

Table S3: Comparison of the Truvari result between all combinations of aligners and SV callers on simulated HiFi, CLR and ONT dataset with simulated SVs: indels (insertions and deletions), inversions. All SVs were simulated by SUVIVOR. HiFi and CLR reads were simulated by PBSIM and ONT reads were simulated by alchemy2, which is distributed with lra source. We simulated 195 Indels (insertions and deletions) of lengths between 50-10000 bases, 97 inversions of lengths between 600-2000 bases.

HiFi																		
INDEL									INV									
aligner	pbsv			cuteSv			sniffles			pbsv			cuteSv			sniffles		
	lra	pbmm2	ngmlr	lra	minimap2	ngmlr	lra	minimap2	ngmlr	lra	pbmm2	ngmlr	lra	minimap2	ngmlr	lra	minimap2	ngmlr
TP base	195	191	191	195	194	193	171	188	185	90	90	89	96	96	96	97	95	96
TP call	195	191	191	195	194	193	171	188	185	90	90	89	195	182	183	97	95	96
FP	0	4	0	0	2	6	6	1	1	0	0	2	1	5	3	3	2	4
FN	0	4	4	0	1	2	24	7	10	7	7	8	0	1	1	0	2	1
precision	1	0.979	1	1	0.990	0.970	0.966	0.995	0.995	1	1	0.978	0.995	0.973	0.984	0.970	0.979	0.960
recall	1	0.979	0.979	1	0.995	0.990	0.877	0.964	0.949	0.928	0.928	0.917	1	0.990	0.990	1	0.980	0.990
F1 score	1	0.979	0.990	1	0.992	0.980	0.919	0.980	0.971	0.963	0.963	0.946	0.997	0.981	0.987	0.985	0.979	0.975

CLR																		
INDEL									INV									
aligner	pbsv			cuteSV			sniffles			pbsv			cuteSV			sniffles		
	lra	pbmm2	ngmlr	lra	minimap2	ngmlr	lra	minimap2	ngmlr	lra	pbmm2	ngmlr	lra	minimap2	ngmlr	lra	minimap2	ngmlr
TP base	195	190	193	195	195	193	154	179	181	90	90	87	96	97	95	96	97	94
TP call	195	190	193	195	195	193	155	179	181	90	90	87	195	195	189	99	97	94
FP	0	0	3	0	3	2	3	8	5	0	0	3	2	0	3	74	2	2
FN	0	5	2	0	0	2	41	9	14	7	7	10	1	0	2	2	0	3
precision	1	1	0.985	1	0.985	0.990	0.981	0.957	0.973	1	1	0.967	0.990	1	0.994	0.572	0.980	0.979
recall	1	0.974	0.990	1	1	0.990	0.790	0.918	0.928	0.928	0.928	0.897	0.990	1	0.948	0.990	1	0.969
F1 score	1	0.987	0.987	1	0.992	0.990	0.875	0.937	0.950	0.963	0.963	0.930	0.990	1	0.971	0.725	0.990	0.974

ONT													
INDEL							INV						
	cuteSV			sniffles			cuteSV			sniffles			
	lra	minimap2	ngmlr	lra	minimap2	ngmlr	lra	minimap2	ngmlr	lra	minimap2	ngmlr	
TP base	188	191	189	140	143	155	97	97	96	80	93	95	
TP call	188	191	189	140	143	155	193	193	192	83	93	95	
FP	3	2	4	3	6	17	2	2	3	35	1	10	
FN	7	4	6	55	52	40	0	0	1	17	4	2	
precision	0.984	0.990	0.979	0.979	0.959	0.901	0.990	0.990	0.985	0.703	0.989	0.9047	
recall	0.964	0.979	0.969	0.718	0.733	0.795	1	1	0.990	0.825	0.959	0.979	
F1 score	0.974	0.985	0.974	0.828	0.831	0.845	0.995	0.995	0.987	0.759	0.974	0.940	