Montrons $\bar{F}(t_i) = \prod_{j=1}^{i} (1 - \lambda(t_j)) \quad \forall i$

On a si $j \geq 2$ $\lambda(t_j) = \frac{p_j}{\bar{F}(t_{j-1})}$ donc $1 - \lambda(t_j) = 1 - \frac{p_j}{\bar{F}(t_{j-1})}$

$$= \frac{\bar{F}(t_{j-1}) - p_j}{\bar{F}(t_{j-1})}$$

$$= \frac{p_j + p_{j+1} + \dots - p_j}{\bar{F}(t_{j-1})}$$

$$= \frac{\bar{F}(t_j)}{\bar{F}(t_{j-1})}$$

si $j = 1$ $\lambda(t_1) = \frac{p_1}{\sum_{j : t_j \geq t_1} p_j} = p_1$

et $1 - \lambda(t_1) = 1 - p_1$
$= p_2 + p_3 + \dots$
$= \bar{F}(t_1)$

On a donc

$$\prod_{j=1}^{i} (1 - \lambda(t_j)) = \prod_{j=1}^{i} \frac{\bar{F}(t_j)}{\bar{F}(t_{j-1})} = \bar{F}(\cancel{t_1}) \frac{\bar{F}(\cancel{t_2})}{\bar{F}(\cancel{t_1})} \cdots \frac{\bar{F}(t_i)}{\bar{F}(\cancel{t_{i-1}})}$$

$$= \bar{F}(t_i).$$