

Externally Acquired Radiological Data for the Clinical Routine – A Review of the Reimbursement Situation in Germany

Externe radiologische Aufnahmen in der klinischen Routine – Eine Übersicht über die aktuelle Abrechnungssituation bei Konferenzen, Boards und Zweitmeinung

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ABSTRACT

Background Interdisciplinary radiological conferences and boards can improve therapeutic pathways. Because of the reinterpretation and presentation of external image data, which already was read, an additional workload is created which is currently not considered by health care providers. In this review we discuss the ongoing basics and possibilities in health economy for a radiological second opinion for the outpatient and inpatient sector in Germany.

Method Based on up-to-date literature and jurisdiction, we discuss the most important questions for the reimbursement for second opinions and conference presentations of external image data in an FAQ format. Additionally, we focus on the recently introduced E-Health law accordingly.

Results Radiological services considering second opinion or board presentation of externally acquired image data are currently not adequately covered by health care providers. In particular, there is no reimbursement possibility for the inpatient sector. Only patients with private insurance or privately paid second opinions can be charged when these patients visit the radiologist directly.

Conclusion Currently there is no adequate reimbursement possibility for a radiological second opinion or image demonstrations in clinical conferences. It will be essential to integrate adequate reimbursement by health care providers in the near future because of the importance of radiology as an essential diagnostic and therapeutic medical partner.

Key Points:

- Currently there is no reimbursement for image interpretation and presentation in boards.
- Second opinions can only be reimbursed for patients with private insurance or privately recompensed.
- The E-Health law allows reimbursement for tele-counsel in very complex situations.
- It will be crucial to integrate radiological second opinion in future reimbursement policies by health care providers.

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ZUSAMMENFASSUNG

Hintergrund Interdisziplinäre Konferenzen und Boards bringen den Patienten eine Optimierung der Therapie. Die zusätzliche Arbeitsbelastung durch die erneute Aufarbeitung bereits extern erstellter Befunde wird jedoch gegenwärtig in der klinischen Radiologie nicht adäquat berücksichtigt. In dieser Übersichtsarbeit wollen wir die aktuellen wirtschaftlichen Grundlagen und Möglichkeiten der radiologischen Zweitmeinung im ambulanten und stationären Sektor in Deutschland diskutieren.

Methode Basierend auf aktueller Literatur und Gesetzgebung werden die wichtigsten Fragen zur wirtschaftlichen

Abbildbarkeit der Zweitbefundung im FAQ-Format diskutiert. Zusätzlich wird das neue E-Health-Gesetz unter dieser Fragestellung kritisch erläutert.

Ergebnisse Prinzipiell werden radiologische Leistungen im Sinne der Zweitmeinung, aber auch die Interpretation und Demonstration extern erstellter Bilddaten in Boards und Konferenzen, gegenwärtig nicht adäquat bezüglich wirtschaftlicher Rekompensation erfasst. Dabei gibt es gerade bei stationären Patienten keine entsprechenden Abrechnungsmöglichkeiten. Lediglich bei externen Wahlleistungspatienten bzw. als IGeL-Leistung besteht eine Abrechnungsmöglichkeit

als explizite Wunschleistung des Patienten nach Zweitmeinung.

Schlussfolgerung Die radiologische Leistung einer Zweitmeinung bzw. der Demonstration extern erstellter Bilddaten wird gegenwärtig wirtschaftlich nicht adäquat dargestellt. Durch die hohe Bedeutung der Radiologie als diagnostischer und therapeutischer klinischer Partner in der sektorübergreifenden Versorgung und in interdisziplinären Boards muss künftig dringend eine entsprechende Abbildung in der wirtschaftlicheren Rekompensation erreicht werden.

Introduction

The benefit of radiology second opinions, primarily in subspecialties, is largely accepted in the current literature [1–4]. One study showed discrepancy rates between 12.6 % and 32.6 % when comparing original and second interpretations of pediatric radiological findings [5]. In another study, patients with ENT tumors were assigned to a different tumor stage based on the second opinion of specialized neuroradiologists in 56 % of cases, resulting in a change of the further treatment concept in 38 % of cases [6]. Therefore, an improvement in diagnosis with subsequent change and optimization of the treatment concept can probably be assumed. A benefit for diagnosis and treatment by including radiology in clinical conferences [7] and tumor boards [8–10] was also able to be shown.

At present, the high time and personnel requirements in clinical radiology for a second reading and interpretation of externally acquired and interpreted examinations by radiologists and specialists are not adequately included in current billing systems. The personnel requirements for external second interpretations and presentations in boards and clinical conferences are also not uniformly included in the finances or in the staffing ratio in the internal accounting of medical services at many hospitals in which radiology is viewed as a cost center.

The goal of this review is to discuss current problems and challenges regarding second interpretations and presentations in clinical radiology. As in the previous review regarding legal aspects, this review presents a dialog between radiologists and medicolegal experts in FAQ format discussing the most important questions with respect to current options for the reimbursement and billing of second opinions and radiology presentation in conferences and boards.

Expected developments with a focus on the E-Health law are also discussed.

Reimbursement situation for radiology consultations and second opinions

Cross-sector and cross-discipline case management is an established part of modern health care. Medical decision-making processes as well as hospital revenues are no longer generated at

individual wards or clinics but rather in interdisciplinary organizational units (e. g. vascular center, organ-tumor center) [11, 12]. Second interpretation of cases in a conference is consequently becoming increasingly necessary. This also relates in particular to radiology expertise and the second interpretation/evaluation of image datasets. Clinical radiologists spend an increasing portion of their time contextualizing diagnoses also of external patients from other health care facilities. Exact numbers regarding the workload for the provision of second opinions in Germany are currently not available. One study from 2013 shows an estimated workload for radiologists at a maximum-care hospital of approximately 15 % for clinical conferences and 14 % for informal case discussions [13]. A not yet published online survey by our workgroup indicates that externally acquired radiological images are presented in tumor boards in over 25 % of cases with the primary external radiology report being available in less than 10 % of cases. The right to bill for medical services usually lags behind. Some radiology services, including radiology consultations and second opinions, are performed across sectors in an outpatient or inpatient setting and as a function of the patient's insurance status or concrete treatment contract. In individual cases but not in explicit terms, radiology consultations in the form of second opinions are listed as reimbursable in the corresponding payment catalogs or fee scales but this predominantly does not apply to the cases discussed here.

Radiology question: Ability to bill board presentations of cases from radiology consultation hours

The term “radiology consultation hours” should first be explained: To date, radiology services at hospitals have not been included in billing for routine outpatient care for patients covered by state health insurance. However, in the case of personal authorization by the Association of Statutory Health Insurance Physicians, in the care of privately insured outpatients, when performing privately paid outpatient services, or in the case of outpatient specialist care, radiology is part of the outpatient care model. As a result of the recent development of interventional and therapeutic radiology (e. g. pain management, oncological interventions), radiology has developed independent therapeutic expertise. In this context primary radiology consultation hours which effectively turn radiologists into managing outpatient and inpatient hospital physicians have become increasingly common.

Can hospital radiologists currently be reimbursed for presenting a case of an outpatient covered by state health insurance with *externally acquired* radiological images from their personal consultation hours in a clinical tumor conference?

Legal response

No, that is not possible. Outpatient specialist care in the uniform value scale (Einheitlicher Bewertungsmaßstab (EBM)) has included a fee schedule item for the presentation of patients in oncological tumor conferences since October 2015. However, these fees cannot be billed by hospital radiologists since radiologists are not currently considered part of the “core team” according to the relevant outpatient specialist care guidelines of the Federal Joint Committee. The radiology society finds this unacceptable since radiologists as representatives of an independent area of specialization with its own indication criteria perform diagnostic as well as therapeutic measures, such as image-guided local tumor ablation. Regardless of this, the primary indication for diagnosis and treatment must be determined in consensus in a multidisciplinary tumor conference. Like all other medical disciplines, radiologists are bound to this decision and have an equal vote in consensus-based decisions. Regardless of whether a radiologist chairs a department with beds, he can refer oncology patients to the decision-making process in the conference via his own consultation hours. The time and effort required in radiology for implementation, presentation of images and findings, discussion of images and findings, and documentation of interdisciplinary tele-conferences or tumor conferences performed in clinical inpatient care are not taken into consideration in the fee scale, at least for external patients with state health insurance from the outpatient sector, even though the evaluation of image data by radiology is the main or even only requirement for a tumor board vote with corresponding written documentation in the conference synopsis and is typically also the requirement for the initiation or modification of a therapeutic measure in the outpatient care sector. The corresponding radiology service is incorporated in a clinical connection (e.g. gastrointestinal tumors) with a typically regional public service obligation (e.g. certified organ cancer center with permanent partners from the inpatient and outpatient sectors). The radiologist’s presence and vote are an absolute requirement for a tumor board to be able to make decisions in every currently significant certification scenario for a tumor center. In the interest of cross-sector patient care, the ability to bill a corresponding fee number that takes the radiological service in tumor conferences into account at least for external patients is urgently needed.

Radiology question: Ability to bill case presentations in tumor boards

Can a hospital radiologist be reimbursed for a passive case evaluation including the evaluation of internal or external image datasets as part of a multidisciplinary conference?

Legal response

No, as with all other medical disciplines participating in the conference, radiologists currently do not have the ability to bill for this.

Billing in the private sector as consultation according to number 60 of the German scale of charges for physicians (GOÄ) is not possible in the current legal situation due to the fact that every physician participating in the consultation and entitled to bill his own services or a regular personal medical representative, including both hospital physicians and physicians in private practice, must examine the patient prior to the consultation or in direct connection with the consultation, i.e., patient-physician contact must have taken place, and this is often not the case in the presentation of patients in conferences and in second opinions in other situations (see below).

Number 60 of the scale of charges of the German Hospital Federation volume I (DKG-NT) cannot be used in accordance with the aforementioned explanation of the scale of charges for physicians for radiology case evaluation of external inpatients (e.g. surgical patients at a partner hospital) as part of a tumor board due to the lack of patient contact. The catalog can ultimately only be used for orientation purposes in such a business situation. The two cooperating institutions each provide a bill and can then negotiate the equivalent value of the service. The radiologist then performs the corresponding service within the terms of employment.

For the outpatient care sector, number 24.2 of the uniform value scale catalog provides a flat rate for radiology consultation. Even the uniform value scale requires personal contact between the physician and patient which does not seem compatible with the tumor conference situation. However, other forms of contact in the physician-patient relationship are now also permissible as long as they are covered by the rules of professional practice – according to § 7 paragraph 4 of the Model Professional Code for Physicians in Germany, it is sufficient if only the presenting physician has direct contact with the patient. However, fee schedule items 24 210, 24 211 and 24 212 only relate to the review of an existing examination indication and receive a correspondingly low classification. Optional components also do not include an evaluation of findings in the overall context. Since 4/1/2017, there has been a fee schedule item for teleradiology consultation for X-ray and/or CT images (fee schedule items 34 810, 34 820 and 34 821) whose specifications can be theoretically applied to certain tumor conference situations in conventional form. However, any billing option according to the uniform value scale requires personal authorization for the hospital radiologist or inclusion, e.g. in an outpatient specialist care contract. Consultation is currently not included in the outpatient specialist care catalog for the relevant treatment fields.

In relation to inpatient “inhouse patients” in this context, it must be stated that: An internal hospital consensus solution for internal billing for medical services should be targeted independent of a possible effect of a documented consultation on the case-based DRG. Calculation (e.g. according to the scale of charges for physicians) of all passive consultations performed as part of multidisciplinary consultations analogous to calculation of other interdisciplinary consultations would be desirable in this connection.

Radiology question: Ability to bill radiology second opinions outside of tumor boards

Are consultations/second opinions of radiologists in situations other than clinical (tumor) conferences billable?

Legal response

In the absence of the highly standardized environment of a tumor conference, various second opinion situations are conceivable:

The obtaining of a second opinion prior to major surgeries or life-altering diagnoses is included as a privately reimbursed service in chapter B “basic and general services” of the schedule of fees for medical services. The evaluation and discussion of external radiological examinations in corresponding expert conferences or boards can be offered at hospitals as a privately paid service as already being done by radiologists. The billing of a radiology second opinion as a service requested by the patient requires a correspondingly specific agreement between the radiologist and patient since the patient is then personally responsible for costs not covered by health insurance. Privately paid services are usually not very common in a hospital environment and are the responsibility of management or require a contractual provision for supplementary income by the employed physician.

External patients requesting optional services can be seen by the radiologist as part of a consultation before the case is discussed with the referring physician. Number 60 of the scale of charges for physicians can be applied in this case. There is currently no other explicit number of the scale of charges for physicians for obtaining radiological evaluations/second opinions as a consultation. Anyone who is of the opinion that a radiology second opinion is billable due to the required time and effort analogous to number 80 of the scale of charges for physicians (“written expert opinion”) will see in the specification of the scale of charges for physicians that “the evaluation of X-ray images (including externally acquired images) cannot be billed separately as an independent service.” The scale of charges for physicians also contains no provision for reimbursement for the evaluation of findings provided by the treating physician in relation to a patient or a patient’s condition. Therefore, the evaluation of MRI or CT scans brought by the patient cannot be additionally reimbursed or billed as a comparable service. Moreover, the use of numbers 80 and 85 of the scale of charges for physicians (“written expert opinion of extraordinary complexity”) is probably not possible because the described consultations are not expert opinions in a non-medical context but rather the medical evaluation of X-ray and CT images. The same is true for the explanation according to the scale of charges of the German Hospital Federation volume I (see previous answer).

Regarding the potential applicability of numbers of the uniform value scale, the explanations in the previous answer about tumor conferences (see above) applies but in consideration of possible personal patient contact. Hospital physicians can only be reimbursed in the case of personal or other contractual authorization (e. g., outpatient specialist care). Outpatient specialist care currently does not allow for reimbursement of radiology consultations, neither as a flat rate nor on an itemized basis.

Developments to be expected in the future based on the regulations of the E-Health law

Using communication technology, in particular video conferencing, interdisciplinary tumor boards and presentations of findings, known as tele-tumor boards/tele-tumor conferences and tele-presentations of findings, can be performed in clinical radiology both inhouse and with external partners. Radiology second opinions can also be obtained in the form of radiology tele-consultations using corresponding technology. This is already being practiced in many places and is currently represented by corresponding billing numbers in the uniform value scale based on the E-Health law. Therefore, tele-consultations to evaluate X-ray and CT images consisting of the evaluation of images and a written report (known as radiology tele-consultations) have been billable in the outpatient sector since 4/1/2017 under certain technical requirements and in the case of “particularly complex medical issues”. However, there are no corresponding reimbursement provisions for radiology in private practice due to the long delay in the amendment of the scale of charges for physicians (GoÄ). The inclusion of corresponding regulations in the announced amendment of the scale of charges for physicians relating to the obtaining of at least external radiology second opinions in the form of radiology tele-consultations as well as to the integral participation and responsibility of radiologists and the rendering of radiology services in tele-tumor boards in the form of a tele-consultation fee in order to reflect the reality of health care and give appropriate consideration to the contribution of radiology to clinical care is more than desirable. In fact it is long overdue. Compared to conventionally performed cross-sector interdisciplinary tumor boards in the clinical setting, travel costs are not incurred when conducting cross-sector tele-tumor conferences.

Discussion and Conclusion

At present, the time and effort required for second opinions/second interpretations in clinical radiology provided on a consultation basis for external patients are generally and particularly for interdisciplinary (tumor) conferences not fully included in reimbursement policies for all variations occurring in the reality of health care (► **Table 1**).

Apart from the practically nonexistent current health insurance billing options mentioned in our study, hospitals should consider the possibility of covering second opinions in radiology conferences and tumor boards by means of internal treatment charges. In Germany, the concrete service should be uniformly described and the cost should be calculated on the basis of current data. In addition, it should be taken into consideration that the generation of radiology second opinions as a consultation service can only be performed by specialists, which would require a shifting of the staffing criteria at hospitals in favor of specialists and senior physicians. However, it should be noted that individual consideration of radiology second opinions at the particular hospital cannot be a satisfactory solution for clinical radiology in the

► **Table 1** Overview of potential reimbursement possibilities for a radiology second opinion in various outpatient and inpatient situations.

radiology's ability to bill radiology second opinions	DRG/OPS	ITC	GKV (EBM)	ASV (EBM)	PKV (GOÄ)	IGeL
tumor conference: active presentation of an outpatient	–	–	–	no (only core team, radiology is not currently permitted)	–	–
tumor conference: passive presentation of an outpatient	–	optional	–	–	–	yes
tumor conference: passive presentation of a patient prior to admission or of an inpatient ("internal consultation")	–	optional	–	–	–	–
other outpatient situation	–	–	–	–	yes (as consultation with patient contact)	yes
other situation regarding a pa- tient prior to admission or of an inpatient ("internal consultation")	–	optional	–	–	yes (as consultation with patient contact)	–

DRG (diagnostic related groups), OPS (German Procedure Classification), ITC (internal treatment charge), GKV (statutory health insurance), EBM (uniform value scale), ASV (outpatient specialist care), PKV (private health insurance), GOÄ (scale of charges for physicians), IGeL (privately paid service).

long term. Adequate representation of services should be achieved by the professional societies on a higher health care policy level.

The rendering of radiology services in the form of second opinions/second interpretations for external patients, particularly in clinical conferences and boards, is currently only taken into account in the outpatient sector. Explicit billing and reimbursement regulations are urgently needed for corresponding services rendered for external patients in the inpatient sector and in the cross-sector setting. A multidisciplinary clinical conference as an institution and service of the inpatient care sector is in demand for outpatients. The same service is not even offered in outpatient care for logistical reasons. For all current and future regulations regarding cross-sector care – e. g. outpatient specialist care or second opinions according to § 27b of book V of the Code of Social Law – it should be ensured that radiology has the same rights and options as other medical disciplines, not least because of the major importance of image data interpretation and radiology treatment options.

In summary, it can be stated that radiology second opinions are not adequately represented in current billing systems. In addition to the greater frequency of tumor conferences due to active inclusion of radiology in organ centers, this increase can certainly also be attributed to the greater integration of radiology as a therapeutic clinical discipline. This new, increasingly cross-sector approach in radiology is resulting in a greater workload in the clinical routine for the presentation of findings and second opinions for externally acquired images.

Due to the current lack of adequate representation of these medical services, they must initially be systematically recorded. Based on this data, these services should then be billed in clinical

radiology as uniformly as possible initially on the basis of ITCs with particular consideration for personnel requirements regarding specialists and senior physicians for implementation.

However, in the medium to long term, radiology second opinions with presentation of findings must be integrated on a higher health care policy level by professional associations and societies in the service catalogs of the various billing systems for outpatient as well as inpatient care.

Conflict of Interest

The authors declare that they have no conflict of interest.

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