|             | TP53        | PKN1 and AR transcription       | RUNX2 transc. regulation  | Generio-Transcription Pathway- | -RNA Poly-II transc.                                    | -Transcription (general)  |
|-------------|-------------|---------------------------------|---|--------------------------------|---|---------------------------|
|             |             | HSP90 SHR                       | TP53-transc-regulation  | Deubiquitination               | -Post-transl-modification                               |                           |
| plification |             | - Neutrophil degranulation      | SUMO E3 ligases   | RHO GTPase Effectors           | Cellular responses to stress                            | Immune System             |
|             | PTEN-       | RUNX2 and bone                  | -PTEN Regulation  | =SUMOylation                   | Innate Immune System                                    |                           |
|             | RB1         | Antigen processing              | =RHO GTPases activate PKNs=                                     | Class I MHC pathway            |   | - Metabolism of proteins  |
|             | MUC16—      | SUMOylation                     | G2/M-Transition   | PIP3 activates AKT signaling   | Signaling by Rho GTPases                                | Outcome                   |
|             | TBP<br>MDM4 | Nuclear-Receptor-transc-pathway | HIV Life Cycle  | Cellular Senescence            | Adaptive Immune System                                  |                           |
|             | FGFR1       | _Regulation of TP53 Activity    | Cap-dependent translation—                                      | -Mitotic G2-G2/M phases        | Cell Cycle, Mitotic                                     | Signal-Transduction-      |
|             | COL1A2-     | -TP53-metabolic regulation      | -G alpha (s) signalling events-<br>Signaling by NOTCH1 PEST Dom | Signaling by Interleukins      | Intracellular signaling (seconda                        | iry)                      |
| ation       |             |                                 | olyllamy by Notolli Let eat.                                    | ESR-mediated signaling         | Diseases of signal transduction<br>Immune cytokine sig. | External stimuli response |
|             |             |                                 |   |                                | millune cytokine sig.                                   | Cell-Cycle—               |
|             | Residual-   | Residual                        | Residual  | Residual                       | -Residual   | Residual                  |
|             | Nec-dad.    |                                 |   |                                |   |                           |
| letion      |             |                                 |   |                                |   |                           |