that significantly more female than male radiologists believed that teleradiology facilitated after-hours reporting. These results are given in Table 4. Concerning the negative views, the opinion that "Teleradiology causes a cheap labor problem" (the most obvious reason for dissatisfaction) was more common among non-academic respondents ($P = 0.017$; Pearson's chi-square).

Among the free-text opinions in favor of teleradiology were the following: "I use teleradiology as an extension of my hospital's PACS. I can also access patients' data which makes my evaluation comfortable"; "Teleradiology provides me a silent medium to be concentrated and focus on images"; "In pandemic conditions, teleradiology made the normal workflow possible"; and "It is the health system that makes teleradiology unproductive, not the teleradiology itself." Among the reasons given for the negative view regarding teleradiology, the item "It exploits labor" was marked the most. The response rates for other options are given in Figure 2. Some of the free-text opinions against teleradiology were as follows: "Teleradiology means low prices, poor quality"; "I feel it will bring the end of radiology"; "Teleradiology for me is too much effort without a rational income"; "Teleradiology with this fee means millions of meaningless reports"; and "Reporting without previous images and clinical data is a kind of Russian roulette."

Table 1. Demographic data of the survey respondents

	Number	Percentage
Gender		
Male	111	76.0
Female	35	24.0
Experience in radiology (years)		
1–3	36	24.0
4–9	42	28.0
≥10	72	48.0
Affiliated institution		
Academic	39	26.1
Non-academic	110	73.9
Training in teleradiology		
Yes	37	24.8
No	112	75.2
Employer		
Public	43	28.5
Private sector	74	49.0
Both	34	22.5

Discussion

A G20 country since the conception of this group of the top 20 economies worldwide in 1999, Turkey has experienced controversial paradigm shifts in health care services since 2002, some of which have been heralded as international success stories.[11] An important part of this transformation concerns the procurement of some services, which also significantly encouraged teleradiology applications. For example, the rate of outsourcing of health care services in the public sector, which was nonexistent in 2002, reached 80% in 2012.[12,13] The systematic promotion of easier access to health care services and the resulting uncontrolled competition caused an excessive increase in the number of CT and MRI examinations performed.[3] During this process, teleradiology was quickly adopted and widely implemented, primarily due to its cost-reducing effect. The importance of the current study is underscored by its cross-sectional depiction of teleradiology services from the standpoint of teleradiologists in an environment created by the major policy shift that has occurred over the last two decades.

As with many other technologies, teleradiology has been found to fit different roles and areas of use from its initially defined functions due to rapidly changing requirements and continuous technological advances. The number of surveys that have been conducted to understand this evolution of the practice of teleradiology in different countries and regions is surprisingly small.[14-17] When conducted with an appropriate sample population, such surveys can help reveal the bigger picture to a large extent. Although the results of these survey studies are not fully comparable due to the different conditions, regulations, and policies among various countries and regions, their technical infrastructure and usage concepts are comparable with global applications. Several remarkable results were obtained in the current study that were not addressed in other surveys,[14-17] which were not specifically aimed at practicing teleradiologists.

In general, the practice of teleradiology in Turkey has permeated the country's health care services in all of its forms of application (i.e., on-site for a single center, on-site for multiple centers, at home for a single center, and at home for multiple centers). Among the survey participants, the percentage of those who provided teleradiology services was close to half. However, due to the large number of service procurements, it was difficult to determine these rates exactly considering that radiology reports are given by publicly employed radiologists through teleradiology as part of the service provided by the private sector.

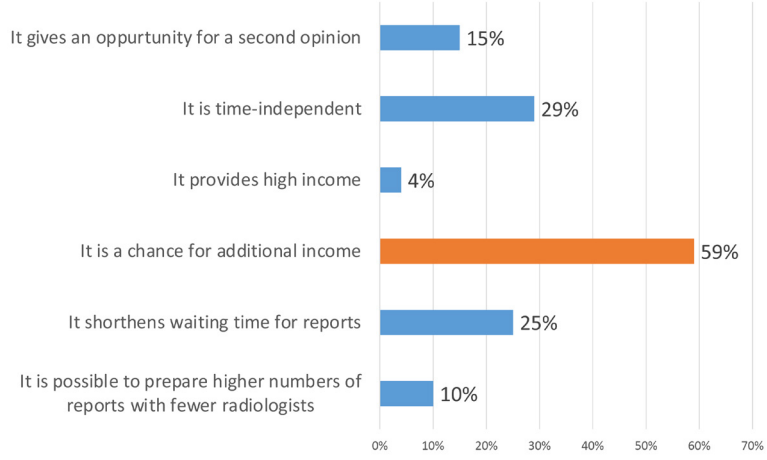

Figure 1. Distribution of opinions in favor of teleradiology service. The distribution of the answers given to the question, which was arranged as a sentence-completion activity. The reason(s) teleradiology was viewed positively were selected. More than one answer could be given. Respondents chose the opinion that was complementary to the following sentence: "I'm in favor of teleradiology service because…"

Table 2. Results of "yes or no" questions in the questionnaire

Question	Number of respondents	Answer	
		Yes (%)	No (%)
Do you work in an academic institution?	149	26	74
Did you get any training in teleradiology?	149	25	75
Do you perform teleradiology full time?	150	51	49
Are you aware of the TSR Teleradiology Standards?	143	24	76
Did you give a written confirmation that you will perform the applications according to the standards when starting the business?	150	12	88
Are patients informed that their examinations are reported by teleradiology?	148	28	72
Do you have access to clinical information at the time of reporting?	149	58	42
Do you have access to the patient's previous examinations at the time of reporting?	145	48	52
Are the images stored at the teleradiology site?	140	63	27
Do you use structured reports (that consist of technical data, exam protocol, findings, results, and recommendations) in teleradiology reports?	147	66	24
Do you insert any diagnostic code in teleradiology reports?	146	29	61

TSR, Turkish Society of Radiology.

As can be understood from the answers of the participants, a significant amount of patient and clinical data and archived images can be accessed during teleradiology applications. Insufficient integration of clinical history is an important downside of teleradiology in Turkey, identified in a revealing 63% of responses in a 2015 study.[18] However, the current survey revealed that the main complaint here was the low income provided in return for the service rendered. Moreover, although it was not asked as a separate question in the survey, it was known that the fees per review stated by the participants were the same regardless of the type of examination performed. The number of daily reports per radiologist was quite high, and high dissatisfaction regarding the monetary return was evident. Nevertheless, the most important motivation for the radiologists to perform teleradiology was cited as financial income. Low pricing is expected to result in poor reporting quality and dissatisfaction with teleradiology. The latter point was clearly expressed in the feedback received. This dramatic result revealed that teleradiology can turn into an abusive technological tool against the background of health policies that prioritize quantity while ignoring adequate setup and implementation of regulations and controls.

All of the regulatory and supervisory authority pertaining to health in Turkey resides with the Ministry of Health. However, no training and certification program specific to teleradiology exists in the country. Against this background, the TSR has published teleradiology standards to help radiologists employ up-to-date standards,[6] which, unfortunately, remained obscure to a significant portion of the participants. This necessitates increased activity on the part of the national professional association of radiologists to propagate these standards.

As mentioned in a study by Karthiyayini and Karthikeyan,[18] an acceptable and efficient teleradiology service in favor of patients will only be possible with appropriate public regulations. These arrangements should be made with the participation of all parties involved and in a way that prioritizes the benefit of the patient. Continuous con-

trol and improvement with the use and revision of quality criteria should be essential.

This study has some limitations. First, it only provides a snapshot of the situation at a time point that coincided with the extraordinary circumstances of the coronavirus disease-2019 pandemic. Such a period naturally entailed an accelerated transition to teleradiology in many centers. However, some norms that were being established during the pandemic might well be long term, if not permanent. The hybrid use of teleradiology and on-site reporting for even in-house services might well be one such norm, at least for some centers. Obviously, trends in the practice of teleradiology need to be monitored by the use of surveys as well as other tools. Another limitation of this study is the relatively low number of respondents, who made up approximately 3% of the potential pool. Nevertheless, unlike in similar studies,[14-17] only radiologists actively performing teleradiology participated in the current study. The country-level participation rates were similar when compared to those of other published surveys.[15,16]

The strengths of this study include the specifically targeted population of practicing teleradiologists (which is unique among published surveys in the literature), the extensive outreach performed through the TSR mailing list (which essentially afforded the randomization of the sample), the diversified content of the questionnaire (which captured various implementations of the teleradiology practice), the balanced distribution of answer options for each question, the web-based data collection (which provided easy access to the survey by the participants), and the high number of filled-out personal feedback areas in the questionnaires. Another upside of this study is that it was performed in a country with the highest numbers of CT and MRI examinations worldwide (adjusted for population), as these are the foremost subjects of teleradiology.

In conclusion, this study revealed that teleradiology in Turkey has a variety of applications and practices that are already shaping the future of radiology services in this G20 country. It is hoped that this study, which underlines the effects of the radical change in health care policy in Turkey over the last two decades, will be useful for future discussions on this subject. The results are both promising for the future (i.e., concerning the propensity for adopting new technology) and alarming for the current state of affairs (i.e., insufficient radiologist reimbursement and lack of licensing and accreditation of service providers). Periodic surveys performed in countries with different health systems may help illustrate the current landscape of teleradiology practices worldwide, and financial, technical, and medicolegal research also involving non-radiologists could be an effective tool to help guide local and regional decision-makers.

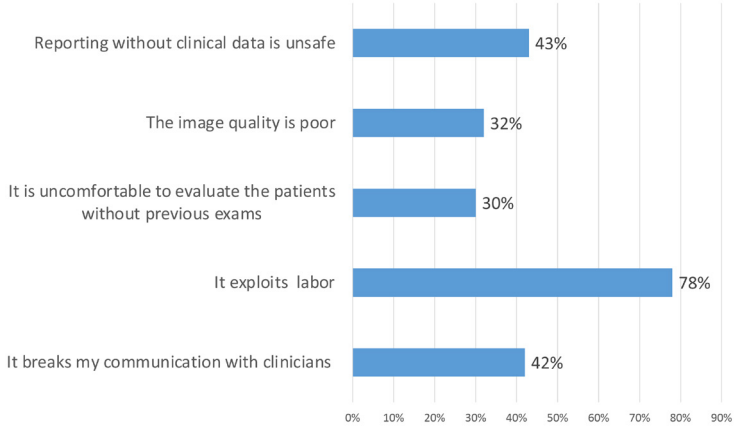

Figure 2. Distribution of opinions against teleradiology service. The distribution of the answers given to the question, which was arranged as a sentence-completion activity. The reason(s) teleradiology was viewed negatively were selected. More than one answer could be given. Respondents chose the opinion that was complementary to the following sentence: "I'm not in favor of teleradiology service because…"

Table 3. Mean values of satisfaction levels in teleradiology practice

	Mean rank	*P**
Gender		
Male	67.05	0.010
Female	87.88	
Affiliated institution		
Academic	91.42	0.020
Non-academic	66.97	

*Mann–Whitney U test.

Table 4. Distribution of the opinion that "Teleradiology facilitates after-hours reporting" (second-ranking reason for satisfaction) by gender

	Male		Female		
Teleradiology facilitates after-hours reporting	n	%	n	%	*P**
Disagree	92	80.0	23	20.0	
Agree	19	61.3	12	38.7	0.020

*Pearson's chi-square

Acknowledgements

The authors kindly thank the Turkish Society of Radiology Executive Board for their support in disseminating the questionnaire to the society members. They are also grateful to Dr. Deniz Akata for her critical review of the draft manuscript. The authors also express their sincere thanks to Dr. Aslı Karakülah and Dr. Yeşim Şenol for their contributions to statistical analysis and interpretation.

Conflict of interest disclosure

The authors declared no conflicts of interest.

References

1. Worldometer. https://www.worldometers.info/world-population/population-by-country/. Accessed 17 March 2022. [CrossRef]
2. E-nabız Personal Health System. https://enabiz.gov.tr/. Accessed 17 March 2022. [CrossRef]
3. Turkish Republic Ministry of Health. Annual of Turkey Health statistics. Ministry of Health publication, 2021. Ankara. https://sbu.saglik.gov.tr/Ekutuphane/kitaplar/health-statistics-yearbook-2019pdf.pdf. [CrossRef]
4. OECD. Health at a Glance 2021: OECD Indicators, OECD Publishing; Paris. 2021.

https://doi.org/10.1787/ae3016b9-en [CrossRef]

5. Birinci Ş, Ülgü M. National teleradiology system in Turkey. *Health Management*. 2017; 17(3):248-250. [CrossRef]
6. Turkish Society of Radiology Board of Qualification and Standards. TSR Standards for the Practice of Teleradiology [Turkish]. Turkish Society of Radiology: Ankara, Turkey. 9 April 2010. [CrossRef]
7. Özmen MN, Dicle O, Şenol U, Aydıngöz Ü. TSR guidelines for the practice of teleradiology: 2021 update. *Diagn Interv Radiol.* 2021;27(4):504-510. [CrossRef]
8. Online survey platform. https://freeonlinesurveys.com/. Accessed 20 March 2022. [CrossRef]
9. Turkish Society of Radiology. Official data. http://www.trd.org.tr Accessed 10 Jan 2022. [CrossRef]
10. Akdağ R. Lessons from health transformation in Turkey: leadership and challenges. *Health Syst Reform*. 2015;1(1):3-8. [CrossRef]
11. Akbulut Y, Terekli G, Yıldırım T. Outsourcing in Turkish hospitals: a systematic review. *Ankara Sağ Hiz Derg*. 2012;11(2):25-33. [CrossRef]
12. Turkish Ministery of Health, Department of Health Services, Audit and Evaluation Center (2012) Health Services Medical Audit Reports I-II-III, Ankara. [CrossRef]
13. European Society of Radiology (ESR). ESR teleradiology survey: results. Insights Imaging. 2016;7(4):463-479.
14. Lienemann B, Hodler J, Luetolf M, Pfirrmann CW. Swiss teleradiology survey: present situation and future trends. *Eur Radiol*. 2005;15(10):2157-2162. [CrossRef]
15. Coppola F, Bibbolino C, Grassi R, et al. Results of an Italian survey on teleradiology. *Radiol Med.* 2016;121(8):652-659. [CrossRef]
16. Rosenkrantz AB, Hanna TN, Steenburg SD, Tarrant MJ, Pyatt RS, Friedberg EB. The Current State of Teleradiology Across the United States: A National Survey of Radiologists' Habits, Attitudes, and Perceptions on Teleradiology Practice. *J Am Coll Radiol.* 2019;16(12):1677-1687. [CrossRef]
17. Petik B, Sırık M, Çolak D, Duman T. The use of teleradiology in Turkey: current situation and attitudes of radiologists. *Turkiye Klinikleri J Med Sci*. 2015;35(4):225-232. [CrossRef]
18. Karthiyayini S, Karthikeyan N. A survey of teleradiology: future trends. *J Appl Sci Comput*. 2019;6(5):1059-1065. [CrossRef]

Appendix 1. Survey questions

1. How many years have you been a radiologist? .....
2. What is your gender? .....
3. Type of institution you work for: academics or non-academics .....
4. Did you get any training in teleradiology?
   ☐ Yes ☐ No
5. Your employer in teleradiology: only state, only private sector, both? .....
6. Type of teleradiology performance: on-site, single center; on-site, multiple centers; at-home, single center; at-home, multiple centers?
   .....
7. What is the share of teleradiology in your routine radiology service: full-time or part-time? .....
8. Are you aware of TSR Teleradiology Standards?
   ☐ Yes ☐ No
9. Did you give a written confirmation that you will perform the applications according to the standards when starting the business?
   ☐ Yes ☐ No
10. How many exams do you report with teleradiology per day?
    ☐ 1-5, ☐ 6-10, ☐ 11-50, ☐ 51-100, ☐ 100+
11. Are patients informed that their examinations are reported by teleradiology?
    ☐ Yes ☐ No
12. Do you have access to clinical information at the time of reporting?
    ☐ Yes ☐ No
13. Do you have access to the patient's previous examinations at the time of reporting?
    ☐ Yes ☐ No
14. Reporting site: home, office, imaging center, hospital? .....
15. How far is the image acquisition from your reporting site: at the same site, within the same city, another city, another country?
    .....
16. What kind of monitor are you using in teleradiology reporting: standard PC, high-resolution PC, diagnostic?
    .....
17. How do you sign your report: fresh signature, electronic signature, only name, unsigned? .....
18. How much you are paid for each teleradiology exam report:
    ☐ 0,1-0,5, ☐ 0,6-2, ☐ 2-5, ☐ 5+ euros ?
19. Are the images stored on the teleradiology site?
    ☐ Yes ☐ No
20. Do you use structured reports (consists of technical data, exam protocol, findings, results, and recommendations) in Teleradiology reports?
    ☐ Yes ☐ No
21. Do you insert any diagnostic code in teleradiology reports?
    ☐ Yes ☐ No
22. What is your satisfaction level with the Teleradiology Service? (10 point scale) .....
23. I'm in favor of Teleradiology Service because it .....:
    - gives an opportunity for a second opinion
    - is time-independent
    - provides high income
    - is a chance for additional income
    - shortens waiting time for reports
    - is possible to prepare higher numbers of reports with the fewer radiologist
24. I'm not in favor of Teleradiology Service because .....:
    - reporting without clinical data is unsafe
    - the image quality is poor
    - I'm unable to reach patients' previous exams
    - it exploits the labor
    - I'm unable to communicate with the patients' physicians