

**Algorithm:**  $y := \text{TRMV\_LT\_UNB\_VAR2}(\mathbf{L}, \mathbf{x})$

**Partition**  $L \rightarrow \left( \begin{array}{c|c} L_{TL} & L_{TR} \\ \hline L_{BL} & L_{BR} \end{array} \right), x \rightarrow \left( \begin{array}{c} x_T \\ \hline x_B \end{array} \right)$

**where**  $L_{TL}$  is  $0 \times 0$ ,  $x_T$  is  $0 \times 1$

**while**  $m(L_{TL}) < m(L)$  **do**

**Repartition**

$$\left( \begin{array}{c|c} L_{TL} & L_{TR} \\ \hline L_{BL} & L_{BR} \end{array} \right) \rightarrow \left( \begin{array}{c|c|c} L_{00} & L_{01} & L_{02} \\ \hline L_{10}^T & \lambda_{11} & L_{12}^T \\ \hline L_{20} & L_{21} & L_{22} \end{array} \right),$$

$$\left( \begin{array}{c} x_T \\ \hline x_B \end{array} \right) \rightarrow \left( \begin{array}{c} x_0 \\ \hline \chi_1 \\ \hline x_2 \end{array} \right)$$

$$x_0 := \chi_1 L_{10} + x_0 \text{ where } L_{10} = (L_{10}^T)^T$$

$$\chi_1 := \chi_1 \lambda_{11}$$

**Continue with**

$$\left( \begin{array}{c|c} L_{TL} & L_{TR} \\ \hline L_{BL} & L_{BR} \end{array} \right) \leftarrow \left( \begin{array}{c|c|c} L_{00} & L_{01} & L_{02} \\ \hline L_{10}^T & \lambda_{11} & L_{12}^T \\ \hline L_{20} & L_{21} & L_{22} \end{array} \right),$$

$$\left( \begin{array}{c} x_T \\ \hline x_B \end{array} \right) \leftarrow \left( \begin{array}{c} x_0 \\ \hline \chi_1 \\ \hline x_2 \end{array} \right)$$

**endwhile**