Exons covered:

The following are the genes covered listed by exons and then codons; may include partially covered codons.

**GENE: Reference Sequence (NCBI)**  
 Exon: Amino Acid Positions

**ABL1: NM\_005157.5**                Exon 4: L184 - K274  
                Exon 5: E275 - G303  
                Exon 6: G303 - R362  
                Exon 7: R362 - A424  
                Exon 8: A424 - C475  
                Exon 9: C475 - E505  
  
**ASXL1: NM\_015338.5**  
                Exon 12: K362 - R573  
                Exon 13: I574 - 1542\*  
  
**BCOR: NM\_001123385.1**                Exon 2: M1 - R29R  
                Exon 3: R29 - V55  
                Exon 4: V56 - A885  
                Exon 4: C925 - Q999  
                Exon 5: M1000 - E1017  
                Exon 6: R1018 - C1080  
                Exon 7: C1080 - D1168  
                Exon 8: 1168D 1283G  
                Exon 9: G1283 - C1363  
                Exon 10: V1392 - E1476  
                Exon 11: E1477 - R1532  
                Exon 12: R1532 - D1581  
                Exon 13: D1581 - E1607  
                Exon 14: E1607 - G1659  
                Exon 15: G1659 - 1756\*  
  
**BCORL1: NM\_021946.4**                Exon 1: 1M 29R  
                Exon 2: 29R 59K  
                Exon 3: 60V 428P  
                Exon 3: 456S 595S  
                Exon 3: 596V 798Q  
                Exon 3: 822K 1147K  
                Exon 4: 1148C 1203G  
                Exon 5: 1203G 1230G  
                Exon 6: 1230G 1360D  
                Exon 7: 1360D 1435K  
                Exon 8: 1436D 1491R  
                Exon 9: 1491R 1540D  
                Exon 10: 1540D 1566E  
                Exon 11: 1566E 1618G  
                Exon 12: 1618G 1712\*  
  
**BRAF: NM\_004333.4**  
                Exon 11: K439 - G478  
                Exon 15: N581 - M620  
  
**CALR: NM\_004343.3**                Exon 9: A352 – A413  
  
**CBL: NM\_005188.3**  
                Exon 1: S8 - K61  
                Exon 2: P81 - T129  
                Exon 3: R148 - K197  
                Exon 5: P250 - S290  
                Exon 8: E366 - Q409  
                Exon 9: E410 - K477  
                Exon 10: V478 - K521  
                Exon 12: S648 - R679  
                Exon 13: R679 -R718  
                Exon 16: G838 - E894  
  
**CBLC: NM\_012116.3**  
                Exon 9: V429 - V454  
  
**CEBPA: NM\_004364.4**                Exon 1: M1 - G117  
                Exon 1: E163 - 359\*  
  
**CSF3R: NM\_000760.3**  
                Exon 14: S575 - E622  
                Exon 15: E622 - N653  
                Exon 16: N653 - E680  
  
**DDX41: NM\_016222.3**  
                Exon 1: M1 - K9  
                Exon 3: L47 - A100  
                Exon 5: A125 - S145  
                Exon 6: S145 – A191

Exon 8: I215 - S266  
                Exon 10: H312 - K366  
                Exon 11: G367 - Q410  
                Exon 14: D467 - V517

Exon 15: V517 – D541  
  
**DNMT3A: NM\_022552.4**                Exon 2: M1 - K24  
                Exon 3: D25 - P59  
                Exon 4: V60 - G150  
                Exon 5: G150 - E164  
                Exon 6: G165 - E213  
                Exon 7: A214 - E285  
                Exon 8: D286 - V338  
                Exon 9: V339 - Q374  
                Exon 10: V375 - E427

Exon 12: E477 – D492  
                Exon 11: E427 - E477  
                Exon 13: D492 - K518  
                Exon 14: N519 - R556  
                Exon 15: R556 - F617  
                Exon 16: D618 - G646  
                Exon 17: G646 - H694  
                Exon 18: I695 - E725  
                Exon 19: E725 - E774  
                Exon 20: S775 - R803  
                Exon 21: R803 - K826  
                Exon 22: F827 - R866  
                Exon 23: R866 - 913\*  
  
**ETV6: NM\_001987.4**                Exon 1: M1 - K11  
                Exon 2: Q12 - R55  
                Exon 3: R55 - G110  
                Exon 4: G110 - D155  
                Exon 5: D155 - D337  
                Exon 6: D337 - K384  
                Exon 7: N385 - R418  
                Exon 8: R418 - 453\*  
  
**EZH2: NM\_001203247.1**                Exon 2: M1 - K39  
                Exon 4: C83 - M121  
                Exon 5: V122 - E162  
                Exon 6: E162 - D209  
                Exon 7: D209 - P232  
                Exon 8: K243 - P298  
                Exon 9: P298 - L328  
                Exon 10: E329 - E409  
                Exon 11:E 409 - Q465  
                Exon 12: V466 - R497  
                Exon 13: R497 - D511  
                Exon 14: D511 - C553  
                Exon 15: C553 - K612  
                Exon 16: H613 - E644  
                Exon 17: I645 - D672  
                Exon 18: D672 - V699  
                Exon 19: V699 - R727  
                Exon 20: R727 - 747\*  
  
**FLT3: NM\_004119.2**                Exon 14: Q569 - G613

Exon 15: G613 – E648  
                Exon 20: C807 - N847  
  
**GATA1: NM\_002049.3**                Exon 2: M1 - V74  
  
**GATA2: NM\_032638.4**                Exon 2: M1 - A77  
                Exon 3: A277 - E291  
                Exon 4: E291 - L339  
                Exon 5: S340 - N381  
                Exon 6: V382 - 481\*  
  
**IDH1: NM\_005896.3**                Exon 4: S41 - Q138  
  
**IDH2: NM\_002168.3**  
                Exon 4: E125 - Q178  
                Exon 6: S227 - K272  
  
**IKZF1: NM\_006060.5**  
                Exon 2: M1 - G14  
                Exon 3: G14 - A54  
                Exon 4: A54 - G141  
                Exon 5: G141 - V197  
                Exon 6: V197 - V239  
                Exon 7: V239 - G284  
                Exon 8: G284 - 520\*  
  
**JAK2: NM\_004972.3**                Exon 12: D505 - F547  
                Exon 13: N548 - E592  
                Exon 14: S593 - N622  
                Exon 15: K630 - L664  
  
**KDM6A: NM\_021140.3**  
                Exon 1: M1 - S54  
                Exon 2: S54 - K75  
                Exon 3: A76 - A112  
                Exon 4: A112 - K128  
                Exon 5: N129 - W148  
                Exon 6: W148 - K188  
                Exon 7: H189 - I207  
                Exon 8: I207 - Q218  
                Exon 9: R219 - G250  
                Exon 10: G250 - R292  
                Exon 11: R292 - G325  
                Exon 12: G325 - Q398  
                Exon 13: A399 - Q443  
                Exon 14: N444 - Q475  
                Exon 15: H476 - Q509  
                Exon 16: M510 - Q641  
                Exon 17: G642 - R901  
                Exon 18: R901 - Y944  
                Exon 19: L945 – D980  
                Exon 20: D980 - R1048  
                Exon 21: E1049 - N1070  
                Exon 23: K1095 - G1145  
                Exon 24: G1145 - K1183  
                Exon 25: K1183 - A1246  
                Exon 26: A1246 - K1293  
                Exon 27: K1293 - E1335  
                Exon 28: V1336 - L1392  
                Exon 29: A1393 - 1402\*  
  
**KIT: NM\_000222.2**  
                Exon 2: G23 - D113  
                Exon 8: T411 - R449  
                Exon 9: R449 - E514  
                Exon 10: E514 - Q549

Exon 11: K550 – G592  
                Exon 13: P627 - G664  
                Exon 14: G664 - C714  
                Exon 15: C714 - G745  
                Exon 17: C788 - N828  
                Exon 18: A829 - G866  
  
**KMT2A: NM\_005933.3**                Exon 1: G102 - E144  
                Exon 2: D145 - V168  
                Exon 3: G382 - K439  
                Exon 4: Q1054 - S1106  
                Exon 5: V1135 - K1190  
                Exon 6: K1190 - A1212  
                Exon 7: S1232 - K1293  
                Exon 8: G1338 - K1362  
                Exon 9: E1363 - K1406  
                Exon 10: E1407 - E1444  
                Exon 11: F1445 - K1493  
                Exon 27: Q2427 - I2487  
                Exon 31: D3688 - G3713  
                Exon 35: R3835 - K3878  
  
**KRAS: NM\_033360.3**  
                Exon 2: M1 - E37  
                Exon 3: D38 - R97  
                Exon 4: R97 - Q150  
  
**MPL: NM\_005373.2**                Exon 10: A490 - R522  
  
**MYD88: NM\_002468.4**                Exon 5: G259 - 310\*  
  
**NF1: NM\_001042492.2**                Exon 1: M1 - Q20  
                Exon 2: L21 - M68  
                Exon 3: R69 - G96  
                Exon 4: Q112 - R160  
                Exon 6: E196 - K218  
                Exon 12: S421 - P464  
                Exon 30: R1325 - Q1370  
                Exon 37: G1620 - Y1680  
                Exon 38: Q1822 - R1870  
                Exon 39: G1897 - S1938  
                Exon 41: I2003 - K2049  
                Exon 45: R2235 - K2273  
                Exon 49: G2397 - A2441  
                Exon 52: G2539 - E2580  
                Exon 58: G2793 - 2840\*  
  
**NOTCH1: NM\_017617.4**                Exon 26: N1529 - G1673  
                Exon 27: G1673 - S1723  
                Exon 34: E2061 - 2556\*  
  
**NPM1: NM\_002520.6**  
                Exon 11: A283 - 295\*  
  
**NRAS: NM\_002524.4**  
                Exon 2: M1 - E37  
                Exon 3: D38 - R97  
                Exon 4: R97 - Q150  
  
**PDGFRA: NM\_006206.5**  
                Exon 12: K552 - G596  
                Exon 14: P631 - G668  
                Exon 15: G668 - S719  
                Exon 18: C814 - S854  
  
**PHF6: NM\_032458.2**                Exon 2: M1 - M46  
                Exon 3: L47 - L80  
                Exon 4: M81 - M125  
                Exon 5: M125 - A140  
                Exon 6: A140 - Y195  
                Exon 7: R196 - M243  
                Exon 8: L244 - M278  
                Exon 9: K279 - K323  
                Exon 10: K323 - 366\*  
  
**PPM1D: NM\_003620.3**                Exon 6: S421 - 606\*  
  
**PTEN: NM\_000314.6**                Exon 5: V85 - K164  
                Exon 7: N212 - K267  
  
**PTPN11: NM\_001330437.1**                Exon 3: R46 - R111  
                Exon 13: G487 - Q537  
  
**RHOA: NM\_001313941.1**                Exon 3: M1 - Q52  
  
**RUNX1: NM\_001754.4**  
                Exon 2: M1 - E20  
                Exon 3: E20 - D33  
                Exon 4: D33 - K117  
                Exon 5: V118 - G170  
                Exon 6: G170 - R205  
                Exon 7: R205 - D269  
                Exon 8: D269 - T323  
                Exon 9: T323 - 481\*  
  
**SETBP1: NM\_015559.2**                Exon 4: A181 - G1334  
  
**SF3B1: NM\_012433.3**                Exon 13: I574 - K602

Exon 14: A603 – G693  
                Exon 15: G693 - I735  
                Exon 15: R736 - K741

Exon 16: G742 – K790  
  
**SRSF2: NM\_003016.4**  
                Exon 1: M1 - S121  
  
**STAG1: NM\_005862.2**                Exon 10: R301 - R342  
                Exon 11: Q343 - K375  
                Exon 12: D376 - H402  
                Exon 16: A516 - R550  
                Exon 22: I733 - K759  
                Exon 29: V1022 - D1091  
                Exon 30: D1091 - N1149  
  
**STAG2: NM\_006603.4**  
                Exon 2: M1 - Q15  
                Exon 3: Q15 - K41  
                Exon 4: T 42 - Q96  
                Exon 5: S97 - G129  
                Exon 6: G129 - E154  
                Exon 7: D155 - A223  
                Exon 8: A223 - E273  
                Exon 9: L274 - R298  
                Exon 10: R298 - K339  
                Exon 11: Q340 - K372  
                Exon 13: Q399 - K435  
                Exon 14: K435 - E472  
                Exon 15: L473 - A512  
                Exon 16: A512 - R546  
                Exon 17: V547 - K577

Exon 18: Y578 – K607  
                Exon 19: H608 - E675  
                Exon 20: G676 - N699  
                Exon 21: N699 - Q728

Exon 22: I729 – K755  
                Exon 23: E756 - Q786  
                Exon 24: A787 - D845  
                Exon 25: D845 - K891  
                Exon 26: Y892 - Q925  
                Exon 27: L926 - K975  
                Exon 28: K975 - V1018  
                Exon 29: V1018 - T1093  
                Exon 30: T1093 - N1156  
                Exon 31: N1156 - L1198  
                Exon 32: P1199 - S1224  
                Exon 33: V1225 - 1232\*  
  
**STAT3: NM\_139276.2**                Exon 13: G380 - L411

Exon 14: T412 – D427  
                Exon 15: A428 - E455  
                Exon 16: T456 - K488  
                Exon 17: N489 - G534  
                Exon 18: G534 - K551  
                Exon 19: E552 - G583  
                Exon 20: G583 - G630  
                Exon 21: G630 - S701  
  
**TET2: NM\_001127208.2**  
                Exon 3: M1 - E137  
                Exon 4: E137 - R167  
                Exon 5: R167 - W198  
                Exon 6: V199 - W268  
                Exon 7: E268 - E318  
                Exon 8: 1319E 1348Q  
                Exon 9: 1349I 1394L  
                Exon 10: 1395V 1513E  
                Exon 11: 1513E 2003\*  
**TP53: NM\_000546.5**                Exon 2: 1M 25L

Exon 3: 25L – 32L

Exon 4: 33S – 125T  
                Exon 5: 126Y 187G

Exon 6: 187G – 224E  
                Exon 7: 225V 261S  
                Exon 8: 261S 307A

Exon 9: 307A – 331Q  
                Exon 10: 332I 367S  
                Exon 11: 367S 394\*  
**U2AF1: NM\_006758.2**  
                Exon 1: 1M 15K  
                Exon 2: 15K 44Q  
                Exon 3: 45T 67C  
                Exon 5: 84E 116K  
                Exon 6: 117F 161G  
                Exon 8: 192K 241\*  
**WT1: NM\_001198551.1**                Exon 2: G4-G45G               
 Exon 3: 45G 79S  
                Exon 4: 79S 105G  
                Exon 5: 105G 122N  
                Exon 6: 122N 154Q  
                Exon 7: 155D 205G  
                Exon 8: 205G 235G  
                Exon 9: 235G 263G  
                Exon 10: 263G 303\*  
**ZRSR2: NM\_005089.3**                Exon 1: 1M 14S  
                Exon 2: 14S 41G  
                Exon 3: 41G 68R  
                Exon 4: 68R 104E  
                Exon 5: 105R 133E  
                Exon 6: 134E 146E  
                Exon 7: 147L 186R  
                Exon 8: 186R 257K  
                Exon 9: 258V 276S  
                Exon 10: 276S 313G  
                Exon 11: 313G 483\*