BLCA - Bladder Urothelial Carcinoma

| Subtype             | Proliferation | Prognosis    | Therapy<br>(Typical / Investigational)   | Common Driver<br>Alterations  |
|---------------------|---------------|--------------|--|---|
| Luminal-Papillary   | Low           | Best         | Surgery ± intravesical BCG<br>(NMIBC); FGFR3 inhibitors<br>(erdafitinib) in<br>FGFR3-altered advanced<br>cases | FGFR3<br>mutations/fusions;<br>KDM6A; STAG2;<br>TERT promoter                             |
| Luminal-Infiltrated | Moderate      | Good         | Chemo + anti-PD-1/PD-L1<br>immunotherapy; BCG in<br>NMIBC  | PIK3CA; ERBB2<br>amplifications; TERT<br>promoter; high<br>PD-L1                          |
| Luminal             | High          | Intermediate | Platinum-based chemo;<br>immunotherapy; FGFR<br>inhibitors if FGFR3 mutated                                    | TP53; RB1; ERCC2;<br>APOBEC mutational<br>signature                                       |
| Basal-Squamous      | High          | Poor         | Cisplatin-based chemo;<br>immunotherapy (PD-L1);<br>EGFR-targeted agents in<br>trials                          | TP53; RB1; CDKN2A<br>deletion;<br>NFE2L2/KEAP1;<br>EGFR<br>overexpression                 |
| Neuronal            | Very High     | Worst        | Platinum + etoposide<br>(NE-like regimens);<br>emerging immunotherapy<br>approaches                            | TP53 + RB1 co-loss;<br>neuroendocrine<br>transcription factors<br>(e.g. NEUROD1);<br>MYCL |