Mutational signature analysis SCKM primary tumor 100 -Signature S1 S17 75 **-**S2 S18 S3 S20 S4 S21 Contribution (%) S23 S5 S6 S24 50 **-**S7 S25 S10 S27 S28 S11 S29 S13 S30 S15 25 unknown S16 Sample