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γ-Glutamyl transpeptidase (5-L-glutamyl-peptide: amino acid 5-glutamyl transferase; EC 2.3.2.2; abbreviated GGT), is a plasma membrane-associated enzyme that is located on the outer surface of the cells of secretory tissues [1]. It plays a central role in the metabolism of glutathione that is widely in various mammals [2]. e enzyme catalyzes the degradation of the extracellular glutathione in a well identi ed cycle known as the γ-glutamyl cycle. In addition, GGT plays a role in the formation of mercapturic acid and the slow reacting substance, leukotriene [3,4]. is enzyme in serum from normal subjects and liver disease patients was separated into multiple molecular forms, which di er in electric charge and relative molecular mass but have similar kinetic behavior [5]. GGT is usually assayed by using γ-glutamyl *p*-nitroanilide as a synthetic γ-glutamyl donor substrate. It is preferred more than the natural substrate glutathione due to the greater analytical convenience of the former compared to glutathione and the much greater solubility of the synthetic substrate [6].

It is generally agreed that clinically signi cant elevations of the catalytic activity of serum GGT associated almost exclusively with hepatobilliary disease [6], although the highest activity of GGT is found in the kidney [7]. us, measurements of total serum GGT activity and the multiple isoforms of serum GGT in normal and disease as well, were considered to be liver-speci c [8,9]. It was found that serum GGT in advanced cases of *Schistosma mansoni* infection was signi cantly increased [10] due to its e ect on the liver. e alteration of GGT activity in schistosomiasis might be attributed to enzyme regulation and modi cations [11]. e signi cant change of GGT in the liver may be an indication of altered degradation of glutathione and the formation of γ-glutamyl-amino acids [1]. It was reported that glutathionuria, growth failure and infertility are detected in genetic GGT de cient-mice [12]. Moreoverr7.9(erh)4(e)0.5(l4.9(d in g)8(86)a5)0.5r11(u)17o(e det)6(MCI(a)3(s)-8(e [6], a)-5(l)127i], a)-5(l)1smTw T*(f(ic n)]TD(t)-5(r)-6(i)4(b)-a)9(n)4(