

Complementary Tests in the Diagnosis of Diseases at the Level of General Medicine

Jose Luis Turabian*

Specialist in Family and Community Medicine Health Center Santa Maria de Benquerencia. Regional Health Service of Castilla la Mancha (SESCAM), Toledo, Spain.

***Corresponding Author:** Jose Luis Turabian., Specialist in Family and Community Medicine Health Center Santa Maria de Benquerencia. Regional Health Service of Castilla la Mancha (SESCAM), Toledo, Spain.

Received Date: June 01, 2026; Accepted Date: June 16, 2026; Published Date: July 01, 2026

Citation: Jose L. Turabian, (2026), Complementary Tests in the Diagnosis of Diseases at the Level of General Medicine, *Clinical Trials and Clinical Research*,5(4); DOI:10.31579/2834-5126/143

Copyright: © 2026, Jose Luis Turabian. This is an open access article distributed under the creative commons' attribution license, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

In other words, the administration is transferring this possibility of expanding the range of tests to GP practices. Hospital managers and doctors believe this will reduce waiting lists. There is also another alternative way to access testing: hospital doctors order tests for the patients they treat and refer them to their GP to receive the results and only send them back if they are abnormal.

Keywords: laboratory radiology test; clinical reasoning; technology; diagnostic techniques and procedures / trends; general practice

Introduction

Diagnostic tests are essential for detecting diseases in patients, establishing a diagnosis, and monitoring the response to therapy. However, the number of tests ordered by general practitioners has tripled in the last 20 years [1, 2]. This overuse of tests is a recognized problem, but clinicians often lack information about the volume of their test orders. In the absence of data, clinicians often rely on self-perception to justify their test ordering practices. Despite this lack of data, healthcare professionals seem to recognize that over-testing is a problem, but few identify themselves as frequent users of tests. Furthermore, a significant percentage of physicians did not consider the cost or the patient's discomfort when ordering tests. These findings highlight the challenges of reducing over-testing in the current era [3]. One of the reasons for this increase in the number of diagnostic tests ordered by physicians is the growing aging population with complex healthcare needs. Furthermore, over the past 20 years, many secondary care services have been transferred to primary care [4]. In this context, despite the increase in tests performed, it is common to hear requests from some general practitioners (GPs) for access to more complementary tests, especially imaging tests. In response to this demand, for example, the UK government recently promised that GPs will be able to order more tests directly, such as MRIs and CT scans. This is expected to speed up the diagnostic process, as the relevant investigations will already have been carried out by the time the patient sees the specialist, and if no abnormality is found, it might be possible to reassure the patient without requiring a hospital appointment [5]. In other words, the administration is transferring this possibility of expanding the range of tests to GP practices. Hospital managers and doctors believe this will reduce

waiting lists. There is also another alternative way to access testing: hospital doctors order tests for the patients they treat and refer them to their GP to receive the results and only send them back if they are abnormal. Similarly, other hospital specialists require that all patients referred from general practice have undergone laboratory and imaging tests.

In this situation, several considerations are appropriate:

1. A fundamental classical advice seems to be forgotten: The GP has to ask himself three questions when considering ordering a complementary test: A) Will a positive result introduce differences in decision-making for that patient?; B) Will a negative result help to reassure the patient?; C) Are there less expensive alternatives to make a decision for that patient? [6, 7]. Detecting a disease is only important if it can be treated. And I go further: early detection is only important if early treatment offers better results than late treatment [8].
2. Laboratory, radiology, functional and nuclear medicine tests are affordable tools in modern medicine. However, concern about the overuse of these techniques has been growing. Although the traditional diagnostic process consists of the sequence of history taking, physical examination, and complementary tests, it has long been known that the final diagnosis is made in most cases by interview or anamnesis; Physical laboratory examination and complementary tests achieve the diagnosis in only 20% of patients [9, 10].

3. Approximately half of the diagnostic tests ordered in primary care are for the monitoring of chronic diseases [11]. However, routine testing is supported by limited evidence, and many tests may be unnecessary. Chronic disease monitoring is largely based on expert opinion. Due to a lack of robust evidence on optimal monitoring strategies and testing frequency, guidelines are unclear and incomplete. This uncertainty could explain the variation in testing observed in the UK between GP practices and regions. The lack of confidence in how to respond to abnormal results underscores the urgent need for robust evidence on optimal testing practices and for clear and unambiguous recommendations. Uncertainty surrounding optimal testing practices has led to overuse of tests, resulting in wasted resources, increased workloads for GPs, and potential harm to patients.
4. Reports have demonstrated a high prevalence of inappropriate and avoidable testing. Excessive testing increases patient discomfort, can lead to false-positive results, and wastes healthcare resources [9, 12-15]. If a test was requested without a clear indication and the result is positive, it is important to bear in mind the potential pitfalls associated with that test [16]. Additional test results may be "mildly abnormal": mild enough that the GP is unwilling to order another test, but abnormal enough that they feel uncomfortable ignoring them [17].
5. GPs and hospital physicians have different concerns: while hospital physicians try to avoid false negatives, GPs are concerned about false positives [18].
6. Furthermore, it is essential to know and consider the patient's opinion regarding any additional tests, so that an informed and shared decision can be made. Many patients continue to ignore their symptoms and postpone testing. These individuals had dismissed tests despite the potential harm they faced. When the physician tries to understand why they made the decisions they did, they rarely find their reasons rational. But when the physician is the patient, they often reconsider this bias. There is something quite rational and profoundly human about remaining in a world that preserves the possibility that what you love remains alive and unaltered, rather than entering a world that may contain the certainty that it does not. "As long as it remains unopened, a box could contain a live cat." A test is never just a test. Each one contains a hammer hovering over a vial of poison [19]. But other people often want to undergo diagnostic tests even after being informed that they are not clinically beneficial and carry risks. These preferences are little known, but they could be related to the belief that any information about tests is valuable. They value diagnostic tests for the perceived peace of mind, the understanding of their own bodies, and their use in medical decision-making, despite having been told the facts that demonstrate that certain diagnostic tests are ineffective or harmful. In this segment of the population, messages about the risks of tests should focus on broader beliefs and address psychological factors that undermine the effect of information about risks and benefits [20].
7. Routine office visits for preventive health screenings are designed to identify asymptomatic diseases in their early, treatable stages and to influence healthy habits. The frequency with which diagnostic tests and procedures are performed, the recommendations for which are not found in asymptomatic individuals, and the associated costs of these tests and procedures are high: between 5% and 43% of cases. This amounts to direct annual costs of hundreds or billions of dollars in the US [3, 21].
8. Incidental findings on screening and diagnostic tests are frequent and can lead to cascades of tests and treatments of uncertain value. By some estimates, up to 52% of radiology and laboratory tests produce incidental findings, and these rates are likely to increase with advances in technology. In some cases, further evaluation of these findings may reveal a clinically important and intervenable discovery, such as an early-stage cancer first detected on a chest x-ray that would have resulted in death if left untreated. More often, subsequent evaluations may find nothing significant, such as an electrocardiogram abnormality that triggers a stress test and cardiac catheterization that ultimately reveals no cardiovascular disease. These cascades of care carry substantial potential for harm: patients may experience anxiety and additional treatment risks in addition to monetary costs and inconveniences, and physicians may feel distressed, conflicted, or overwhelmed by extra work [22].
9. Excessive testing increases iatrogenic harm. Especially for tests using ionizing radiation, there are the elements of danger in exposing our patients to radiation. Physicians are referring their patients for so many imaging tests that up to 2% of cancers may be attributable to radiation exposure during computed tomography [17]. Computed tomography scans with cumulative doses of about 50 mGy received during childhood can nearly triple the risk of leukemia, and cumulative doses of about 60 mGy can triple the risk of brain cancer, according to a retrospective cohort study of patients who were younger than 22 when they received CT scans and had no previous cancer diagnoses [23, 24]. In summary, the demand for unlimited access to ancillary tests from the primary care/GP level is an indicator of the biological tendency in medicine and is contrary to the holistic, comprehensive, systemic, and biopsychosocial approach characteristic of GPs [7, 25, 26]. The way we evaluate and incorporate information about requests for ancillary tests is not always done reflectively in practice, and the quantity and quality of these tests define a certain type of clinical professional [27]. Furthermore, an ancillary test should only be performed when its result has a decisive influence on the subsequent management of the problem. GPs must approach imaging and ancillary tests with humility. The healthcare system must avoid a "wild or reckless" model where tests are requested in any diagnostic direction, including for health problems that, for certain reasons, are not intended to be treated [28]. When performing diagnostic procedures of uncertain value, no large-scale randomized trial has demonstrated that the results of such tests in these circumstances prolong life, improve quality of life, prevent major clinical events, or reduce long-term medical costs [17]. Therefore, over-testing of patients is a major problem in clinical medicine that should be addressed through training [9]. There is a constant, dramatic need for each of us to hone our clinical reasoning skills and recognize the ongoing challenges posed by the integration of artificial intelligence and algorithmic practice into the management of the individual patient, whether seated or lying before us. Alongside the physician's educational and reflective needs, in this context, I suggest that a high number of ancillary tests in medicine, especially in general practice, for

example, above the average for a given area, should be considered an indicator of medical malpractice.

References

- O'Sullivan JW, Stevens S, Hobbs FDR, Salisbury C, Little P, Goldacre B, et al. (2018). Temporal trends in use of tests in UK primary care, 2000-15: retrospective analysis of 250 million tests. *BMJ*;363: k4666.
- Elwenspoek MMC, Mann E, Alsop K, et al. (2020). GP's perspectives on laboratory test use for monitoring long-term conditions: an audit of current testing practice. *BMC Fam Pract*; 21, 257.
- Bodley T, Kwan JL, Matelski J, et al. (2019). Self-reported test ordering practices among Canadian internal medicine physicians and trainees: a multicenter cross-sectional survey. *BMC Health Serv Res*; 19, 820.
- Baird B, Charles A, Honeyman M, Maguire D, Das P. (2016). Understanding pressures in general practice. *Kings Fund*;1–100.
- Salisbury H. (1992). Is GPs' access to scans just another transfer of work to general practice? *BMJ*. 2025; 388 :r12.
- Editorial. Negative investigations. *Lancet*; 340(8813): 213.
- Turabian JL. (1995). [Notebooks of Family and Community Medicine. An introduction to the principles of Family Medicine]. Madrid: Díaz de Santos.
- Wilson FP. (2025). Treat AFib 'Diagnosed' by Smartwatch? *Medscape*.
- Gouzi F, Hédon C, Blervaque L, et al. (2019). Interactive whiteboard use in clinical reasoning sessions to teach diagnostic test ordering and interpretation to undergraduate medical students. *BMC Med Educ*; 19: 424.
- Hampton JR, Harrison MJ, Mitchell JR, Prichard JS, Seymour C. (1975). Relative contributions of history-taking, physical examination, and laboratory investigation to diagnosis and management of medical outpatients. *BMJ*; 2(5969): 486-9.
- Public Health England. (2017). The 2nd Atlas of Variation in NHS Diagnostic Services. England reducing unwarranted variation to improve health outcomes and value.;1:178.
- Watson J, Salisbury C, Whiting P, Banks J, Pyne Y, Hamilton W. (2019). Added value and cascade effects of inflammatory marker tests in UK primary care: a cohort study from the clinical practice Research Datalink. *Br J Gen Pract*;69(684):e470–e8.
- Hobbs FDR, Bankhead C, Mukhtar T, Stevens S, Perera-Salazar R, Holt T, et al. (2016). Clinical workload in UK primary care: a retrospective analysis of 100 million consultations in England, 2007-14. *Lancet*;387(10035):2323–2330.
- Petrie KJ, Sherriff R. (2014). Normal diagnostic test results do not reassure patients. *Evid Based Med*;19(1):14.
- (2014). Unnecessary Tests and Procedures In the Health Care System. What Physicians Say About. The Problem, the Causes, and the Solutions. *Results from a National Survey of Physicians*.
- Suresh E. (2019). Laboratory tests in rheumatology: A rational approach. *Cleveland Clinic Journal of Medicine*;86(3):198-210
- Lauer MS. (2009). Elements of danger--the case of medical imaging. *N Engl J Med*; 361(9): 841-843.
- Turabian JL. (2024). Diagnosis from an Epidemiological Point of View. The Example of COVID-19. *Arch Community Med Public Health*; 10(4): 018-021.
- Earnest M. (2025). Schrödinger's Cancer. *N Engl J Med*;392 (3):214-215.
- Rozbroj T, Hoo MH, Gorelik A, O'Connor DA, Buchbinder R. (2026). Why Most Australians Consider It Valuable to Find Harmless Abnormalities with Diagnostic Tests: A Mixed-Methods Study. *Medical Decision Making*;0(0).
- Merenstein D, Daumit GL, Powe NR. (2006). Use and costs of nonrecommended tests during routine preventive health exams. *Am J Prev Med*;30(6):521-527.
- Ganguli I, Simpkin AL, Lupo C, et al. Cascades of Care After Incidental Findings in a US National Survey of Physicians. *JAMA Netw Open*. 2019;2(10): e1913325.
- Bath C. (2012). CT Scans in Childhood Can Triple Risk of Leukemia and Brain Cancer Later in Life, Study Finds. *ASCO post*.
- Pearce MS, Salotti JA, Little MP, et al. (2016). Radiation exposure from CT scans in childhood and subsequent risk of leukaemia and brain tumours: A retrospective cohort study. *Lancet*; 380:499-505.
- Russell G. Holism and holistic. *BMJ*; 353:i1884.
- Turabian JL, Perez Franco B. (2019). [Individualized medical care with a community orientation - Contextualized care: the figure is the background]. *Revista Clínica Electrónica en Atención Primaria*.
- Mandell BF. The tests that we order define us. *Cleve Clin J Med*;86(3):150
- Turabian JL. Wild west style. (2025). scans and other supplementary evidence: "have a look at those for me, old man, and tell me if one of them's a duck." Rapid response to: Helen Salisbury: Is GPs' access to scans just another transfer of work to general practice? *BMJ*;388:r12.

Ready to submit your research? Choose ClinicSearch and benefit from:

- fast, convenient online submission
- rigorous peer review by experienced research in your field
- rapid publication on acceptance
- authors retain copyrights
- unique DOI for all articles
- immediate, unrestricted online access

At ClinicSearch, research is always in progress.

Learn more <http://clinicsearchonline.org/journals/clinical-trials-and-clinical-research>



© The Author(s) 2026. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated in a credit line to the data.