

v	i	L	<i>Node</i>			W
			3. $select_G(2)$			2. $rank_G$
0	0	1	\$	\$	\$	T
1	1	1	C	G	A	C
2	2	1	\$	T	A	C
3	3	0	G	A	C	G
4	4	1	G	A	C	T
5	6	1	T	A	C	G
6	7	0	A	C	G	A
7	8	1	A	C	G	T
8	10	1	T	C	G	A
9	11	1	\$	\$	T	A
10	12	1	A	C	T	\$
			C	G	T	C

Diagram illustrating the selection and rank operations on a binary tree structure. The tree is represented by the columns v , i , L , *Node*, and W . The *Node* column shows the sequence of nodes visited during the selection process, with the selected node highlighted in blue. The W column shows the sequence of weights assigned to the nodes, with the selected node highlighted in blue.

The selection process is shown by the vertical arrows and the sequence of nodes: $select_G(2)$ (3. $select_G(2)$) and $rank_G$ (2. $rank_G$). The selected node is **G** (row 3). The rank of the selected node is calculated as:

4. $rank_{G-}(6) - rank_{G-}(3) = 1 - 0 + 1$ (for G) = 2