### Radiopharmaceuticals and Their Target Sites

<table>
<thead>
<tr>
<th>Radiopharmaceutical</th>
<th>Imaging Target</th>
<th>Cancer Site</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small Molecules (Imaging)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[^{18}F]-FLT</td>
<td>tumor cell proliferation</td>
<td>lymphoma, prostate, H&amp;N, NSCLC</td>
</tr>
<tr>
<td>[^{18}F]-FES</td>
<td>estrogen receptor status</td>
<td>breast</td>
</tr>
<tr>
<td>[^{18}F]-FDHT</td>
<td>androgen receptor</td>
<td>prostate</td>
</tr>
<tr>
<td>[^{18}F]-FMISO</td>
<td>tumor oxygenation</td>
<td>head &amp; neck, rectal</td>
</tr>
<tr>
<td>[^{18}F]-FACBC</td>
<td>amino acid metabolism</td>
<td>breast, prostate, brain</td>
</tr>
<tr>
<td>[^{18}F]-FIAU</td>
<td>gene expression</td>
<td>prostate</td>
</tr>
<tr>
<td>[^{18}F]-ML10</td>
<td>imaging apoptosis</td>
<td>brain, NSCLC, H&amp;N</td>
</tr>
<tr>
<td>[^{18}F]-FEAU</td>
<td>gene expression</td>
<td>all tumors and T cell therapies</td>
</tr>
<tr>
<td>[^{18}F]-dasatinib</td>
<td>tyrosine kinases</td>
<td>prostate, breast</td>
</tr>
<tr>
<td>[^{18}F]-glutamine</td>
<td>tumor metabolism</td>
<td>all solid malignancies</td>
</tr>
<tr>
<td>[^{64}Cu]-ATSM</td>
<td>tumor oxygenation</td>
<td>uterine, cervical, rectal</td>
</tr>
<tr>
<td>[^{124}I]-IAZGP</td>
<td>tumor oxygenation</td>
<td>rectal</td>
</tr>
<tr>
<td>[^{124}I]-FIAU</td>
<td>gene expression</td>
<td>prostate</td>
</tr>
<tr>
<td>Na[^{124}I]</td>
<td>Na iodide Symporter</td>
<td>thyroid</td>
</tr>
<tr>
<td>[^{124}I]-PUH71</td>
<td>HSP-90</td>
<td>all solid malignancies and lymphoma</td>
</tr>
<tr>
<td>[^{18}F]-MFPG</td>
<td>hNET</td>
<td>neuroendocrine tumors</td>
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</tbody>
</table>

### Antibodies and Fragments (Imaging)

<table>
<thead>
<tr>
<th>Radiopharmaceutical</th>
<th>Imaging Target</th>
<th>Cancer Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>[^{68}Ga]- Her2 F(ab')</td>
<td>HER2</td>
<td>breast</td>
</tr>
<tr>
<td>[^{64}Cu]-DOTA-trastuzumab</td>
<td>HER2</td>
<td>breast</td>
</tr>
<tr>
<td>[^{124}I]-A33</td>
<td>A33 antigen</td>
<td>colon</td>
</tr>
<tr>
<td>[^{124}I]-3F8</td>
<td>disialoganglioside GD2</td>
<td>neuroblastoma (pediatrics)</td>
</tr>
<tr>
<td>[^{124}I]-8H9</td>
<td>8H9 antigen</td>
<td>multiple tumors, e.g., leptomeninges (pediatrics)</td>
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<tr>
<td>[^{124}I]-G250</td>
<td>CA9 antigen</td>
<td>renal</td>
</tr>
<tr>
<td>[^{89}Zr]-DFO-huJ591</td>
<td>PSMA</td>
<td>prostate</td>
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<tr>
<td>[^{89}Zr]-herceptin</td>
<td>herceptin</td>
<td>breast</td>
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<tr>
<td>[^{111}In]-DOTA-cG250</td>
<td>CA9 antigen</td>
<td>renal</td>
</tr>
<tr>
<td>[^{89}Zr]-DFO-MSTP2109A</td>
<td>PSMA</td>
<td>prostate</td>
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</tbody>
</table>

### Antibodies and Fragments (Therapy)

<table>
<thead>
<tr>
<th>Radiopharmaceutical</th>
<th>Imaging Target</th>
<th>Cancer Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>[^{90}Y]-DOTA-cG250</td>
<td>CA9 antigen</td>
<td>renal</td>
</tr>
<tr>
<td>[^{131}I]-8H9</td>
<td>8H9 antigen</td>
<td>multiple tumors, e.g., leptomeninges (pediatrics)</td>
</tr>
<tr>
<td>[^{131}I]-3F8</td>
<td>disialoganglioside GD2</td>
<td>neuroblastoma (pediatrics)</td>
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<tr>
<td>[^{225}Ac]-lintuzumab</td>
<td>Anti-CD33</td>
<td>acute myeloid leukemia</td>
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</tbody>
</table>

### Nanoparticles (Imaging)

<table>
<thead>
<tr>
<th>Radiopharmaceutical</th>
<th>Imaging Target</th>
<th>Cancer Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>[^{124}I]-Cdot nanoparticles</td>
<td>αvβ3</td>
<td>melanoma</td>
</tr>
</tbody>
</table>