

	outcome	cancer	Batch 1	Batch 2	Batch 3	Batch 4	Batch 5
1	Biopsy	Biopsy	0	0	0	5	4
2	mTCC	Cancer	11	1	0	0	0
3	Normal	Normal	0	4	4	0	0
4	sTCC–CIS	Cancer	0	13	0	0	3
5	sTCC+CIS	Cancer	0	0	0	0	12

This table summarizes the count of outcome and tumor presence combinations, categorized by batch. The first two columns represent the combination of variables being observed, while the remaining columns correspond to different batch numbers. Each row indicates the count of a specific outcome and tumor presence combination.

As visible in the table, there is a significant batch effect, with batches 1, 3, and 4 containing data exclusively for mTCC, Normal, and Biopsy, respectively. Batches 2 and 5 show a more balanced distribution but still have a dominant phenotype that constitutes the largest fraction of their respective data. In batch 2, sTCC–CIS makes up 72% of the batch, while in batch 5, sTCC+CIS accounts for 63% of the batch.