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Intratumoral heterogeneity of surrogate molecular subtypes in urothelial carcinoma in situ of the urinary bladder: implications for prognostic stratification of high-risk non-muscle-invasive bladder cancer

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**Online Resource 1** Protein expression of luminal and basal markers as well as of p53 in CIS biopsies from HR NMIBC patients of two independent cohorts [14]

	Curre	nt CIS cohort	median	CIS Aachen/N cohort n= 156 samples		median
KRT20 positive negative	129 98	(57%) (43%)	positive	132 24	(85%) (15%)	positive
ERBB2 0-1 2 3	31 42 150	(14%) (19%) (67%)	3	55 51 50	(35%) (33%) (32%)	2
GATA3 0-2 3-12	1 225	(0.4%) (99.6%)	12	5 151	(3%) (97%)	12
KRT5/6 positive negative	7 206	(3%) (97%)	negative	3 153	(2%) (98%)	negative
KRT14 positive negative	0 231	(0%) (100%)	negative	2 154	(1%) (99%)	negative
p53 aberrant non-aberrant	150 72	(68%) (32%)	-	99 57	(63%) (37%)	-

For KRT20, KRT5/6, and KRT14, percentage of positive cells was determined and biopsy samples were considered positive if > 50% of cells expressed the marker. GATA3 expression was scored using the Remmele score, whereas ERBB2 expression was scored with the Dako score. Note: numbers of analyzed samples for each single marker differ due to availability of sample material.