



## Letter to the Editor

### Why did you order this test?

 Musa Yılmaz

*Hitit University Faculty of Medicine, Department of Medical Biochemistry, Çorum, Turkey*

Dear Editor,

I would like to share my concerns about the increase in the number of laboratory tests in healthcare services in recent years and the harms of unnecessary test orderings. This situation causes significant problems both in the health system and in patient care. Over the past years, a noticeable increase in the number of laboratory tests has been observed. According to a study conducted in Turkey, there was a continuous increase in the use of laboratory tests between 2015 and 2019, and this increase has serious impacts on hospital costs (1). Additionally, a study in 2023 shows that using the ARIMA (Auto Regressive Integrated Moving Average) model to forecast laboratory expenditures, it is expected to reach 380 billion Turkish Liras in 2023, 538 billion Turkish Liras in 2024, and 694 billion Turkish Liras in 2025 (2). Various reasons contribute to this increase. One is that advancements in laboratory technologies enable faster and more comprehensive tests, which can also lead to an increase in unnecessary test orderings. Another reason is that physicians tend to order more tests to avoid possible legal issues, which leads to an increase in unnecessary test orderings (3). Unnecessary laboratory test orderings have various adverse effects on the health system and patients.

To discuss them under main headings:

Cost increase; unnecessary tests cause significant costs in the health system. A study in Turkey shows that unnecessary laboratory tests cost public hospitals billions of Turkish Liras annually (1). These costs strain the health budget and hinder the effective use of resources. This situation is similar in many countries.

Patient safety and health risk; unnecessary tests can create additional stress and health risks for patients. False positive results can expose patients to unnecessary treatments and further tests, posing a serious threat to patient safety (4).

Resource waste; the effective use of health resources is becoming increasingly important. Unnecessary test orderings waste the time of healthcare staff and laboratory resources (4).



Patient satisfaction; unnecessary tests can undermine patients' trust in the health system. Patient satisfaction should be ensured by conducting appropriate and necessary tests.

Ethical issues; unnecessary test orderings also raise ethical issues. Ethical medical practices require avoiding unnecessary interventions.

In conclusion, the increase in the number of laboratory tests and the harms of unnecessary test orderings lead to significant problems in the health system and patient care. To prevent these problems: physicians and health professionals should be more careful and aware when ordering tests, health authorities should create guidelines and protocols to prevent unnecessary test orderings, patients should be informed and their awareness should be raised to avoid unnecessary tests. I wrote this article to highlight this important issue and to improve the quality of healthcare services.

**Keywords:** Laboratory, test cost, test ordering, unnecessary test.

**Conflicts of interest:** The authors declare no conflicts of interest.

**Financial support and sponsorship:** None.

**Peer-review:** Externally peer-reviewed.

**Authorship contributions:** Concept, design, supervision, funding, materials, data collection and/or processing, analysis and/or interpretation, literature search, writing, and critical review: MY.

## References

1. Küçük A. Use of laboratory tests of public hospitals and cost analysis in Turkey. *Turkish Journal of Clinics and Laboratory*. 2021;3:315-23.
2. Yücel MH, Çalışkan Z. The Forecasting of Health Expenditure in Turkey Using ARIMA Method. *Fiscaoeconomia*. 2023;7:552-80.
3. Plebani M. Defensive medicine and diagnostic testing. *Diagnosis (Berl)*. 2014;1:151-4.
4. Chauvin A, Lang E, Bossuyt P. When less is more: mitigating the harms and risks of over-testing through shared decision making. *CJEM*. 2022;24:126-7.