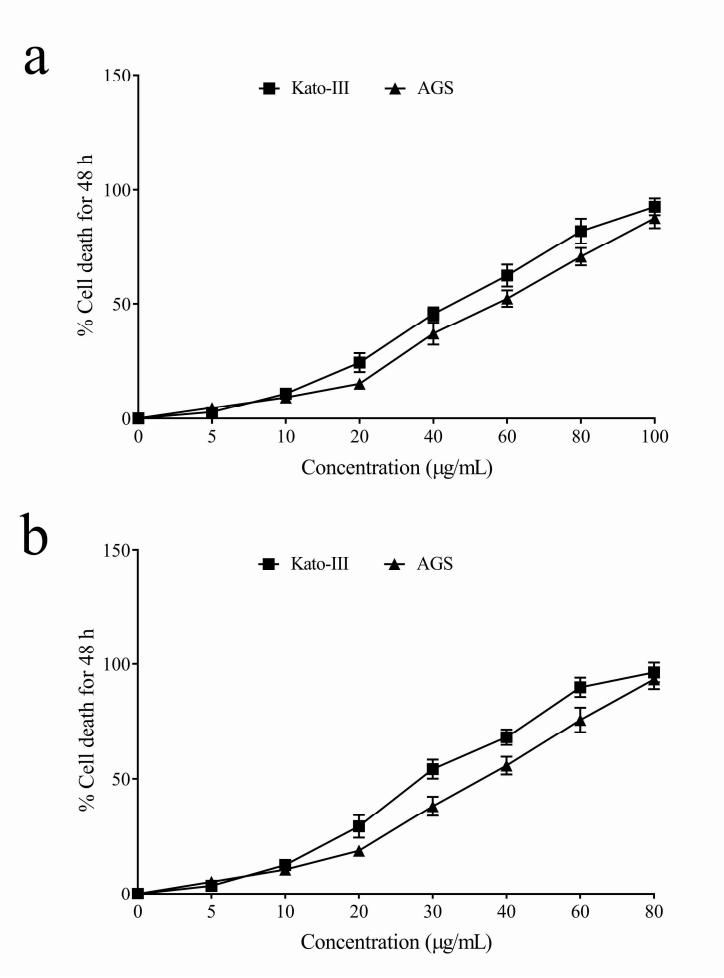
Supplementary Material S1 Composition of the polyphenols in methanolic extract of *Azima tetracantha* leaves analyzed by LC-MS

Sl. No.	Retention time (mins)	Compounds identified
1	2.6	Ferulic acid
2	4.2	p-Coumaric acid
3	5.5	Hydroxycinnamic acid derivative
4	6.7	4-Hydroxycinnamic acid
5	8.9	7-O-methyl quercetin
6	10.2	Methyl-O-quercetin glucoside
7	11.6	Quercetin 3-O-glucoside
8	16.3	Myricetin-3-O-rutinoside
9	19.7	Quercetin
10	24.2	Isorhamnetin 3-O-glucoside

The data was taken from our previous publication (https://doi.org/10.1016/j.sjbs.2021.07.090) via licence number 5161810868726

Supplementary Material S2: The effect of *Azima tetracantha* extract alone treatment (**a**), *A. tetracantha* co-treated with glutathione biosynthesis inhibitor- buthionine sulfoximine (BSO) on the cell death induced by *Azima tetracantha* extract (**b**).



Supplementary material S3. The comparison of % cell death at individual doses of Azima tetracantha extract treated cells; the comparison was made with the non-cancerous cell (HEK293) to the AGS and Kato-III cells.

Dose	% Cell death		
	HEK293	AGS	Kato-III
5	1.44± 0.7	4.7± 0.8**	2.8± 0.2*
10	2.04± 1.1	9.3± 2.2***	10.9± 2.1***
20	6.33± 0.9	15.2± 2.2***	24.33± 4.1***
40	16.2± 2.4	36.91± 4.8***	45.56± 2.9***
60	25.3± 1.6	52.26± 3.6***	62.36± 4.8***
80	33.2± 1.4	70.65± 3.8***	81.92± 5.5***
100	43.67± 4.3	87.6± 4.5***	92.55± 3.7***

Supplementary material S4. The effect of *Azima tetracantha* extract alone treatment and the BSO co-treatment on the cell death of Kato-III and AGS cells

Dose (μg/mL)	Kato-III Cells		Statistical significance
	A. tetracantha	A. tetracantha + BSO	
0	0	0	ns
5	2.8± 0.2	3.49± 0.1	ns
10	10.9± 2.1	12.48± 1.77	ns
20	24.33± 4.1	29.16± 4.9	ns
40	45.56± 2.9	68.22± 3.4	**
60	62.36± 4.8	89.9± 4.2	***
80	81.92± 5.5	96.33± 4.29	****
AGS cells			
Dose (μg/mL)	A. tetracantha	A. tetracantha + BSO	Statistical significance
0	0	0	ns
5	5.2± 0.4	4.7± 0.8	ns
10	10.5± 2.1	9.3± 2.2	ns
20	18.6± 2.2	15.2± 2.2	ns
40	37.99± 4.2	52.26± 3.6	***
60	55.83± 3.9	70.65± 3.8	***
80	75.83± 5.3	87.6± 4.5	****