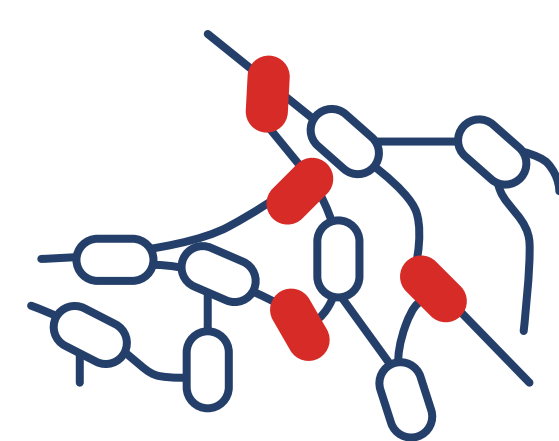


# High-Risk, Early Breast Cancer: Recurrence by Tumor Stage and Nodal Burden and the Importance of Quantifying Risk

## Early breast cancer (EBC) recurrence

Some patients with EBC have cancer cells that are more aggressive and more likely to grow and spread quickly, which means there is a higher risk of the cancer recurring<sup>1,2</sup>

Patients with hormone receptor-positive (HR+)/HER2-negative (HER2-) EBC at high risk of recurrence may present with<sup>3</sup>

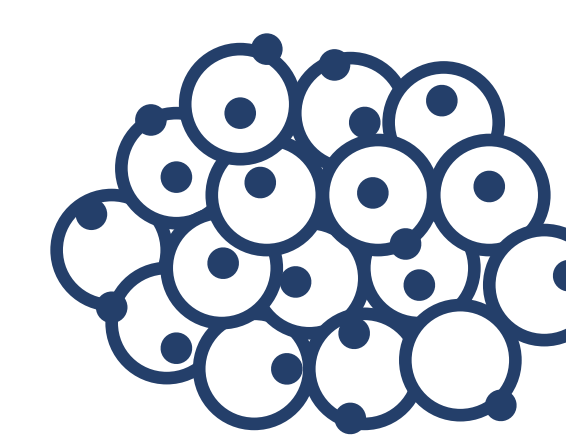
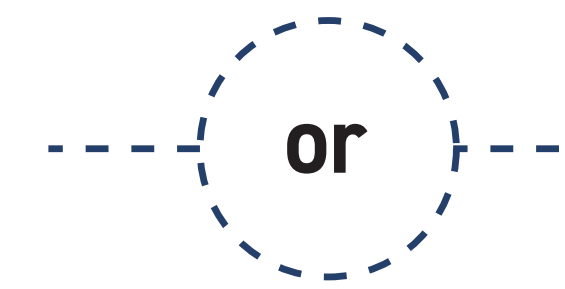


≥4 positive axillary lymph nodes (ALNs)

or 1-3 positive ALNs with



Grade 3 disease

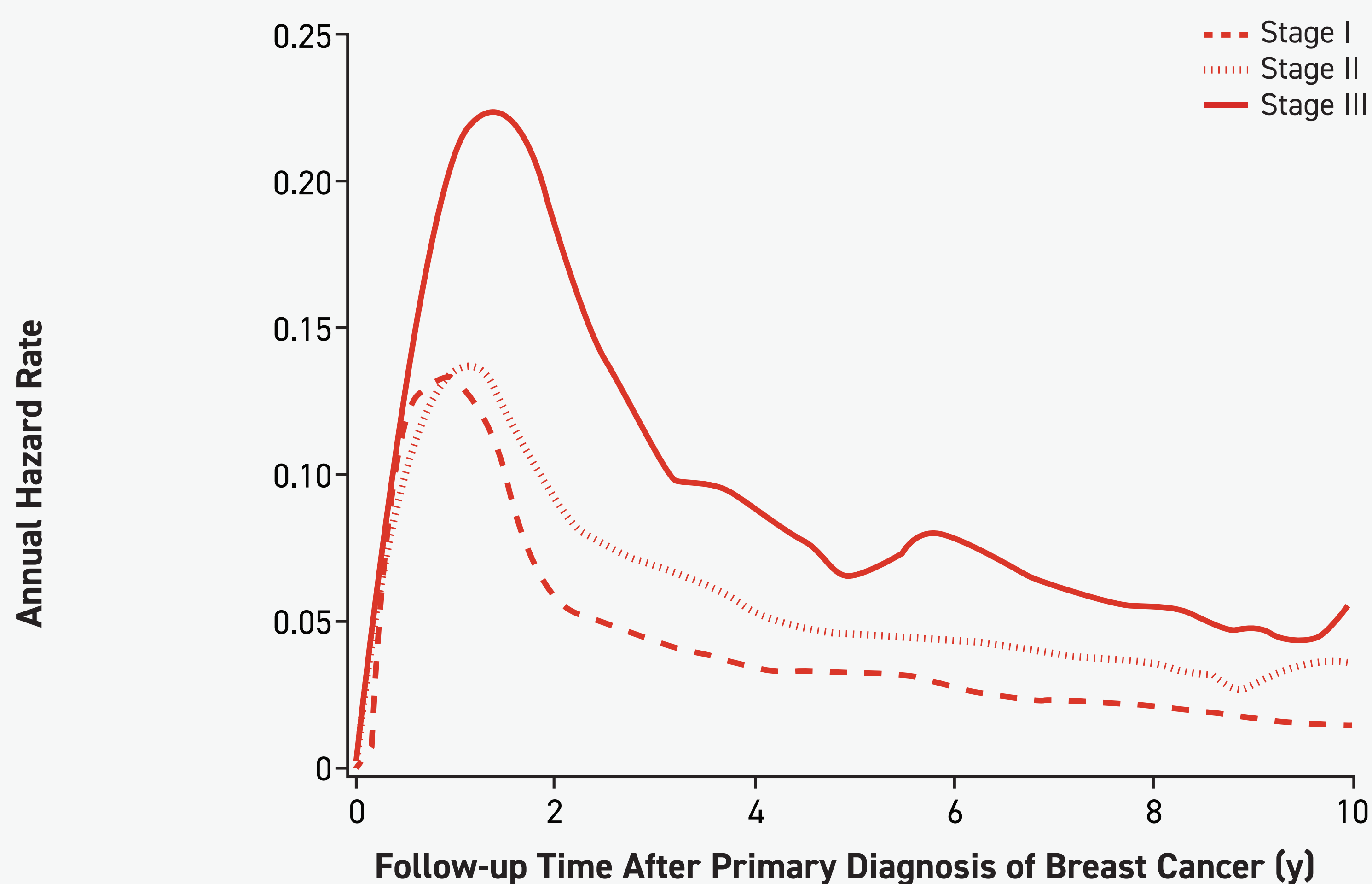


Tumor size ≥5 cm

## Risk of recurrence by tumor stage and nodal status

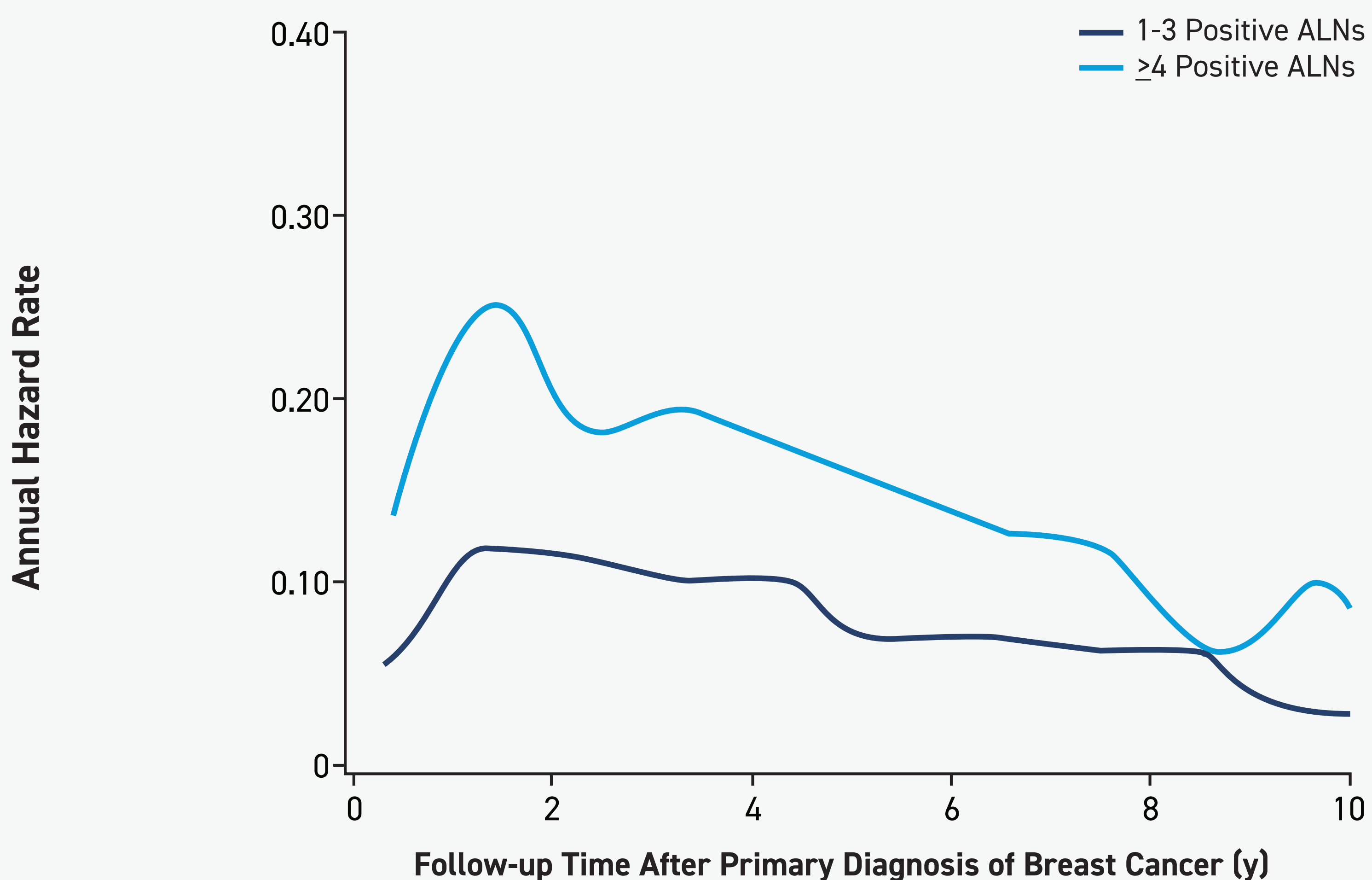
Regardless of disease stage (stage I, II, or III) or nodal status (≥4 ALNs or 1-3 ALNs), a peak in early recurrence was observed in all patients at 2 years after primary diagnosis<sup>4,5</sup>

Risk of Recurrence by Stage in Patients With HR+ EBC<sup>4</sup>



For patients with stage I, II, or III breast cancer, the curves for annual hazard rates were similar, with a steep incline at 1-2 years of follow-up<sup>4</sup>

Risk of Recurrence by Nodal Status in Patients With ER+ EBC<sup>5,a</sup>



For patients with ER+ (estrogen receptor-positive) EBC, the annual hazard rates inclined and peaked between the 1-2 year mark for all patients with nodal involvement (≥4 ALNs and 1-3 ALNs)<sup>5</sup>

<sup>a</sup>ER levels of 10 fmol/mg or greater of cytosol protein based on chemical assay were classified as positive.

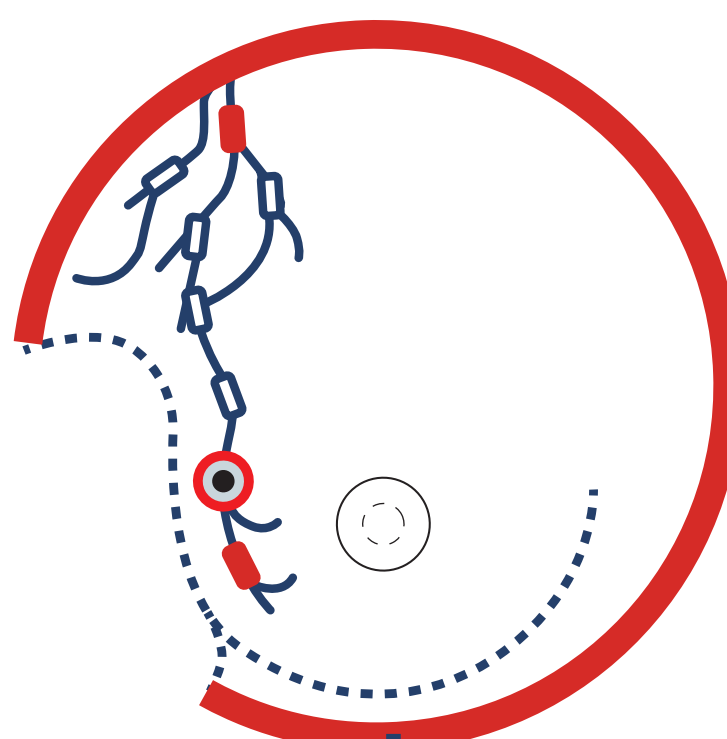
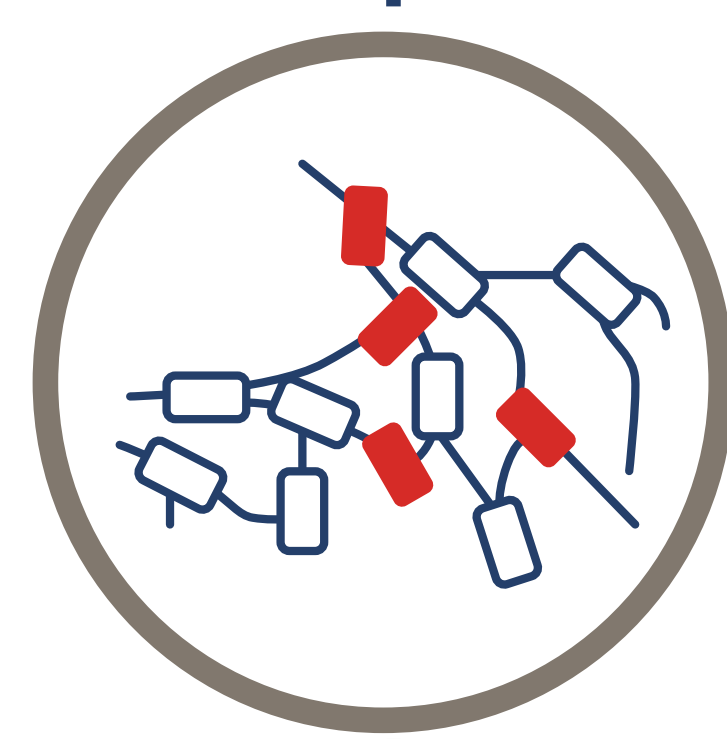

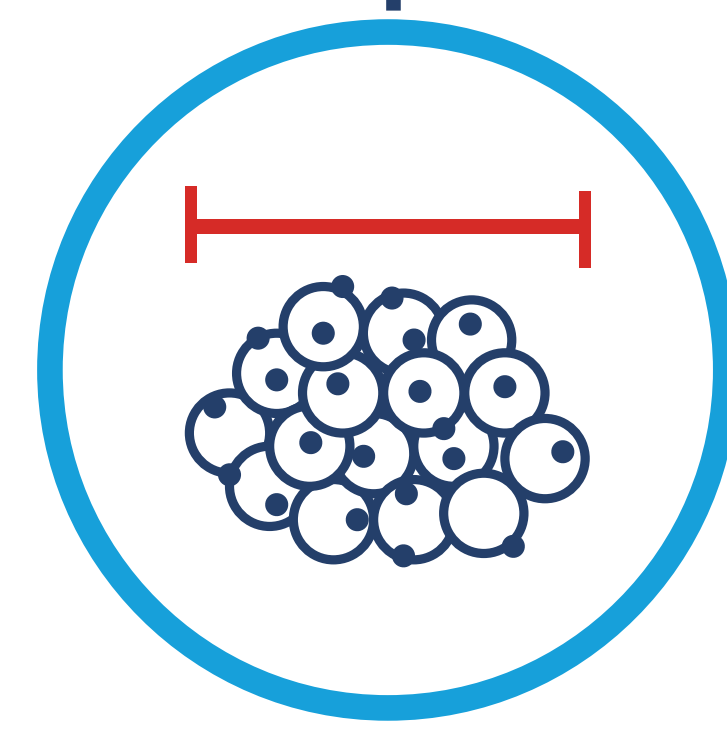
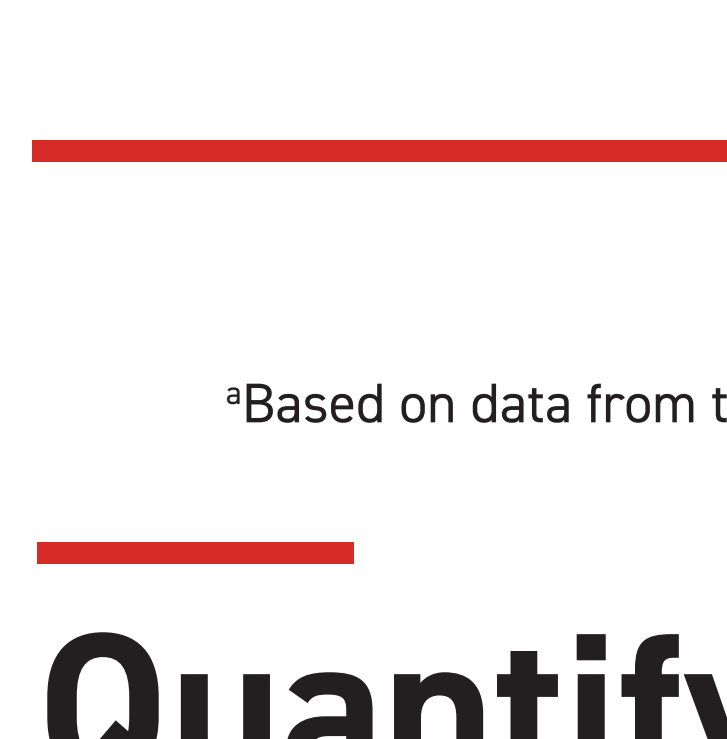
1. <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/recurrent-cancer>. (Accessed March 29, 2023).  
 2. <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/aggressive>. (Accessed March 29, 2023).  
 3. Sheffield KM, et al. *Future Oncol*. 2022;18(21): 2667-2682.  
 4. Cheng L, et al. *Cancer Epidemiol Biomarkers Prev*. 2012;21(5):800-809.  
 5. Colleoni M, et al. *J Clin Oncol*. 2016;34(9):927-935.

# High-Risk, Early Breast Cancer: Recurrence by Tumor Stage and Nodal Burden and the Importance of Quantifying Risk

## Mortality rates of patients with **HR+ /HER2- EBC** by clinical and pathological factors

Higher mortality rates have been observed in patients with HR+ /HER2- EBC who have  $\geq 4$  positive ALNs, grade 3 tumors, and greater tumor size<sup>1</sup>

### 5-Year Mortality Rate (%) in Patients With HR+ /HER2- EBC (N=50,321)<sup>a</sup>

	Overall	18.15	
	Stage	II	12.56
		III	26.41
	ALNs	1-3	12.93
		$\geq 4$	24.75
	Grade 3		25.62
	Tumor Size	$\geq 2$ cm to $< 3$ cm	15.10
		$\geq 3$ cm to $< 4$ cm	21.22
		$\geq 4$ cm to $< 5$ cm	26.41
		$\geq 5$ cm	28.67

Mortality rate doubles for patients with stage III vs those with stage II disease

Mortality rate nearly doubles for patients with  $\geq 4$  ALNs vs those with 1-3 ALNs

### Other factors associated with higher mortality rates<sup>1,2</sup>

Male sex | Aged  $\geq 70$  years | American Indian/Alaska Native (non-Hispanic) | Black (non-Hispanic)

<sup>a</sup>Based on data from the Surveillance, Epidemiology, and End Results (SEER) Program 2010-2016; the American Joint Committee on Cancer (AJCC) defines T1 tumors as  $\leq 2$  cm, T2 tumors as  $> 2$  cm to  $\leq 5$  cm, and T3 tumors as  $> 5$  cm in greatest dimension.

## Quantifying risk of recurrence with patients



As health care providers, it is important to help our patients with breast cancer have a **quantitative understanding** of their risk of recurrence over the course of their treatment journey

Knowledge on disease prognosis may help patients adjust expectations, boost treatment adherence, and increase involvement in shared decision-making<sup>3</sup>

1. Brown J, et al. Poster presented at: SABCS 2019. Poster P5-08-18.

2. Daly B, et al. JAMA. 2015;313(2):141-2.

3. Ciria-Suarez L, et al. Front Psychol. 2020;11:540083.