Data Extraction Table with Examples

Review Matrix on the Use of Infrared Thermographic Imaging in Medical Diagnostics: a Scoping Review

Reference & Purpose						**Study Design & Participants**				**Content & Results**						**Conclusion & Comment**	
RefID only for internal use	**Source** Database DOI	**Author(s) Title**	**Publication: Type Year Jounal**	**Origin: Research & Sample**	**Aims / Purpose**	**#**	**Characteristics**	**Study and Sample Design, Setting**	**Health Condition**	**Year Collected**	**Methodology** (technical and environmental) & Device	**(Diagnostic) Purpose** e.g. Screening	**Examination / Application**	**Comparator**	**Outcome(s)**	**Key Findings** related to review objectives	**Author's Conclusion**	**Reviewer's Comments**
		Aggarwal N, Garg M, Dwarakanathan V et al. Diagnostic accuracy of non-contact infrared thermometers and thermal scanners: a systematic review and meta-analysis.	Journal Article **2008** *J Travel Med*	Research: India, USA Sample: International (15 countries)	Investigate diagnostic accuracy of non-contact infrared thermometers and thermal scanners for the detection of fever	19 Studies in meta-analysis, 12,759 patients with 13,874 readings	Neonates, children, adults	Systematic review and Meta-analysis Studies on assessment of diagnostic accuracy of non-contact infrared thermometers and thermal scanners. Setting: inpatient, outpatient / airport, unclassified	Unclear, possible fever	2004 - 2020	Contactless infrared thermal imaging systems for temperature measurements. Handheld non-contact infrared thermometers (NCITs) and thermal scanners	Thermal screening during a pandemic	Fever measured by non-contact infrared devices	Fever measured by conventional thermometer (tympanic, axillary, rectal, oral)	NCITs sensitivity 0.781 (95%CI 0.628–0.882) and specificity 0.926 (95%CI 0.799–0.975) Thermal scanners sensitivity 0.818 (95%CI 0.758–0.866) and specificity 0.923 (95%CI 0.823–0.969)	NCITs and thermal scanners are validated instruments for mass screening of fever	Handheld NCITs and thermal scanners have a reasonable sensitivity and specificity in detecting fever. However,	
		Jesenšek Papež B, Palfy M, Turk, Z. Infrared Thermography Based on Artificial Intelligence for Carpal Tunnel Syndrome Diagnosis.	Journal Article **2008** *J Int Med Res*	Slovenia	Improve the diagnosis of CTS with thermography using a computer-based system employing artificial neural networks (ANN) to analyse the images	30 pathological, 26 healthy, 112 images	Adult (26-71 years, 15 females, 8 males) patients with confirmed CTS without previous surgery, volunteers (28-66 years, 8 females, 5 males) confirmed with no CTS	Observational Study Patients referred by general practitioners and specialists to the Department of Physical Medicine and Rehabilitation, Medical Centre Maribor,	Carpal tunnel syndrome (CTS)	n.a.	Neo Thermo TVS-700 camera (NEC Avio Infrared Technologies, Tokyo, Japan) resolution 320 × 240 pixels, standard distance 80 cm, ambient temperature 23±1 °C; relative humidity 56±8%). Software application based on ANN	Computer aided diagnosis of carpal tunnel syndrome	Dorsal and palmar thermographic imaging of CTS confirmed by electro-myography	Dorsal and palmar thermographic imaging of no CTS confirmed by electro-myography	The classification success rate for the dorsal side of the hand was in mean 80.6%. Palmar segments had no beneficial influence on the outcome	CTS with computer aided thermographic diagnostic is a promising field for further research	Relatively high success rates give rise to optimism, especially when there is still plenty of scope for method improvement	Temperature of each individual segment normalized according to the mean temperature of the whole hand facilitates inter-individual comparisons. Computer aided diagnosis can be resource efficient.