Left End Right End $(t_2 t_3 t_4) \cup (t_3) \cup (t_1 t_2)$ $(t_5) \cup (t_1 t_2) \cup (t_1 t_2 t_6)$ Position pair per-transcript f: forward r: reverse *t*₁ (120f, 1400r), (140f, 900r), (110f, 300r) *t*₂ (100f, 400r), (120f, 500r) $(t_1 t_2 t_3 t_4) \cap (t_1 t_2 t_4 t_5)$ Both are reverse-mapped (in-valid pair) Validation of $(t_1 t_2)$ This position **Pairs** pair is discarded t₁ (140f, 900r) **t**₁ t₂ (100f, 400r), (120f, 500r) 1000 bp This position Validation of pair valid **t**₂ **Pairs** Nucleotide Coverage *t*₁ (140f, 900r):**190** Coverage *t*₂ (100f, 400r):**192**, (120f, 500r):**180 Filter** *t*₁ (140f, 900r):**190** *t*₂ (100f, 400r):**192** Edit-distance Filter Final target transcript