

ILC with Extracellular Mucin

- **RARE!**
 - 14 published cases (1 report with 8 cases; 6 single case reports)
 - 16 cases in recent series from BWH (USCAP 2018, Soong, *et al*)

ILC with Extracellular Mucin

Clinico-Pathologic features

	Previously Reported (1998-2016)
Number of cases	14
Median age (range)	60 yrs (38-75)
Size >2cm	11/12 (92%)
Node positive	9/13 (69%)
ER+	10/10 (100%)
HER2+	2/13 (15%)
E-cadherin -	14 (100%)
Signet ring cells	14/14 (100%)
LCIS	10/13 (77%)

ILC with Extracellular Mucin

Clinico-Pathologic features

	Previously Reported (1998-2016)	BWH series (2001-2017)
Number of cases	14	16
Median age (range)	60 yrs (38-75)	69 yrs (31-77)
Size >2cm	11/12 (92%)	8/12 (67%)
Node positive	9/13 (69%)	8/16 (50%)
ER+	10/10 (100%)	15/16 (94%)
HER2+	2/13 (15%)	3/16 (19%)
E-cadherin -	14 (100%)	16/16 (100%)
Signet ring cells	14/14 (100%)	11/16 (69%)
LCIS	10/13 (77%)	7/12 (58%)

ILC with Extracellular Mucin

Outcome

	Previously Reported (1998-2016)
# with follow-up	5
Median follow-up	29 mos (21-68 mos)
Loco-regional	1/5 (20%)
Distant mets	1/5 (20%)
Both loco-regional and distant mets	1/5 (20%)
DOD	2/5 (40%)

ILC with Extracellular Mucin

Outcome

	Previously Reported (1998-2016)	BWH series (2001-2017)
# with follow-up	5	12
Median follow-up	29 mos (21-68 mos)	38 mos (3-127 mos)
Loco-regional	1/5 (20%)	1/12 (9%)
Distant mets	1/5 (20%)	4/12 (33%)
Both loco-regional and distant mets	1/5 (20%)	0
DOD	2/5 (40%)	2/12 (17%)

Genomic Alterations

Soong, USCAP 2018

- 10 cases studied by Oncopanel (447 genes for SNVs and CNVs, 191 regions across 60 genes for chromosomal rearrangements)
 - 16q loss, 1q gain (lobular signature): 5 cases
 - 22q loss: 5 cases
 - 1p loss: 5 cases

Genomic Alterations

Soong, USCAP 2018

CDH1 (frameshift/deleterious/structural variant)										
Pathogenic mutations										
<i>PIK3CA</i>										
<i>TP53</i>										
<i>PTEN</i>										
<i>RB1</i>										
<i>ERBB3</i>										
<i>ERBB2</i>										
<i>MUTYH</i>										
High-copy amplifications										
<i>FGFR1</i>										
<i>WHSC1L1</i>										
<i>ERBB2</i>										
<i>CDK12</i>										

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Summary

- **Rare variant of ILC seen primarily in older (post-menopausal) women**
- **Relatively aggressive clinical course**
- **Should not be mistaken for conventional mucinous carcinoma, a breast cancer type associated with a favorable prognosis**