**BOX 1: Search Terms**

(clinicians OR physicians OR doctors OR medics)

AND

( confiden\* OR uncertain\* OR certain\*)

AND

( diagnosis AND medical )

AND

( decision OR ( decision AND making ) OR decision-making )

**BOX 2: Scoping Review Research Questions (Preregistered)**

Primary questions:

* **RQ1:** How calibrated are the confidence/certainty judgements made during diagnostic decisions by clinicians relative to their actual accuracy?
* **RQ2:** How are confidence/certainty judgements utilised within the wider diagnostic decision process?

Subsidiary questions:

* **RQ3:** What are the prevalent ways in which diagnostic confidence and certainty are operationalised as variables?
* **RQ4:** What strategies, tools or frameworks have been used to prompt better calibration of both confidence and certainty?
* **RQ5:** What types of empirical procedures/tasks are used to study confidence and certainty in diagnostic decisions? Do they come to different conclusions?
* **RQ6:** What are the discrepancies between the concepts/research questions studied in the context of confidence and certainty in the cognitive psychology literature and the medical diagnosis literature?
* **RQ7:** What areas of research are yet underexplored with the context of medical diagnosis?

**BOX 3: Papers on Imaging and Confidence**

There were also a subset of papers that find an increase in confidence when providing clinicians with specialised imaging for a patient when making diagnoses, be they MRI scans31-32, CT scans33, evacuation proctography34 or photos of wounds35. Meanwhile, another subset of papers use various forms of computer-aided decision support systems with the goal of improving confidence, with mixed results36-39. These results are perhaps not surprising, but do warrant addressing as per our inclusion criteria.

**FIGURE 1 – Distribution of Papers by Publication Year**

A graph of a number of years

Description automatically generated with medium confidence

**FIGURE 2 – PRISMA Diagram of Literature Review**

A diagram of a flowchart

Description automatically generated

**FIGURE 3: Theoretical Framework. The dark boxes show stages of the diagnostic decision process as they proceed over time. The black arrows indicate when a factor impacts the target. The green dashed arrows show links between factors that have been identified as recommendations for future work.**

A diagram of a medical procedure

Description automatically generated

**TABLE 1: Broad Characteristics of Included Studies**

|  |  |  |  |
| --- | --- | --- | --- |
| **Publication Year** | | **Subdiscipline / Population** | |
| 1991-2000 | 10 | Primary Care / General Practice | 26 |
| 2001-2010 | 11 | Medical Students | 15 |
| 2011-2020 | 29 | Emergency Medicine | 10 |
| 2021- | 29 | Nursing | 6 |
|  |  | Pathology | 4 |
| **Methodology** | | Radiology | 4 |
| Textual Vignette | 44 | Other | 14 |
| Imaging Interpretation (e.g. ECG) | 20 |  |  |
| In Situ Questionnaires/Surveys | 13 |  |  |
| High-Fidelity Simulation | 2 | **Total** | **79** |

**TABLE 2: Full Table of Included Studies (Supplemental)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Author(s) | Title | Year | Discipline | Methodology | Measure of Confidence |
| Neugebauer, M.; Ebert, M.; Vogelmann, R. | A clinical decision support system improves antibiotic therapy for upper urinary tract infection in a randomized single-blinded study. | 2020 | Medical Doctors (Internal Medicine) | Fictive Paper Case | Confidence in Diagnosis (%) |
| Sanger, P. C.; Simianu, V. V.; Gaskill, C. E.; Armstrong, C. A. L.; Hartzler, A. L.; Lordon, R. J.; Lober, W. B.; Evans, H. L. | Diagnosing surgical site infection using wound photography: a scenario-based study. | 2017 | Members of Surgical Infection Society | 5 online scenarios | Confidence in diagnosis (1-10) |
| Levin, P. D.; Idrees, S.; Sprung, C. L.; Weissman, C.; Weiss, Y.; Moses, A. E.; Benenson, S. | Antimicrobial use in the ICU: Indications and accuracy - an observational trial. | 2012 | ICU | Observational in ICU | Certainty of presence of infection when starting patients on antimicrobials |
| Fernandez-Aguilar, Carmen; Martin-Martin, Jose Jesus; Minue Lorenzo, Sergio; Fernandez Ajuria, Alberto | Use of heuristics during the clinical decision process from family care physicians in real conditions. | 2022 | Primary Care | Real patients presenting with dyspnoea | 0-100% scale confidence in diagnosis |
| Heller, Rachael F; Saltzstein, Herbert D; Caspe, William B | Heuristics in medical and non-medical decision-making. | 1992 | Paediatric residents | Medical and non-medical problems | 0-100% scale confidence in diagnosis |
| Mackenzie, R; Dixon, A K; Keene, G S; Hollingworth, W; Lomas, D J; Villar, R N | Magnetic resonance imaging of the knee: assessment of effectiveness. | 1996 | Radiology | Observation of knee MRI patients | 5 point visual analogue confidence scale |
| Mamede, S.; Zandbergen, A.; De Carvalho-Filho, M.A.; Choi, G.; Goeijenbier, M.; Van Ginkel, J.; Zwaan, L.; Paas, F.; Schmidt, H.G. | Role of knowledge and reasoning processes as predictors of resident physicians' susceptibility to anchoring bias in diagnostic reasoning: A randomised controlled experiment | 2024 | Internal Medicine | 6 clinical vignettes (with vs without salient distracting features) | Confidence in diagnosis |
| Staal, J.; Speelman, M.; Brand, R.; Alsma, J.; Zwaan, L. | Does a suggested diagnosis in a general practitioners’ referral question impact diagnostic reasoning: an experimental study | 2022 | Internal Medicine | 6 cases formatted as GP referral letters | 0-10 confidence in diagnosis |
| Küper, A.; Lodde, G.; Livingstone, E.; Schadendorf, D.; Krämer, N. | Mitigating cognitive bias with clinical decision support systems: an experimental study | 2023 | Students and physicians | 6 clinical scenarios | 7 point scale confidence as well as likelihood of each differential |
| Oskay, A. | Evaluation of thoracic computed tomography interpretation by emergency medicine residents with regards to accuracy and confidence | 2023 | Emergency Medicine | 30 CT scans | 1-10 Confidence |
| Marx, G.; Koens, S.; Von Dem Knesebeck, O.; Scherer, M. | Age and gender differences in diagnostic decision-making of early heart failure: Results of a mixed-methods interview-study using video vignettes | 2022 | General Practice | Video vignettes | 0-100% certainty |
| Albrechtsen, S.S.; Riis, R.G.C.; Amiri, M.; Tanum, G.; Bergdal, O.; Blaabjerg, M.; Simonsen, C.Z.; Kondziella, D. | Impact of MRI on decision-making in ICU patients with disorders of consciousness | 2022 | ICU | Real patient cases in ICU | 5 point likert scale |
| Fawver, B.; Thomas, J.L.; Drew, T.; Mills, M.K.; Auffermann, W.F.; Lohse, K.R.; Williams, A.M. | Seeing isn’t necessarily believing: Misleading contextual information influences perceptual-cognitive bias in radiologists. | 2020 | Radiology | 16 deidentified musculoskeletal radiographic cases | 5 point likert scale |
| Hausmann, D.; Kiesel, V.; Zimmerli, L.; Schlatter, N.; von Gunten, A.; Wattinger, N.; Rosemann, T. | Sensitivity for multimorbidity: The role of diagnostic uncertainty of physicians when evaluating multimorbid video case-based vignettes | 2019 | General Practice / Emergency Medicine | Video vignettes | 0-100% scale confidence in diagnosis |
| Lambe, K.A.; Hevey, D.; Kelly, B.D. | Guided reflection interventions show no effect on diagnostic accuracy in medical students | 2018 | Medical Students | Fictional patient cases | 1-6 scale of confidence in original differential |
| Cairns, A.W.; Bond, R.R.; Finlay, D.D.; Breen, C.; Guldenring, D.; Gaffney, R.; Gallagher, A.G.; Peace, A.J.; Henn, P. | A computer-human interaction model to improve the diagnostic accuracy and clinical decision-making during 12-lead electrocardiogram interpretation | 2016 | GPs and Undergrads | ECG interpretation | Self-rated confidence 1-10 |
| Ben-Assuli, O.; Sagi, D.; Leshno, M.; Ironi, A.; Ziv, A. | Improving diagnostic accuracy using EHR in emergency departments: A simulation-based study | 2015 | Emergency Medicine | Simulated patient scenarios with actors for presenting complaints | 7 point likert scale of confidence in diagnosis |
| Maserejian, N.N.; Lutfey, K.E.; McKinlay, J.B. | Do physicians attend to base rates? prevalence data and statistical discrimination in the diagnosis of coronary heart disease: Physicians and coronary heart disease | 2009 | Primary Care | Vignettes of CHD | 0-100 scale of certainty |
| Abujudeh, H.H.; Kaewlai, R.; McMahon, P.M.; Binder, W.; Novelline, R.A.; Gazelle, G.S.; Thrall, J.H. | Abdominopelvic CT increases diagnostic certainty and guides management decisions: A prospective investigation of 584 patients in a large academic medical center | 2011 | Emergency Medicine | Real patients presenting with abdomen pain | 0-100% certainty |
| van Hout, H.P.J.; Vernooij-Dassen, M.J.; Stalman, W.A.B. | Diagnosing dementia with confidence by GPs | 2007 | General Practice | Observation of dementia patients | 4 point likert scale |
| Benvenuto-Andrade, C.; Dusza, S.W.; Hay, J.L.; Agero, A.L.C.; Halpern, A.C.; Kopf, A.W.; Marghoob, A.A. | Level of confidence in diagnosis: Clinical examination versus dermoscopy examination | 2006 | Dermatology | 20 pairs of clinical and dermoscopic images of lesions | 7 point likert scale of confidence in diagnosis (whether benign or malignant) |
| Dreiseitl, S.; Binder, M. | Do physicians value decision support? A look at the effect of decision support systems on physician opinion | 2005 | Dermatology | 25 dermoscopic lesions | 1-10 scale of benign to malignant, with higher values interpreted as confident? |
| Davis, D.P.; Campbell, C.J.; Poste, J.C.; Ma, G. | The association between operator confidence and accuracy of ultrasonography performed by novice emergency physicians | 2005 | Emergency Medicine | Ultrasound scanning | 1-10 scale of confidence of correct test identification |
| McKinlay, J.B.; Lin, T.; Freund, K.; Moskowitz, M. | The unexpected influence of physician attributes on clinical decisions: Results of an experiment | 2002 | Primary Care | 2 Video vignettes | Certainty adhering to diagnosis (% likelihood for each differential) |
| Friedman, C.; Gatti, G.; Elstein, A.; Franz, T.; Murphy, G.; Wolf, F. | Are clinicians correct when they believe they are correct? Implications for medical decision support | 2001 | Internal Medicine | 36 clinical cases split into 4 equal groups | Confidence in each diagnosis |
| Harvey, C.J.; Halligan, S.; Bartram, C.I.; Hollings, N.; Sahdev, A.; Kingston, K. | Evacuation proctography: A prospective study of diagnostic and therapeutic effects | 1999 | Radiology | Questionnaires after proctography in 50 patient cases | 1-10 confidence in diagnosis |
| Berner, E.S.; Maisiak, R.S. | Influence of case and physician characteristics on perceptions of decision support systems | 1999 | General Practice / Emergency Medicine | Written cases | 1-5 confidence |
| Hillson, S.D.; Connelly, D.P.; Liu, Y. | The Effects of Computer-assisted Electrocardiographic Interpretation on Physicians' Diagnostic Decisions | 1995 | Primary Care | ECG interpretation + vignettes (10) | 1-10 confidence in diagnosis |
| Calman, N.S.; Hyman, R.B.; Licht, W. | Variability in consultation rates and practitioner level of diagnostic certainty | 1992 | GP / Family practice | Observational of consultations | Confidence scored based on physician notes by coders |
| Sklar, D.P.; Hauswald, M.; Johnson, D.R. | Medical problem solving and uncertainty in the emergency department | 1991 | Emergency Medicine | Real patients, filling in questionnaire | Visual analogue scale for each differential |
| Brannon, Laura A; Carson, Kimi L | Nursing expertise and information structure influence medical decision making | 2003 | Nursing | Patient scenarios, manipulated information | 0-100% scale confidence in diagnosis |
| Clayton, Dayna A.; Eguchi, Megan M.; Kerr, Kathleen F.; Miyoshi, Kiyofumi; Brunyé, Tad T.; Drew, Trafton; Weaver, Donald L.; Elmore, Joann G. | Are Pathologists Self-Aware of Their Diagnostic Accuracy? Metacognition and the Diagnostic Process in Pathology | 2023 | Pathology | Diagnosis based on slides for microscopes | 6 point scale confidence in correct diagnosis |
| Friedman, Charles P.; Gatti, Guido G.; Franz, Timothy M.; Murphy, Gwendolyn C.; Wolf, Fredric M.; Heckerling, Paul S.; Fine, Paul L.; Miller, Thomas M.; Elstein, Arthur S. | Do physicians know when their diagnoses are correct?: Implications for decision support and error reduction | 2005 | Internal Medicine | 2-4 page medical synopses diagnosis | Likelihood to seek assistance to reach a diagnosis |
| Garbayo, Luciana S.; Harris, David M.; Fiore, Stephen M.; Robinson, Matthew; Kibble, Jonathan D. | A metacognitive confidence calibration (MCC) tool to help medical students scaffold diagnostic reasoning in decision-making during high-fidelity patient simulations | 2023 | Medical Students | High Fidelity Sim (Cases: Heart Failure, Respiratory Distress, DKA, heat exhaustion) | 7 point likert scale of confidence |
| Hautz, Wolf E; Schubert, Sebastian; Schauber, Stefan K; Kunina\_Habenicht, Olga; Hautz, Stefanie C; Kämmer, Juliane E; Eva, Kevin W | Accuracy of self\_monitoring: does experience, ability or case difficulty matter? | 2019 | Medical Students | 6 clinical scenarios | 10 point scale (0% to 100%) |
| Kämmer, Juliane E.; Schauber, Stefan K.; Hautz, Stefanie C.; Stroben, Fabian; Hautz, Wolf E. | Differential diagnosis checklists reduce diagnostic error differentially: A randomised experiment | 2021 | Medical Students / Emergency Medicien | 6 clinical scenarios | 10 point scale of confidence |
| Kostopoulou, Olga; Russo, J. Edward; Keenan, Greg; Delaney, Brendan C.; Douiri, Abdel | Information Distortion in Physicians’ Diagnostic Judgments | 2012 | Primary Care | 3 clinical scenarios each with 2 competing diagnoses | 21 point likelihood |
| Kourtidis, Ploutarchos; Nurek, Martine; Delaney, Brendan; Kostopoulou, Olga | Influences of early diagnostic suggestions on clinical reasoning | 2022 | Family Medicine | 2 patient scenarios with or without diagnostic suggestions | 10 point visual analogue scale of certainty |
| Krupat, Edward; Wormwood, Jolie; Schwartzstein, Richard M; Richards, Jeremy B | Avoiding premature closure and reaching diagnostic accuracy: some key predictive factors | 2017 | Internal Medicine | 4 complex vignettes | 1-100 scale of certainty |
| Leblanc, Vicki R.; Norman, Geoffrey R.; Brooks, Lee R. | Effect of a Diagnostic Suggestion on Diagnostic Accuracy and Identification of Clinical Features: | 2001 | Medical Students | Scenarios with photographs with clinical features |  |
| Redelmeier, Donald A.; Shafir, Eldar | The Fallacy of a Single Diagnosis | 2023 | Primary Care | Series of vignettes to diagnosis COVID | % likelhiood |
| Trueblood, Jennifer S.; Eichbaum, Quentin; Seegmiller, Adam C.; Stratton, Charles; O'Daniels, Payton; Holmes, William R. | Disentangling prevalence induced biases in medical image decision-making | 2021 | Medical Students / Imaging | Cell scans (cancer identification) |  |
| Yang, Huiqin; Thompson, Carl; Bland, Martin | The effect of clinical experience, judgment task difficulty and time pressure on nurses’ confidence calibration in a high fidelity clinical simulation | 2012 | Nursing | High Fidelity Sim | 0-100 confidence |
| Yang, Huiqin; Thompson, Carl | Nurses’ risk assessment judgements: a confidence calibration study: Nurses’ risk assessment judgements | 2010 | Nursing | Risk assessment vignettes | 0-100 confidence |
| Eva, Wayne Kevin | The influence of differentially processing evidence on diagnostic decision-making | 2001 | Medical Students | Presenting case histories | Probability ratings |
| Tabak, Nili; Bar-Tal, Yoram; Cohen-Mansfield, Jiska | Clinical decision making of experienced and novice nurses | 1996 | Nursing | Two scenarios | 0-100% scale confidence in diagnosis |
| Brezis, Mayer; Orkin-Bedolach, Yael; Fink, Daniel; Kiderman, Alexander | Does Physician's Training Induce Overconfidence That Hampers Disclosing Errors? | 2019 | Cross Disciplines | Survey with clinical vignette of a girl with urinary infection and penicillin allergy | 5 point likert scale |
| Mann, Doug | The Relationship between Diagnostic Accuracy and Confidence in Medical Students. | 1993 | Medical Students / Cardiac | ECG slides - Classification of cardiac dysrhythmias | 11 point scale, 0-100% |
| Schoenherr, Jordan Richard; Waechter, Jason; Millington, Scott J | Subjective awareness of ultrasound expertise development: individual experience as a determinant of overconfidence | 2018 | Cardiology | Cardiac ultrasound case studies | 6 point scale confidence in correct identification |
| Meyer, Ashley ND; Payne, Velma L; Meeks, Derek W; Rao, Radha; Singh, Hardeep | Physicians’ diagnostic accuracy, confidence, and resource requests: a vignette study | 2013 | Internal Medicine | 4 case vignettes | 0-10 confidence in diagnosis (for each) |
| Wood, Greg; Batt, Jeremy; Appelboam, Andrew; Harris, Adrian; Wilson, Mark R. | Exploring the Impact of Expertise, Clinical History, and Visual Search on Electrocardiogram Interpretation\*\* | 2014 | ED | ECG traces and eye tracking | 1-10 confidence in diagnosis |
| Bergl, P. A.; Shukla, N.; Shah, J.; Khan, M.; Patel, J. J.; Nanchal, R. S. | Factors influencing diagnostic accuracy among intensive care unit clinicians – an observational study\*\* | 2024 | ICU | Surveys during ICU | 5 point likert scale |
| Frey, J.; Braun, L. T.; Handgriff, L.; Kendziora, B.; Fischer, M. R.; Reincke, M.; Zwaan, L.; Schmidmaier, R. | Insights into diagnostic errors in endocrinology: a prospective, case-based, international study\*\* | 2023 | Endocrinology | 5 patient cases | 1-10 confidence in diagnosis |
| van Sassen, C.; Mamede, S.; Bos, M.; van den Broek, W.; Bindels, P.; Zwaan, L. | Do malpractice claim clinical case vignettes enhance diagnostic accuracy and acceptance in clinical reasoning education during GP training?\*\* | 2023 | General Practice | Cases with and without malpractice claim information | 0-100 confidence |
| Gupta, A. B.; Greene, M. T.; Fowler, K. E.; Chopra, V. I. | Associations Between Hospitalist Shift Busyness, Diagnostic Confidence, and Resource Utilization: A Pilot Study\*\* | 2023 | Doctors | Questionnaire during shift | 1-10 Confidence |
| Kuhn, J.; Mamede, S.; van den Berg, P.; Zwaan, L.; van Peet, P.; Bindels, P.; van Gog, T. | Learning deliberate reflection in medical diagnosis: does learning-by-teaching help?\*\* | 2023 | General Practice | 10 written cases | 1-9 confidence |
| Staal, J.; Katarya, K.; Speelman, M.; Brand, R.; Alsma, J.; Sloane, J.; Van den Broek, W. W.; Zwaan, L. | Impact of performance and information feedback on medical interns' confidence–accuracy calibration\*\* | 2023 | Medical Students | X-ray interpretation | 0-10 confidence in diagnosis |
| Keene, T.; Pammer, K.; Lord, B.; Shipp, C. | Dispatch information affects diagnosis in paramedics: an experimental study of applied dual-process theory\*\* | 2022 | Paramedics | Vignettes in two parts with an intuitive impression and then diagnosis, with or wtihout secondary task distraction | 4 point scale |
| Tio, R. A.; Filho, M. A. C.; de Menezes Mota, M. F.; Santanchè, A.; Mamede, S. | The Effect of Information Presentation Order on Residents’ Diagnostic Accuracy of Online Simulated Patients With Chest Pain\*\* | 2022 | Cardiology | 12 clinical cases presented in 2 diagnostic rounds (history and EKG) | 0-100 confidence |
| Kuhn, J.; van den Berg, P.; Mamede, S.; Zwaan, L.; Bindels, P.; van Gog, T. | Improving medical residents’ self-assessment of their diagnostic accuracy: does feedback help?\*\* | 2022 | General Practice | 12 cases | 1-9 confidence |
| Katz, I.; O'Brien, B.; Clark, S.; Thompson, C. T.; Schapiro, B.; Azzi, A.; Lilleyman, A.; Boyle, T.; Espartero, L. J. L.; Yamada, M.; Prow, T. W. | Assessment of a Diagnostic Classification System for Management of Lesions to Exclude Melanoma\*\* | 2021 | Pathology / Dermatology | 217 Lesions prepared and stained from patients | 1-5 confidence |
| Staal, J.; Alsma, J.; Mamede, S.; Olson, A. P. J.; Prins-van Gilst, G.; Geerlings, S. E.; Plesac, M.; Sundberg, M. A.; Frens, M. A.; Schmidt, H. G.; Van den Broek, W. W.; Zwaan, L. | The relationship between time to diagnose and diagnostic accuracy among internal medicine residents: a randomized experiment\*\* | 2021 | Internal Medicine | 8 clinical case | 0-100% scale confidence that diagnosis was correct |
| Thorlacius-Ussing, G.; Bruun, M.; Gjerum, L.; Frederiksen, K. S.; Rhodius-Meester, H. F. M.; Van Der Flier, W. M.; Waldemar, G.; Hasselbalch, S. G.; Nobili, F. | Comparing a Single Clinician Versus a Multidisciplinary Consensus Conference Approach for Dementia Diagnostics\*\* | 2021 | Neurology | Real patient evaluations | 0-100 Visual analogue scale |
| Chen, Y.; Nagendran, M.; Kilic, Y.; Cavlan, D.; Feather, A.; Westwood, M.; Rowland, E.; Gutteridge, C.; Lambiase, P. D. | The diagnostic certainty levels of junior clinicians: A retrospective cohort study\*\* | 2021 | Emergency Medicine | Real patient cases deindentified | Qualitative labels translated into % |
| Li, S.; Zheng, J.; Lajoie, S. P. | The relationship between cognitive engagement and students’ performance in a simulation-based training environment: an information-processing perspective\*\* | 2020 | Medical Students | Two patient cases shown | 0-100% scale confidence in diagnosis |
| Chartan, C.; Singh, H.; Krishnamurthy, P.; Sur, M.; Meyer, A.; Lutfi, R.; Stark, J.; Thammasitboon, S. | Isolating red flags to enhance diagnosis (I-RED): An experimental vignette study\*\* | 2019 | Paediatric residents | Paediatric cases | 1-10 Confidence |
| Cleary, T. J.; Konopasky, A.; La Rochelle, J. S.; Neubauer, B. E.; Durning, S. J.; Artino, A. R. | First-year medical students’ calibration bias and accuracy across clinical reasoning activities\*\* | 2019 | Medical Students | Some of kind of virtual patient sim | Estimations of performance |
| Costa Filho, G. B.; Moura, A. S.; Brandão, P. R.; Schmidt, H. G.; Mamede, S. | Effects of deliberate reflection on diagnostic accuracy, confidence and diagnostic calibration in dermatology\*\* | 2019 | Medical Students / dermatology | 12 dermatological images | 0-100% scale confidence in diagnosis |
| Nederhand, M. L.; Tabbers, H. K.; Splinter, T. A. W.; Rikers, R. M. J. P. | The Effect of Performance Standards and Medical Experience on Diagnostic Calibration Accuracy\*\* | 2018 | General Medicine | 6 clinical cases | Confidence in diagnosis (1-10) |
| Pusic, M. V.; Chiaramonte, R.; Gladding, S.; Andrews, J. S.; Pecaric, M. R.; Boutis, K. | Accuracy of self-monitoring during learning of radiograph interpretation\*\* | 2015 | Radiology / medical students | Ankle radiographs | Qualitative labels |
| Hautz, W. E.; Kämmer, J. E.; Schauber, S. K.; Spies, C. D.; Gaissmaier, W. | Diagnostic performance by medical students working individually or in teams\*\* | 2015 | Medical Students | 6 simulated cases of respiratory distress | 1-10 Confidence |
| Soares, W. E.; Price, L. L.; Prast, B.; Tarbox, E.; Mader, T. J.; Blanchard, R. | Accuracy screening for ST elevation myocardial infarction in a task-switching simulation\*\* | 2019 | Emergency Medicine | ECG interpretation | 1-5 confidence |
| Blissett, S.; Sibbald, M.; Kok, E.; van Merrienboer, J. | Optimizing self-regulation of performance: is mental effort a cue? \*\* | 2018 | Internal Medicine | ECG interpretation | 0-100% certainty |
| Adderley, U. J.; Thompson, C. | Confidence and clinical judgement in community nurses managing venous leg ulceration – A judgement analysis\*\* | 2017 | Nursing | 110 (!) clinical scenarios | 1-10 confidence in diagnosis |
| Feyzi-Behnagh, R.; Azevedo, R.; Legowski, E.; Reitmeyer, K.; Tseytlin, E.; Crowley, R. S. | Metacognitive scaffolds improve self-judgments of accuracy in a medical intelligent tutoring system\*\* | 2014 | Pathology / Dermatology | Dermatoligical slides | 6 point scale confidence in correct diagnosis |
| Hageman, M. G. J. S.; Bossen, J. K. J.; King, J. D.; Ring, D. | Surgeon confidence in an outpatient setting\*\* | 2013 | Surgery | Real patients visiting surgery | 5 point likert scale |
| Crowley, R. S.; Legowski, E.; Medvedeva, O.; Reitmeyer, K.; Tseytlin, E.; Castine, M.; Jukic, D.; Mello-Thoms, C. | Automated detection of heuristics and biases among pathologists in a computer-based system\*\* | 2013 | Pathology / Dermatology | Dermatoligical slides | Scale from -1 to +1 |
| Yang, H.; Thompson, C.; Bland, M. | Effect of improving the realism of simulated clinical judgement tasks on nurses' overconfidence and underconfidence: Evidence from a comparative confidence calibration analysis\*\* | 2012 | Nursing | Both paper and high fidelity sim scenarios | 0-100 confidence |
| Gruppen, L; Wolf, F; Billi, J | Information Gathering and Integration as Sources of Error in Diagnostic Decision Making\*\* | 1991 | Primary Care | Vignettes deciding between two diagnostic alternatives | Probability correct |

Studies marked with \*\* next to their title were included via citation tracking