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SUPPLEMENTAL DATA

GATA2-mediated IER3 transcription promotes breast cancer progression and tumor-associated immunosuppression

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Table S1. Detailed statistical results

Comparison/Variable	Test type	Statistic (t/F/r)	df	Effect size	Exact *p* value	Notes
Fig3A	Two-tailed paired t-test	t=21.24	62	ηp^2=0.8791	<0.0001	
Fig3B	Two-tailed unpaired t-test	t=9.048	4	η^2=0.9534	0.0008	
Fig3C	One-way ANOVA	F=67.46	2, 6	ηp^2=0.9574	<0.0001	
Fig3D	Two-way ANOVA					
Interaction		F=7.993	1, 8	ηp^2 = 0.4998	*p*=0.0222	
Row Factor		F=4.832	1, 8	ηp^2 = 0.3765	*p*=0.0592	
Column Factor		F=246.2	1, 8	ηp^2 = 0.9685	*p*<0.0001	
Fig3E	Two-way ANOVA					
Interaction		F=1.197	1, 8	ηp^2 = 0.1301	*p*=0.3058	
Row Factor		F=3.277	1, 8	ηp^2 = 0.2906	*p*=0.1078	
Column Factor		F=95.40	1, 8	ηp^2 = 0.9226	*p*<0.0001	

Fig3F	Two-way ANOVA					
Interaction		F=6.220	1, 8	ηp^2 = 0.4374	p=0.0373	
Row Factor		F=1.960	1, 8	ηp^2 = 0.1968	p=0.1990	
Column Factor		F=314.2	1, 8	ηp^2 = 0.9752	p<0.0001	
Fig3G	Two-way ANOVA					
Interaction		F = 1.256	1, 8	ηp^2 = 0.1357	p=0.2949	
Row Factor		F = 1.274	1, 8	ηp^2 = 0.1374	p=0.2917	
Column Factor		F = 141.5	1, 8	ηp^2 = 0.9465	p<0.0001	
Fig3H	Two-way ANOVA					
Interaction		F = 0.9750	1, 8	ηp^2 = 0.1086	p=0.3524	
Row Factor		F = 7.025	1, 8	ηp^2 = 0.4676	p=0.0292	
Column Factor		F = 107.0	1, 8	ηp^2 = 0.9304	p<0.0001	
Fig4A	Two-tailed unpaired t-test	t=9.749	4	η^2=0.9596	0.0006	
Fig4B	Two-tailed unpaired t-test	t=5.672	4	η^2=0.8894	0.0048	

Fig4C1	Two-tailed unpaired t-test	t=6.821	4	η^2=0.9208	0.0024	
Fig 4C2	Two-tailed unpaired t-test	t=8.063	4	η^2=0.9420	0.0013	
Fig4D	Two-tailed unpaired t-test	t=5.888	4	η^2=0.8965	0.0042	
Fig4E	Two-tailed unpaired t-test	t=8.859	4	η^2=0.9515	0.0009	
Fig4F1	Two-tailed unpaired t-test	t=8.699	4	η^2=0.9498	0.0010	
Fig4F2	Two-tailed unpaired t-test	t=3.909	4	η^2=0.7925	0.0174	
Fig4G1	Two-tailed unpaired t-test	t=7.728	4	η^2=0.9372	0.0015	
Fig4G2	Two-tailed unpaired t-test	t=12.80	4	η^2=0.9762	0.0002	
Fig4H	Two-way ANOVA					
Interaction		F= 180.4	1, 8	ηp^2 =0.9575	p<0.0001	
Row Factor		F= 180.2	1, 8	ηp^2 =0.9575	p<0.0001	
Column Factor		F = 33.14	1, 8	ηp^2 =0.8056	p=0.0004	

Fig 4I	Two-way ANOVA					
Interaction		F = 160.4	1, 8	ηp^2 =0.9525	p<0.0001	
Row Factor		F = 160.4	1, 8	ηp^2 =0.9525	p<0.0001	
Column Factor		F = 28.26	1, 8	ηp^2 =0.7794	p=0.0007	
Fig5C	Two-way ANOVA					
Interaction		F = 23.38	3,16	ηp^2 =0.8142	p<0.0001	
Row Factor		F = 44.54	1,16	ηp^2 =0.7357	p<0.0001	
Column Factor		F = 267.7	3,16	ηp^2 =0.9805	p<0.0001	
Fig5D	Two-way ANOVA					
Interaction		F = 2.204	3,16	ηp^2 =0.2925	p=0.1272	
Row Factor		F = 2.127	1,16	ηp^2 =0.1174	p=0.1640	
Column Factor		F = 258.7	3,16	ηp^2 =0.9798	p<0.0001	

Fig5E	Two-way ANOVA					
Interaction		F= 1.624	3,16	ηp^2 =0.2334	p=0.2233	
Row Factor		F = 3.140	1,16	ηp^2 =0.1641	p=0.0954	
Column Factor		F = 553.6	3,16	ηp^2 =0.9905	p<0.0001	
Fig5F	Two-way ANOVA					
Interaction		F = 0.9040	2,12	ηp^2 =0.1309	p=0.4308	
Row Factor		F = 3.302	1,12	ηp^2 =0.2158	p=0.0942	
Column Factor		F = 273.1	2,12	ηp^2 =0.9785	p<0.0001	
Fig5G	Two-way ANOVA					
Interaction		F = 91.25	3,16	ηp^2 =0.9448	p<0.0001	
Row Factor		F = 91.26	3,16	ηp^2 =0.9448	p<0.0001	
Column Factor		F = 267.1	1,16	ηp^2 =0.9435	p<0.0001	

Fig5H	Two-way ANOVA					
Interaction		F = 85.27	3,16	ηp^2 =0.9411	p<0.0001	
Row Factor		F = 85.28	3,16	ηp^2 =0.9411	p<0.0001	
Column Factor		F = 250.9	1,16	ηp^2 =0.9401	p<0.0001	
Fig5I	Two-tailed paired t-test	t=21.95	62	ηp^2=0.8860	<0.0001	
Fig5J	Two-tailed unpaired t-test	t=6.431	4	η^2=0.9118	0.003	
Fig5K	One-way ANOVA	F=72.84	2, 6	ηp^2=0.9604	<0.0001	
Fig5L	Spearman r correlation	r=0.5818	61	r=0.5818	<0.0001	
Fig6A	Two-way ANOVA					
Interaction		F = 2.241	3,16	ηp^2=0.2959	p=0.1229	
Row Factor		F= 17.09	1,16	ηp^2=0.5164	p=0.0008	
Column Factor		F = 175.3	3,16	ηp^2=0.9705	p<0.0001	

Fig6B	Two-way ANOVA					
Interaction		F = 0.9718	3,16	ηp^2=0.1541	p=0.4303	
Row Factor		F = 22.87	1,16	ηp^2=0.5884	p=0.0002	
Column Factor		F = 78.82	3,16	ηp^2=0.9366	p<0.0001	
Fig6C	Two-way ANOVA					
Interaction		F = 2.640	3,16	ηp^2=0.3311	p=0.0849	
Row Factor		F = 28.67	1,16	ηp^2=0.6418	p<0.0001	
Column Factor		F = 196.7	3,16	ηp^2=0.9736	p<0.0001	
Fig6D	Two-way ANOVA					
Interaction		F= 1.608	3,16	ηp^2=0.2317	p=0.2269	
Row Factor		F = 8.474	1,16	ηp^2=0.3463	p=0.0102	
Column Factor		F = 79.58	3,16	ηp^2=0.9372	p<0.0001	

Fig6E	Two-way ANOVA					
Interaction		F = 1.251	3,16	ηp^2=0.1900	p=0.3245	
Row Factor		F = 5.056	1,16	ηp^2=0.2402	p=0.0390	
Column Factor		F = 47.70	3,16	ηp^2=0.8995	p<0.0001	
Fig6F	One-way ANOVA	F=32.75	3,8	ηp^2=0.9247	p<0.0001	
Fig6G	One-way ANOVA	F=32.27	3,8	ηp^2=0.9237	p<0.0001	
Fig6H1	One-way ANOVA	F=38.94	3,8	ηp^2=0.9359	p<0.0001	
Fig6H2	One-way ANOVA	F=32.86	3,8	ηp^2=0.9249	p<0.0001	
Fig6I	One-way ANOVA	F=35.36	3,8	ηp^2=0.9299	p<0.0001	
Fig6J	One-way ANOVA	F=42.88	3,8	ηp^2=0.9415	p<0.0001	
Fig6K1	One-way ANOVA	F=58.19	3,8	ηp^2=0.9562	p<0.0001	
Fig6K2	One-way ANOVA	F=45.92	3,8	ηp^2=0.9451	p<0.0001	
Fig6L	One-way ANOVA	F=54.81	3,8	ηp^2=0.9536	p<0.0001	
Fig6M	One-way ANOVA	F=48.56	3,8	ηp^2=0.9479	p<0.0001	

Fig6N	Two-way ANOVA		3,8	ηp^2=		
Interaction		F = 95.76	3,16	ηp^2=0.9472	*p*<0.0001	
Row Factor		F = 448.1	1,16	ηp^2=0.9655	*p*<0.0001	
Column Factor		F = 10.02	3,16	ηp^2=0.6525	*p*=0.0006	
Fig6O	Two-way ANOVA					
Interaction		F= 147.2	3,16	ηp^2=0.9650	*p*<0.0001	
Row Factor		F = 684.7	1,16	ηp^2=0.9772	*p*<0.0001	
Column Factor		F = 25.70	3,16	ηp^2=0.8282	*p*<0.0001	
Fig7A	Two-way ANOVA					
Interaction		F = 20.70	9,80	ηp^2=0.6996	*p*<0.0001	
Row Factor		F = 184.2	3,80	ηp^2=0.8735	*p*<0.0001	
Column Factor		F = 86.29	3,80	ηp^2=0.7639	*p*<0.0001	
Fig7B	One-way ANOVA	F=107.1	3,20	ηp^2=0.9414	*p*<0.0001	

Fig7D	Two-way ANOVA					
Interaction		F = 40.56	3,40	ηp^2=0.7526	p<0.0001	
Row Factor		F = 288.4	1,40	ηp^2=0.8782	p<0.0001	
Column Factor		F= 206.0	3,40	ηp^2=0.9392	p<0.0001	
Fig7G	One-way ANOVA	F=51.12	3,20	ηp^2=0.8848	p<0.0001	
Fig7H	One-way ANOVA	F=60.00	3,20	ηp^2=0.900	p<0.0001	

Abbreviations: ANOVA, analysis of variance; df, degrees of freedom.

Table S2. Association of GATA2/IER3 expression with clinicopathological parameters in patients with breast cancer (*n*=63)

Variables	Number	GATA2 expression		*p* value	IER3 expression		*p* value
		High (*n*=32)	Low (*n*=31)		High (*n*=32)	Low (*n*=31)	
Age (years)				0.1877			0.6029
＜50	41	18	23		22	19	
≥50	22	14	8		10	12	
Tumor size (cm)				0.0234			0.2101
≤2	29	10	19		12	17	
＞2	34	22	12		20	14	
Lymph node				0.0021			0.0107

metastases							
No	36	12	24		13	23	
Yes	27	20	7		19	8	
TNM stage				0.0003			0.0394
I+II	38	12	26		15	23	
III	25	20	5		17	8	
ER status				0.0107			0.0003
Negative	26	8	18		6	20	
Positive	37	24	13		26	11	
PR status				<0.0001			0.0001
Negative	29	6	23		7	22	
Positive	34	26	8		25	9	
HER2 status				0.6088			0.0394
Negative	39	21	18		24	15	
Positive	24	11	13		8	16	

Abbreviations: ER, estrogen receptor; GATA2, GATA binding protein 2; HER2, human epidermal growth factor receptor 2; IER3, immediate early response 3; PR, progesterone receptor; TNM, tumor–node–metastasis.