# A Retrospective Cohort Study to Evaluate the Disease Burden, Treatment Patterns, Healthcare Resource Utilization, and Costs in Patients with Breast Cancer in Dubai, UAE

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### Background

- Globally, breast cancer (BC) is the most frequently occurring cancer, with an estimated incidence of 12.5%.<sup>1</sup>
- The current study evaluated the disease burden, healthcare resource utilization, and associated costs in BC-diagnosed patients, as well as the cost burden due to events of special interest in BC patients and subset of patients treated with CDK4/6 inhibitors(CDK4/6 inhibitors were chosen as the index drug, and costs due to events of special interests (adverse effects) specific to CDK4/6 inhibitors, including cardiac rhythm abnormalities, hepatic events, diarrhea, neutropenia, venous thromboembolism, heart failure, and interstitial lung disease, were assessed), as captured in the insurance e-claim data.

## **Methods**

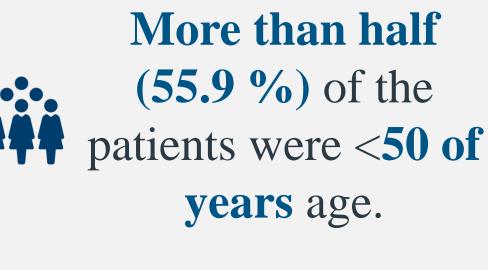
- This retrospective study was conducted from 01 January 2014 to 30 September 2021 using insurance e-claims data from the Dubai Real-World Database.
- Female patients aged ≥18 years with at least
  1 diagnosis claim for BC and continuous
  enrollment during the index period were
  included.

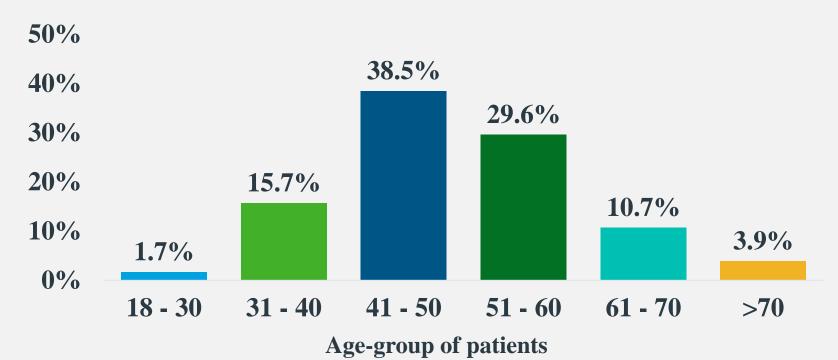
### **III.** Results

### 1. Baseline characteristics in BC patients

Overall, 8,031 patients were diagnosed with BC, with age information available for 1,960 patients and the median age being 49.0 years (Figure 1). Most patients (70.2%) had a CCI risk score of 0.

Figure 1: Percentage of patients in different age groups





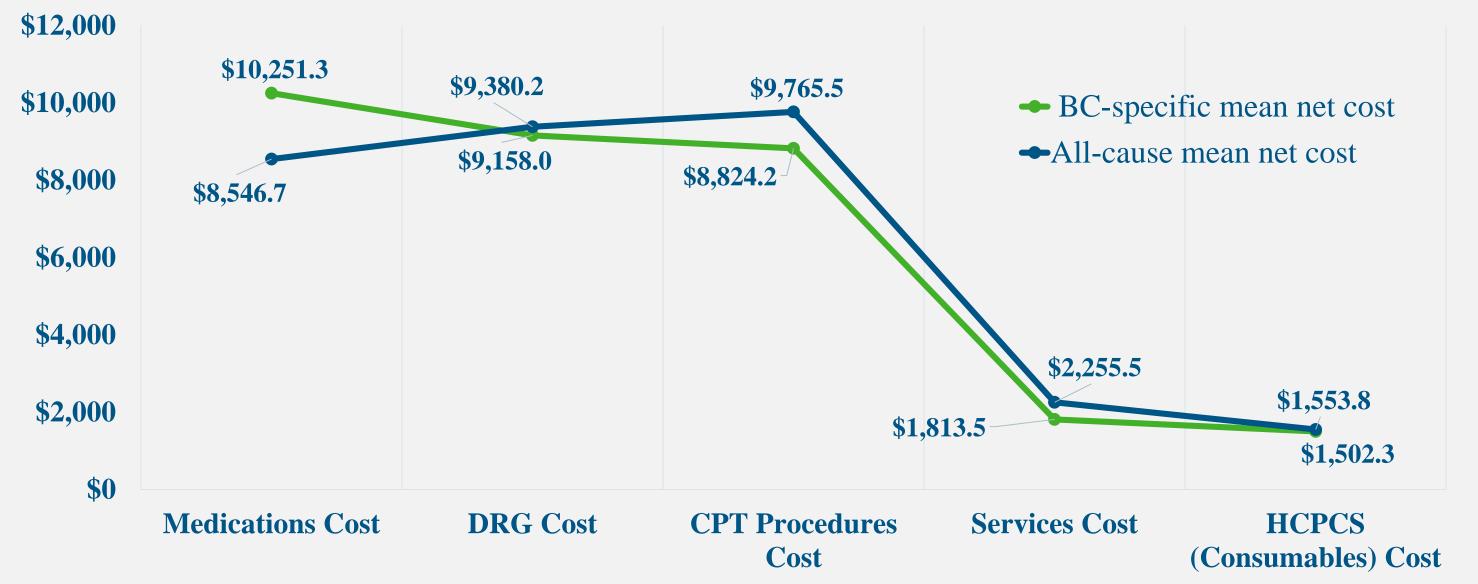
#### 2. HCRU in BC patients: All-cause and BC-specific costs

During the 12-month follow-up period, inpatient costs (USD 16,956.2), based on visit type and medication costs (USD 10,251.3), based on activity type, contributed significantly to BC-specific costs (Figures 2 and 3).

Figure 2: BC-specific and all-cause costs (gross cost) by visit type



Figure 3: BC-specific and all-cause costs (net cost) by activity type





During the 12-month follow-up period, BC-specific costs contributed to 84% of the overall disease burden in BC patients.

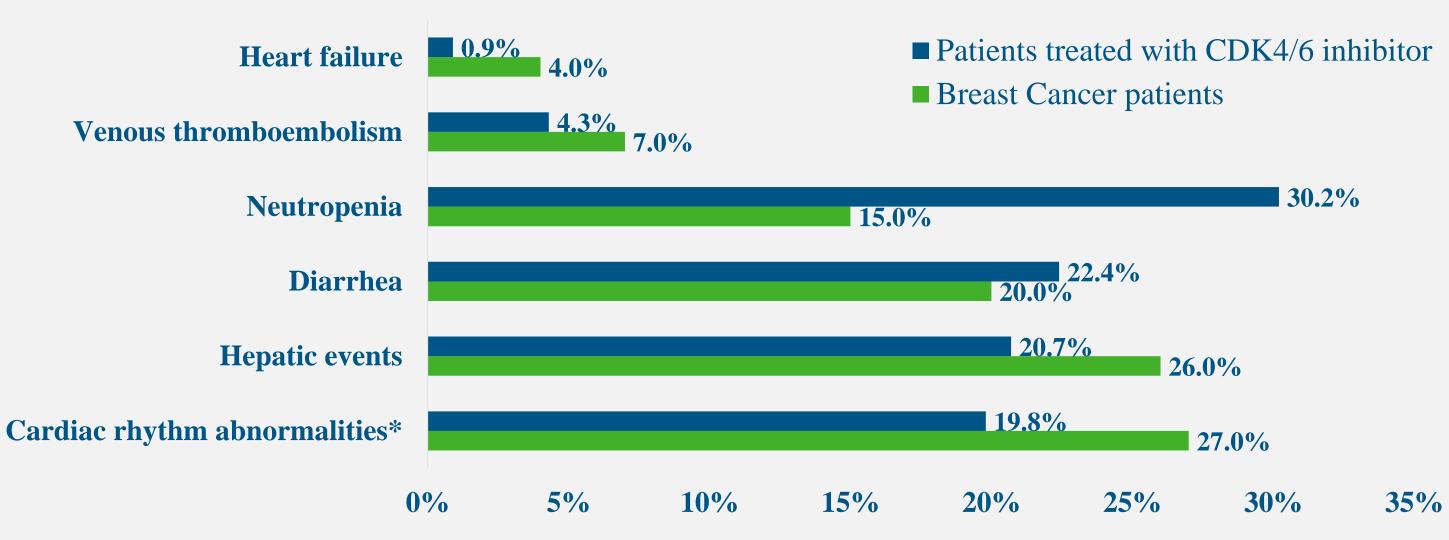
# 3. Treatment pattern in the subset of patients treated with CDK4/6 inhibitors

In the subgroup of patients in whom CDK4/6 inhibitors were part of the regimen (n = 174), CDK4/6 inhibitors were commonly prescribed in combination with aromatase inhibitors (41.4%) and estrogen receptor antagonists (17.9%); CDK4/6 inhibitors were prescribed as monotherapy to 17.1% of patients.



# 4. Percentage of events of special interest in BC patients and in the subset of patients treated with CDK4/6 inhibitors

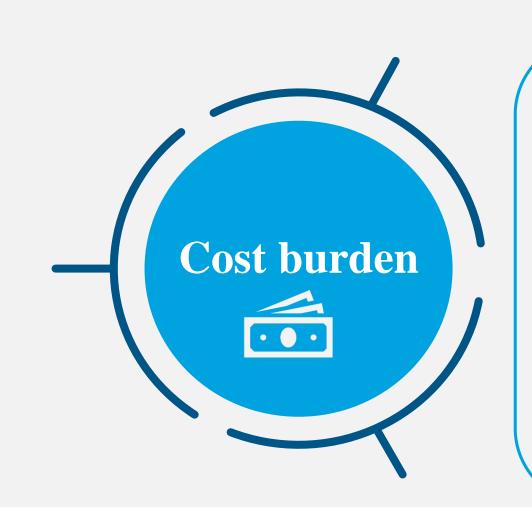
Figure 4: Events of special interests



\*Cardiac rhythm abnormalities in this study included abnormalities of heart rhythm, **arrhythmias**, atrial fibrillation and flutter, cardiac arrhythmias, and heart block.

When compared with BC patients, in the subset of BC patients treated with CDK4/6 inhibitors, neutropenia and diarrhea were reported more frequently than other events of interest.

#### 5. HCRU due to events of special interest in BC patients



In BC patients, costs due to events of special interest added to the health care cost burden (mean cost due to events of special interest was USD 7,760 in BC patients and USD 12,524 in the subset of BC patients treated with CDK4/6 inhibitors).

# <sup>2</sup> Conclusions

- The study findings showed that 55.9% of patients diagnosed with BC were less than 50 years of age and highlighted the need for modifying current screening recommendations in the UAE (routine screening for BC is not recommended for BC in the female population below 40 years of age).
- Our study was one of the first to report the cost burden of events of special interest in BC patients, and the findings suggest that costs due to events of special interest are an additional burden to health care costs in BC patients.
- Payers and providers should implement future policy measures aimed at reducing the cost burden due to inpatient (based on visit type), medication costs (based on activity type) and costs due to events of special interest in BC patients.

### Reference

1. Breast cancer facts and statistics [Available from: <a href="https://www.breastcancer.org/facts-statistics">https://www.breastcancer.org/facts-statistics</a>]

### **Abbreviations**

BC: Breast cancer; CDK: Cyclin-dependent kinase; CPT: Current procedural terminology; DRG: Diagnosis-related group; HCPCS: Healthcare Common Procedure Coding System; HCRU: Health care resource utilization; USD: United States dollar.

