

Table 1 The case records, treatment strategies, and prognosis of LGACC patients in our hospital

Patient	Age	Gender	AJCC stage	Surgery	Histopathologic subtype (predominantly basaloid/solid)	Perineural invasion (Pos/Neg)	Adjuvant chemotherapy	Adjuvant radiotherapy	Time and last follow up (months)	Overall survival	Local recurrence	Distant metastasis
1	65	F	T4bN0M0	Globe-preserving surgery	Yes	Yes	No	Yes	22	Died	No	Yes
2	52	F	T2aN0M0	Globe-preserving surgery	No	Yes	No	Yes	82	Alive	No	No
3	61	F	T1aN0M0	Globe-preserving surgery	Yes	Yes	No	Yes	76	Alive	No	No
4	70	F	T3cN0M0	Globe-preserving surgery	Yes	Yes	No	Yes	33	Alive	Yes	Yes
5	53	M	T4bN0M0	Globe-preserving surgery	No	Yes	No	Yes	12	Alive	No	No
6	47	M	T2aN0M0	Globe-preserving surgery	Yes	Yes	Yes	Yes	31	Alive	No	No
7	38	M	T2aN0M0	Globe-preserving surgery	No	Yes	Yes	No	6	Alive	No	No

F: female; M: male

Table 2 The basic characteristics and tumor staging of the reported cases in the literature

Refer ences	Pat ient	Author	Year	Age	Ge nde r	AJCC stage	Surgery	Margin status (Pos/N eg)	Histopa thologic subtype (predo minantl y basaloi d/solid))	Perineur al invasion (Pos/Neg)	Adju vant chem other apy	Adjuv ant radiot herapy	Time and last follow up (months)	Overall survival *	Local recurren ce*	Distan t metast asis*
¹	1	Falcone	2017	14	F	T2cN 0M0	Globe- preserving surgery	Unkno wn	No	Pos	No	Yes	267	Alive	No	No
²	2	Branson	2017	41	F	T1aN 0M0	Globe- preserving surgery	Pos	No	Pos	Yes	Yes	221	Died	Yes	No
³	3	Han	2018	40	M	T2aN 0M0	Globe- preserving surgery	Pos	Yes	Pos	No	Yes	217	Alive	No	No
³	4	Han	2018	55	M	T2cN 0M0	Globe- preserving surgery	Pos	No	Pos	No	Yes	217	Alive	No	No
⁴	5	Argyris	2013	39	F	T2aN 0M0	Globe- preserving surgery	Unkno wn	Yes	Neg	No	Yes	201	Alive	No	No
⁵	6	Wolkow	2019	13	F	T1aN 0M0	Globe- preserving surgery	Pos	No	Neg	No	Yes	196	Alive	No	No
⁶	7	Hung	2019	29	F	T1aN 0M0	Globe- preserving surgery	Pos	No	Neg	No	Yes	196	Alive	No	No
⁵	8	Wolkow	2019	10	F	T1aN 0M0	Globe- preserving surgery	Pos	No	Neg	No	Yes	179	Alive	Yes	No

Continued Table 2 The basic characteristics and tumor staging of the reported cases in the literature

Refer ences	Pat ient	Author	Year	Age	Ge nde r	AJCC stage	Surgery	Margin status (Pos/N eg)	Histopa thologic subtype (predo minantl y basaloi d/solid))	Perineur al invasion (Pos/Ne g)	Adju vant chem other apy	Adjuv ant radiot herapy	Time and last follow up (months)	Overall survival *	Local recurren ce*	Distan t metast asis*
⁵	9	Wolkow	2019	60	M	T2cN 0M0	Globe- preserving surgery	Pos	No	Pos	No	Yes	176	Alive	Yes	No
⁵	10	Wolkow	2019	39	F	T2cN 0M0	Globe- preserving surgery	Pos	Yes	Pos	No	Yes	172	Alive	No	No
⁶	11	Hung	2019	28	M	T2aN 0M0	Globe- preserving surgery	Neg	No	Pos	No	Yes	163	Alive	No	No
⁵	12	Wolkow	2019	55	F	T2aN 0M0	Globe- preserving surgery	Pos	Yes	Pos	No	Yes	156	Alive	No	No
⁵	13	Wolkow	2019	39	M	T2aN 0M0	Globe- preserving surgery	Neg	No	Pos	No	Yes	156	Died	No	No
³	14	Han	2018	43	M	T1cN 0M0	Globe- preserving surgery	Pos	No	Pos	No	Yes	155	Alive	No	No
⁷	15	Mizokami	2002	48	M	T1aN 0M0	Globe- preserving surgery	Neg	No	Pos	No	Yes	154	Alive	No	No
³	16	Han	2018	64	M	T2aN 0M0	Globe- preserving surgery	Pos	No	Pos	No	Yes	145	Alive	No	No

Continued Table 2 The basic characteristics and tumor staging of the reported cases in the literature

Refer ences	Pat ient	Author	Year	Age	Ge nde r	AJCC stage	Surgery	Margin status (Pos/N eg)	Histopa thologic subtype (predo minantl y basaloi d/solid))	Perineur al invasion (Pos/Ne g)	Adju vant chem other apy	Adjuv ant radiot herapy	Time and last follow up (months)	Overall survival *	Local recurren ce*	Distan t metast asis*
³	17	Han	2018	43	F	T2aN 0M0	Globe- preserving surgery	Pos	No	Pos	No	Yes	144	Alive	Yes	No
⁵	18	Wolkow	2019	23	M	T2cN 0M0	Globe- preserving surgery	Neg	No	Neg	No	No	144	Died	Yes	No
⁶	19	Hung	2019	50	F	T2cN 0M0	Globe- preserving surgery	Neg	No	Pos	No	Yes	129	Alive	Yes	No
⁶	20	Hung	2019	35	M	T4xN 0M0	Globe- preserving surgery	Neg	Yes	Pos	No	Yes	114	Died	Yes	Yes
³	21	Han	2018	24	F	T3aN 0M0	Globe- preserving surgery	Pos	No	Pos	No	Yes	111	Alive	No	No
⁸	22	Nie	2018	32	F	T2aN 0M0	Globe- preserving surgery	Unkno wn	No	Unknow n	No	Yes	108	Alive	No	No
⁵	23	Wolkow	2019	38	F	T2cN 0M0	Globe- preserving surgery	Pos	Yes	Pos	No	Yes	89	Alive	No	No

Continued Table 2 The basic characteristics and tumor staging of the reported cases in the literature

Refer ences	Pat ient	Author	Year	Age	Ge nde r	AJCC stage	Surgery	Margin status (Pos/N eg)	Histopa thologic subtype (predo minantl y basaloi d/solid))	Perineur al invasion (Pos/Neg)	Adju vant chem other apy	Adjuv ant radiot herapy	Time and last follow up (months)	Overall survival *	Local recurren ce*	Distan t metast asis*
⁶	24	Hung	2019	40	M	T1aN OM0	Globe- preserving surgery	Pos	No	Pos	No	Yes	86	Alive	Yes	No
⁵	25	Wolkow	2019	43	M	T2aN OM0	Globe- preserving surgery	Pos	Yes	Pos	No	Yes	77	Alive	No	No
³	26	Han	2018	17	F	T1aN OM0	Globe- preserving surgery	Pos	No	Neg	No	Yes	73	Alive	No	No
⁹	27	Guo	1993	60	F	T1aN OM0	Globe- preserving surgery	Unkno wn	Unkno wn	Unknow n	No	Yes	72	Alive	Yes	No
⁶	28	Hung	2019	20	M	T2aN OM0	Globe- preserving surgery	Neg	No	Pos	No	Yes	65	Alive	No	No
⁶	29	Hung	2019	40	M	T2cN OM0	Globe- preserving surgery	Neg	No	Neg	No	Yes	64	Alive	No	No
³	30	Han	2018	67	M	T3aN OM0	Globe- preserving surgery	Neg	No	Neg	No	Yes	58	Died	No	No
¹⁰	31	Choi	2015	47	F	T4bN OM0	Orbital exenteration	Pos	No	Unknow n	Yes	Yes	54	Died	Yes	Yes

Continued Table 2 The basic characteristics and tumor staging of the reported cases in the literature

Refer ences	Pat ient	Author	Year	Age	Ge nde r	AJCC stage	Surgery	Margin status (Pos/N eg)	Histopa thologic subtype (predo minantl y basaloi d/solid))	Perineur al invasion (Pos/Ne g)	Adju vant chem other apy	Adjuv ant radiot herapy	Time and last follow up (months)	Overall survival *	Local recurren ce*	Distan t metast asis*
¹¹	32	Park	2020	29	M	T4xN 0M0	Globe- preserving surgery	Unkno wn	Unkno wn	Unknow n	No	Yes	50	Died	Yes	Yes
¹²	33	Strianese	2014	53	F	T2cN 0M0	Globe- preserving surgery	Pos	Yes	Pos	No	Yes	49	Died	No	Yes
¹³	34	Lewis	2010	59	M	T2cN 0M0	Globe- preserving surgery	Pos	Yes	Pos	No	Yes	49	Died	No	Yes
¹⁴	35	Dagher	1980	11	F	T2cN 0M0	Globe- preserving surgery	Neg	No	Pos	No	Yes	48	Alive	No	No
⁶	36	Hung	2019	39	F	T2cN 0M0	Globe- preserving surgery	Neg	No	Pos	No	No	48	Alive	Yes	No
¹⁵	37	Yu	1991	59	F	T2cN 0M0	Globe- preserving surgery	Unkno wn	Unkno wn	Unknow n	No	Yes	48	Died	Yes	No
¹⁶	38	Eneh	2015	14.5	M	T2cN 0M0	Orbital exenteration	Unkno wn	Yes	Pos	Yes	Yes	48	Alive	No	No
¹⁷	39	Azeredo	2023	59	M	T4bN 0M0	Globe- preserving surgery	Pos	Yes	Pos	No	Yes	48	Alive	No	No

Continued Table 2 The basic characteristics and tumor staging of the reported cases in the literature

References	Patient	Author	Year	Age	Gender	AJCC stage	Surgery	Margin status (Pos/Neg)	Histopathologic subtype (predominantly basaloid/solid)	Perineural invasion (Pos/Neg)	Adjuvant chemotherapy	Adjuvant radiotherapy	Time and last follow up (months)	Overall survival*	Local recurrence*	Distant metastasis*
¹⁸	40	Shields	1997	26	F	T2aN0M0	Orbital exenteration	Unknown	Yes	Unknown	Yes	Yes	45	Died	Yes	Yes
³	41	Han	2018	45	M	T2aN0M0	Globe-preserving surgery	Pos	No	Pos	No	Yes	43	Alive	No	No
⁵	42	Wolkow	2019	41	F	T4xN0M0	Orbital exenteration	Unknown	Unknown	Pos	Yes	Yes	42	Died	Yes	Yes
¹⁹	43	Fellman	2013	26	F	T2aN0M0	Globe-preserving surgery	Pos	No	Pos	No	Yes	41	Alive	No	No
⁶	44	Hung	2019	23	F	T2cN0M0	Globe-preserving surgery	Pos	No	Pos	No	Yes	40	Alive	No	No
⁶	45	Hung	2019	50	F	T4bN0M0	Globe-preserving surgery	Neg	No	Pos	No	Yes	38	Died	Yes	Yes
²⁰	46	Zhang	1989	19	M	T2aN0M0	Globe-preserving surgery	Unknown	Yes	Unknown	No	Yes	38	Alive	Yes	No

Continued Table 2 The basic characteristics and tumor staging of the reported cases in the literature

Refer ences	Pat ient	Author	Year	Age	Ge nde r	AJCC stage	Surgery	Margin status (Pos/N eg)	Histopa thologic subtype (predo minantl y basaloi d/solid))	Perineur al invasion (Pos/Ne g)	Adju vant chem other apy	Adjuv ant radiot herapy	Time and last follow up (months)	Overall survival *	Local recurren ce*	Distan t metast asis*
⁵	47	Wolkow	2019	53	F	T1aN OM0	Globe- preserving surgery	Pos	No	Unknow n	No	Yes	36	Alive	No	No
²¹	48	Castañeda	2021	74	F	T4aN OM0	Globe- preserving surgery	Unkno wn	Unkno wn	Pos	No	Yes	36	Alive	Yes	No
²²	49	Mihailovic	2019	24	N	T2aN OM0	Globe- preserving surgery	Pos	Yes	Pos	No	Yes	36	Alive	No	No
⁵	50	Wolkow	2019	48	M	T4aN OM0	Orbital exenteration	Pos	Yes	Pos	No	Yes	34	Died	No	Yes
⁵	51	Wolkow	2019	29	M	T4bN OM0	Orbital exenteration	Neg	Unkno wn	Unknow n	Yes	Yes	30	Alive	No	Yes
⁶	52	Hung	2019	86	F	T4cN OM0	Globe- preserving surgery	Neg	No	Pos	No	Yes	28	Died	Yes	Yes
²³	53	HRlandi	2014	44	F	T4bN OM0	Globe- preserving surgery	Pos	Yes	Pos	No	Yes	27	Alive	No	Yes

Continued Table 2 The basic characteristics and tumor staging of the reported cases in the literature

Refer ences	Pat ient	Author	Year	Age	Ge nde r	AJCC stage	Surgery	Margin status (Pos/N eg)	Histopa thologic subtype (predom inantl y basaloi d/solid))	Perineur al invasion (Pos/Neg)	Adju vant chem other apy	Adjuv ant radiot herapy	Time and last follow up (months)	Overall survival *	Local recurren ce*	Distan t metast asis*
²⁴	54	Rafizadeh	2023	35	F	T4xN0M0	Globe-preserving surgery	Unkno wn	Yes	Pos	No	Yes	24	Died	No	Yes
⁵	55	Wolkow	2019	14	M	T2aN0M0	Globe-preserving surgery	Pos	No	Pos	Yes	Yes	24	Alive	No	No
²⁵	56	Salim	2022	44	M	T2aN0M0	Globe-preserving surgery	Pos	No	Pos	No	Yes	24	Alive	No	No
⁵	57	Wolkow	2019	45	M	T4cN0M0	Orbital exenteration	Pos	Yes	Pos	No	Yes	24	Alive	No	No
²⁶	58	Font	1990	69	M	T2aN0M0	Globe-preserving surgery	Unkno wn	Unkno wn	Neg	No	No	20	Alive	No	No
²⁷	59	Benali	2021	45	F	T3cN0M0	Globe-preserving surgery	Pos	Yes	Pos	No	Yes	18	Alive	Yes	No
²⁸	60	Levartovsky	1993	57	F	T1aN0M0	Globe-preserving surgery	Pos	Yes	Pos	No	Yes	18	Alive	No	No

Continued Table 2 The basic characteristics and tumor staging of the reported cases in the literature

Refer ences	Pat ient	Author	Year	Age	Ge nde r	AJCC stage	Surgery	Margin status (Pos/N eg)	Histopa thologic subtype (predo minantl y basaloi d/solid)	Perineur al invasion (Pos/Ne g)	Adju vant chem other apy	Adjuv ant radiot herapy	Time and last follow up (months)	Overall survival *	Local recurren ce*	Distan t metast asis*
²⁰	61	Zhang	1989	44	M	T1aN 0M0	Globe- preserving surgery	Unkno wn	No	Unknow n	No	No	17	Alive	No	No
¹⁵	62	Yu	1991	55	F	T4bN 0M0	Orbital exenteration	Pos	Yes	Pos	No	No	14	Died	No	No
⁵	63	Wolkow	2019	33	F	T2cN 0M0	Globe- preserving surgery	Pos	No	Pos	No	Yes	13	Alive	No	No
¹⁵	64	Yu	1991	15	M	T1aN 0M0	Globe- preserving surgery	Unkno wn	Unkno wn	Unknow n	Yes	Yes	13	Alive	No	No
²⁹	65	Yu	2022	30	M	T4cN 0M0	Orbital exenteration	Pos	No	Pos	Yes	Yes	13	Alive	No	No
³⁰	66	Shields	1998	9	M	T2cN 0M0	Globe- preserving surgery	Neg	No	Neg	No	Yes	12	Alive	No	No
⁵	67	Wolkow	2019	11	M	T2aN 0M0	Orbital exenteration	Unkno wn	No	Neg	No	No	12	Alive	No	No

Continued Table 2 The basic characteristics and tumor staging of the reported cases in the literature

Refer ences	Pat ient	Author	Year	Age	Ge nde r	AJCC stage	Surgery	Margin status (Pos/N eg)	Histopa thologic subtype (predomi nantly basaloid/ solid)	Perineur al invasion (Pos/Neg)	Adju vant chem other apy	Adjuv ant radiot herapy	Time and last follow up (months)	Overall survival *	Local recurren ce*	Distan t metast asis*
³¹	68	Liang	2023	38	M	T4aN OM0	Globe- preserving surgery	Unkno wn	No	Unknow n	No	Yes	12	Alive	No	No
³²	69	Fattahi	2023	48	M	T4bN OM0	Orbital exenteration	Neg	No	Pos	No	Yes	12	Alive	No	No
³³	70	Panarelli	2011	52	M	T4bN OM0	Globe- preserving surgery	Unkno wn	No	Unknow n	No	Yes	12	Alive	Yes	No
²²	71	Mihailovic	2019	21	N	T2aN OM0	Globe- preserving surgery	Pos	Unkno wn	Pos	No	Yes	12	Alive	No	No
³⁴	72	Maamari	2017	72	F	T2aN OM1	Globe- preserving surgery	Pos	No	Pos	Yes	No	10	Alive	No	Yes
³⁵	73	Yan	1994	38	M	T1cN OM0	Globe- preserving surgery	Unkno wn	Unkno wn	Neg	No	Yes	10	Alive	No	No
¹⁵	74	Yu	1991	49	M	T4aN OM0	Orbital exenteration	Unkno wn	Unkno wn	Unknow n	No	Yes	10	Alive	No	No

Continued Table 2 The basic characteristics and tumor staging of the reported cases in the literature

References	Patient	Author	Year	Age	Gender	AJCC stage	Surgery	Margin status (Pos/Neg)	Histopathologic subtype (predominantly basaloid/solid)	Perineural invasion (Pos/Neg)	Adjuvant chemotherapy	Adjuvant radiotherapy	Time and last follow up (months)	Overall survival*	Local recurrence*	Distant metastasis*
³⁶	75	Maniar	2022	64	M	T4cN0M0	Orbital exenteration	Neg	Yes	Pos	Yes	Yes	10	Alive	No	No
¹⁷	76	Azeredo	2023	59	M	T2aN0M0	Globe-preserving surgery	Neg	Yes	Neg	No	Yes	8	Alive	No	No
⁵	77	Wolkow	2019	46	F	T2cN0M0	Globe-preserving surgery	Pos	Yes	Pos	No	Yes	7	Alive	No	No
¹⁵	78	Yu	1991	32	F	T4aN0M0	Orbital exenteration	Unknown	Unknown	Unknown	Yes	Yes	6	Died	No	No
³	79	Han	2018	26	M	T1aN0M0	Orbital exenteration	Neg	No	Pos	No	Yes	6	Alive	No	No
³⁷	80	Shah	2022	42	M	T4cN0M0	Orbital exenteration	Neg	No	Pos	No	Yes	6	Alive	No	No
³⁸	81	Tse	2006	58	M	T4bN0M0	Orbital exenteration	Unknown	Unknown	Unknown	Yes	No	6	Died	No	No

Pos: Positive

Neg: Negative

*: Owing to the extensive temporal span of included literature cases and resultant heterogeneity in institutional follow-up protocols, a standardized 5-year follow-up endpoint was adopted.

Table 3 LGACC case dataset

Characteristic	No. of patients (%)	
Age at diagnosis, median (range), years (n = 88)		
	1–20	12 (14)
	20–40	29 (33)
	40–60	37 (42)
	60–80	9 (12)
	>80	1 (1)
Sex (n = 88)		
	Male	45 (51)
	Female	41 (47)
	Unknown	2 (2)
DSS (mean = 60 months), months (n = 88)		
	1–12	2 (10)
	12–36	5 (25)
	36–60	9 (45)
	60–120	1 (5)
	>120	3 (15)
LRFS (mean = 36 months), months (n = 88) ^a		
	1–12	7 (32)
	12–24	4 (18)
	24–48	7 (32)
	48–60	1 (5)
	>60	3 (14)
DMF (mean = 49 months), months (n = 88) ^b		
	1–12	5 (23)
	12–36	6 (27)
	36–60	3 (13)
	60–120	2 (9)
	>120	6 (27)
Distant metastatic site (n = 22) ^c		
	Lung	12 (55)
	Bone	5 (23)
	Liver	4 (18)
	Brain	11 (50)
	Multiple parts of the body	1 (9)

a: Local recurrence occurred multiple times in 4 patients.

b: One patient presented with distant metastasis at initial diagnosis and subsequently experienced recurrence following treatment.

c: One patient presented multiple metastases at several sites. Pulmonary and intracranial metastases occurred in 2 patients. Lung and liver metastases occurred in 2 patients. One patient presented liver, lung, and bone metastases. One patient presented liver metastatic lesions at the first diagnosis.

Table 4 Kaplan-Meier analysis of mortality rate in the LGACC dataset

Characteristic		No. of patients	<i>P</i> value
Age (years)		16	0.037
	≤40	4	
	>40	12	
Sex		16	0.835
	Male	7	
	Female	9	
T category		16	<0.001
	T1–T2	5	
	T3–T4	11	
Adjuvant chemotherapy		16	0.064
	No	12	
	Yes	4	
Surgical approach		16	<0.001
	Globe-preserving surgery	8	
	Orbital exenteration	8	
Margin status ^d		11	0.776
	Negative	4	
	Positive	7	
Adjuvant radiotherapy		16	0.930
	No	1	
	Yes	15	
Histopathologic subtype ^d		13	0.132
	Predominantly non-basaloid/solid	6	
	Predominantly basaloid/solid	7	
Perineural invasion ^d		12	0.089
	Negative	0	
	Positive	12	

d: Some cases did not record the corresponding status. (Given that the majority of LGACC cases exhibit mixed histopathological subtype, this study integrated data from our institutional cohort and previously published studies to categorize tumors into two primary pathological subtypes: predominantly basaloid/solid and predominantly non-basaloid/solid.)

Table 5 Kaplan-Meier analysis of local recurrence rate in the LGACC dataset

Characteristic		No. of patients	<i>P</i> value
Age (years)		21	0.077
	≤40	7	
	>40	14	
Sex		21	0.353
	Male	8	
	Female	13	
T category		21	<0.001
	T1–T2	10	
	T3–T4	11	
Adjuvant chemotherapy		21	0.519
	No	18	
	Yes	3	
Surgical approach		21	0.380
	Globe-preserving surgery	18	
	Orbital exenteration	3	
Margin status ^d		11	0.365
	Negative	5	
	Positive	6	
Adjuvant radiotherapy		21	0.196
	No	3	
	Yes	18	
Histopathologic subtype ^d		16	0.451
	Predominantly non-basaloid/solid	9	
	Predominantly basaloid/solid	7	
Perineural invasion ^d		14	0.205
	Negative	1	
	Positive	13	

d: Some cases did not record the corresponding status.

Table 6 Kaplan–Meier analysis of distant metastasis rate in the LGACC dataset

Characteristic		No. of patients	<i>P</i> value
Age (years)		16	0.043
	≤40	4	
	>40	12	
Sex		16	0.944
	Male	7	
	Female	9	
T category		16	<0.001
	T1–T2	4	
	T3–T4	12	
Adjuvant chemotherapy		16	0.007
	No	11	
	Yes	5	
Surgical approach		16	<0.001
	Globe-preserving surgery	10	
	Orbital exenteration	6	
Margin status ^d		11	0.290
	Negative	5	
	Positive	6	
Adjuvant radiotherapy		16	0.998
	No	1	
	Yes	15	
Histopathologic subtype ^d		13	0.007
	Globe-preserving surgery	4	
	Orbital exenteration	9	
Perineural invasion ^d		12	0.106
	Negative	0	
	Positive	12	

d: Some cases did not record the corresponding status.

Reference

1. Falcone MM, Tran KD, Tavakoli M, Ortiz DF, Barredo JC, Lee WW. Adenoid cystic carcinoma of the lacrimal gland in a 14-year-old male. *Orbit (Amsterdam, Netherlands)* 2017;36:448-51.
2. Branson SV, McClintic E, Yeatts RP. Bilateral Adenoid Cystic Carcinoma of the Orbit. *Ophthalmic plastic and reconstructive surgery* 2017;33:S124-s5.
3. Han J, Kim YD, Woo KI, Sobti D. Long-Term Outcomes of Eye-Sparing Surgery for Adenoid Cystic Carcinoma of Lacrimal Gland. *Ophthalmic plastic and reconstructive surgery* 2018;34:74-8.
4. Argyris PP, Pambuccian SE, Cayci Z, Singh C, Tosios KI, Koutlas IG. Lacrimal gland adenoid cystic carcinoma with high-grade transformation to myoepithelial carcinoma: report of a case and review of literature. *Head and neck pathology* 2013;7:85-92.
5. Wolkow N, Jakobiec FA, Lee H. Long-term Outcomes of Globe-Preserving Surgery With Proton Beam Radiation for Adenoid Cystic Carcinoma of Lacrimal Gland. *American journal of ophthalmology* 2019;201:84-5.
6. Hung JY, Wei YH, Huang CH, Chen LW, Fuh CS, Liao SL. Survival outcomes of eye-sparing surgery for adenoid cystic carcinoma of lacrimal gland. *Japanese journal of ophthalmology* 2019;63:344-51.
7. Mizokami H, Inokuchi A, Sawatsubashi M, Takagi S, Tsuda K, Tokunaga O. Adenoid cystic carcinoma of the lacrimal gland with wide and severe myoepithelial differentiation. *Auris, nasus, larynx* 2002;29:77-82.
8. Nie KK, Xu J, Gao C, Zhang ZF, Lan KT, Ji YX. Successful Treatment of Erlotinib on Metastatic Adenoid Cystic Carcinoma of the Lacrimal Gland. *Chinese medical journal* 2018;131:1746-7.
9. Guo Qing, Guo. Discussion on the Treatment of Lacrimal Gland Adenoid Cystic Carcinoma. *Journal of Practical Ophthalmology*. 1993:54.
10. Choi M, Koo JS, Yoon JS. Recurred adenoid cystic carcinoma of lacrimal gland with aggressive local invasion to the maxillary bone marrow without increased uptake in PET-CT. *Korean journal of ophthalmology : KJO* 2015;29:68-70.
11. Park J, Kim HK, Kim WS, Bae TH. Extensive and aggressive growth of adenoid cystic carcinoma in the lacrimal gland. *Archives of craniofacial surgery* 2020;21:114-8.
12. Strianese D, Ferrara M, Iuliano A, Bonavolontà G. Simultaneous diagnosis of ipsilateral adenoid cystic carcinoma of the lacrimal gland and orbital cavernous hemangioma: case report. *Orbit (Amsterdam, Netherlands)* 2014;33:283-5.
13. Lewis KT, Kim D, Chan WF, Jaiwatana J, Calcote C. Conservative treatment of adenoid cystic carcinoma with plaque radiotherapy: a case report. *Ophthalmic plastic and reconstructive surgery* 2010;26:131-3.
14. Dagher G, Anderson RL, Ossoinig KC, Baker JD. Adenoid cystic carcinoma of the lacrimal gland in a child. *Archives of ophthalmology (Chicago, Ill : 1960)* 1980;98:1098-100.
15. Yu Xiumin, Tang Xia. 6 cases of orbital adenoid cystic carcinoma %J *Journal of Shandong Medical University*. 1991:180.
16. Eneh A, Parsa K, Wright KW, Strube YN. Pediatric adenoid cystic carcinoma of the lacrimal gland treated with intra-arterial cytoreductive chemotherapy. *Journal of AAPOS : the official publication of the American Association for Pediatric Ophthalmology and Strabismus* 2015;19:272-4.
17. SB DEA, Correa NB, Martio AE, Mesquita Filho PM. Cystic Adenoid Carcinoma of Lacrimal Gland. *Current health sciences journal* 2023;49:597-600.
18. Shields JA, Shields CL, Eagle RC, Jr., Adkins J, De Potter P. Adenoid cystic carcinoma

developing in the nasal orbit. American journal of ophthalmology 1997;123:398-9.

19. Fellman M, Carter K, Call CB, Esmaeli B. Disease recurrence after intraarterial chemotherapy in 2 patients with adenoid cystic carcinoma of lacrimal gland. Canadian journal of ophthalmology Journal canadien d'ophtalmologie 2013;48:e17-8.

20. Zhang Hancheng. Case Report of Adenoid Cystic Carcinoma of the Lacrimal Gland %J Ophthalmology Research. 1989;115-6+31.

21. Nava-Castañeda Á, Kahuam-López N, De La Fuente Díez Y, et al. Primary adenoid cystic carcinoma arising from an ectopic lacrimal gland involving both nasal orbits: a rare clinical entity. Orbit (Amsterdam, Netherlands) 2021;40:525-8.

22. Mihailovic N, Elges S, Glitz B, et al. [Treatment Options for Adenoid Cystic Lacrimal Gland Carcinoma - A Case Series and Literature Review]. Klin Monbl Augenheilkd 2019;236:35-8.

23. Orlandi E, Takanen S, Giandini T, et al. Postoperative radiotherapy with volumetric modulated arc therapy of lacrimal gland carcinoma: two case reports and literature review. Future oncology (London, England) 2014;10:2111-20.

24. Rafizadeh SM, Ghadimi H, Zarei Vesal N, Nozarian Z, Nikdel M. Unexpected recurrence and rapid progression of lacrimal gland adenoid cystic carcinoma during pregnancy: a case report. Orbit (Amsterdam, Netherlands) 2023;42:645-9.

25. Salim N, Libson E, Tumanova K, Krotenkova I. Stereotactic radiosurgery as a successful method to control meningeal metastatic adenoid cystic carcinoma of the lacrimal gland: A case report. Molecular and clinical oncology 2022;17:135.

26. Font RL, Patipa M, Rosenbaum PS, Smith S, Berg L. Correlation of computed tomographic and histopathologic features in malignant transformation of benign mixed tumor of lacrimal gland. Survey of ophthalmology 1990;34:449-52.

27. Benali K, Benmessaoud H, Aarab J, et al. Lacrimal gland adenoid cystic carcinoma: report of an unusual case with literature review. Radiation oncology journal 2021;39:152-8.

28. Levartovsky S, Milstein A, Nissim F, Loven D, Shani A. An unusual presentation of adenoid cystic carcinoma of the lacrimal gland. Ophthalmic plastic and reconstructive surgery 1993;9:47-50.

29. Yu MD, Men CJ, Do H, et al. Genome Sequencing and Apoptotic Markers to Assess Treatment Response of Lacrimal Gland Adenoid Cystic Carcinoma to Intra-Arterial Cytoreductive Chemotherapy. Ophthalmic plastic and reconstructive surgery 2022;38:e44-e7.

30. Shields JA, Shields CL, Eagle RC, Jr., Freire JE, Mercado GV, Schnall B. Adenoid cystic carcinoma of the lacrimal gland simulating a dermoid cyst in a 9-year-old boy. Archives of ophthalmology (Chicago, Ill : 1960) 1998;116:1673-6.

31. Liang M, Yu Z, Wang F. A case report: An unusual presentation of adenoid cystic carcinoma of the lacrimal gland. Medicine 2023;102:e33446.

32. Fattahi MR, Zarafshani M, Abdolahad M, et al. Intraoperative use of electrical impedance spectroscopy for adenoid cystic carcinoma of the lacrimal gland: A case report. Clinical case reports 2023;11:e7995.

33. Panarelli JF, Zoumalan CI, Mukkamala K, Maher EA, Iacob C, Della Rocca DA. Dedifferentiated adenoid cystic carcinoma of the lacrimal gland. Ophthalmic plastic and reconstructive surgery 2011;27:e119-21.

34. Maamari RN, Custer PL, Harocopos GJ. Incidentally Discovered Adenoid Cystic Carcinoma of the Lacrimal Gland with Isolated Liver Metastases. Ocular oncology and pathology 2017;3:262-6.

35. Yan Pengfei, Chen Mangen. A case of lacrimal gland adenoid cystic carcinoma. Recent Advances

in Ophthalmology. 1994:59-60.

36. Maniar A, Saqi A, Troob SH, et al. Targeted Neoadjuvant Intra-arterial Chemotherapy in Lacrimal Gland Adenoid Cystic Carcinoma: A Histological Correlation Using Apoptotic Tumor Markers. Ophthalmic plastic and reconstructive surgery 2022;38:e28-e33.
37. Shah SA, Parikh L, Solanki R, Bhojani J, Gohil R. Lacrimal Gland Adenoid Cystic Carcinoma with High Grade Transformation: A Case Report and Current Concepts in Multi Modality Management. Indian journal of otolaryngology and head and neck surgery : official publication of the Association of Otolaryngologists of India 2022;74:2599-606.
38. D.T. T, P. B, J.J. M, Yang Xiumei. Atypical presentation of lacrimal gland adenoid cystic carcinoma: a case report. World Core Medical Journals Digest. Ophthalmology Section. 2006:9-10.