

## PRODUCT MONOGRAPH

**PrPHARMORUBICIN\* PFS**

epirubicin hydrochloride injection

2 mg/mL

Professed Standard

**Antineoplastic agent**

Pfizer Canada Inc  
17,300 Trans-Canada Highway  
Kirkland, Quebec H9J 2M5

Date of Revision:  
July 09, 2014

Submission Control No.: 173657

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Par Pharm., Inc.  
Exhibit 1107  
Par Pharm., Inc. v. Novartis AG  
Case IPR2016-01479

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## PHARMORUBICIN® PFS\*

epirubicin hydrochloride injection

### PART I: HEALTH PROFESSIONAL INFORMATION

#### CAUTION

PHARMORUBICIN PFS (EPIRUBICIN HYDROCHLORIDE INJECTION) IS A POTENT DRUG AND SHOULD BE USED ONLY BY PHYSICIANS EXPERIENCED WITH CANCER CHEMOTHERAPEUTIC DRUGS (SEE WARNINGS AND PRECAUTIONS). BLOOD COUNTS AND HEPATIC FUNCTION TESTS SHOULD BE PERFORMED REGULARLY. IRREVERSIBLE CARDIAC TOXICITY MAY OCCUR AS THE CUMULATIVE DOSE APPROACHES 1000 mg/m<sup>2</sup>. CARDIAC MONITORING IS ADVISED IN THOSE PATIENTS WHO HAVE RECEIVED MEDIASTINAL RADIOTHERAPY, OTHER ANTHRACYCLINE OR ANTHRACENE THERAPY, WITH PRE-EXISTING CARDIAC DISEASE, OR RECEIVED PRIOR EPIRUBICIN CUMULATIVE DOSES EXCEEDING 650 mg/m<sup>2</sup>.

SECONDARY ACUTE MYELOID LEUKEMIA (AML) WITH OR WITHOUT A PRELEUKEMIC PHASE (MYELOYDYSPLASTIC SYNDROME OR MDS) HAS BEEN REPORTED IN PATIENTS TREATED WITH EPIRUBICIN-CONTAINING REGIMENS. THE CUMULATIVE RISK OF DEVELOPING TREATMENT-RELATED AML/MDS IN 7110 PATIENTS WITH EARLY BREAST CANCER WHO RECEIVED ADJUVANT TREATMENT WITH EPIRUBICIN-CONTAINING REGIMENS WAS ESTIMATED AS 0.27% AT 3 YEARS, 0.46% AT 5 YEARS, AND 0.55% AT 8 YEARS.

#### SUMMARY PRODUCT INFORMATION

Route of Administration	Dosage Form / Strength	Clinically Relevant Nonmedicinal Ingredients
Intravenous	Sterile solution for injection / 2 mg/mL	Not Applicable. <i>For a complete listing see Dosage Forms, Composition and Packaging section.</i>

## INDICATIONS AND CLINICAL USE

PHARMORUBICIN PFS (epirubicin hydrochloride injection) has been used successfully as a single agent and in combination with other chemotherapeutic agents to produce regression in a variety of tumour types such as lymphoma, lung, cancer of the breast, ovary and stomach.

PHARMORUBICIN PFS is recommended for the treatment of metastatic breast cancer.

PHARMORUBICIN PFS may also be used as a component in the adjuvant treatment of early stage breast cancer for pre- and peri- menopausal women.

PHARMORUBICIN PFS is also recommended in small cell lung cancer (both limited and extensive disease) advanced non-small cell lung cancer, non-Hodgkin's lymphoma, Hodgkin's disease, Stage III and IV (FIGO) ovarian carcinoma and metastatic and locally unresectable gastric carcinoma.

## CONTRAINDICATIONS

- Hypersensitivity to epirubicin or any other component of the product, or other anthracyclines or anthracenediones such as doxorubicin hydrochloride, daunorubicin hydrochloride, mitoxantrone or mitomycin C.
- marked persistent myelosuppression induced by prior treatment with other antitumour agents or by radiotherapy
- severe hepatic impairment
- severe myocardial insufficiency
- recent myocardial infarction
- severe arrhythmias
- history of severe cardiac disease
- previous treatments with maximum cumulative doses of epirubicin and/or other anthracyclines and anthracenediones (see WARNINGS AND PRECAUTIONS).

## WARNINGS AND PRECAUTIONS

### Serious Warnings and Precautions

- PHARMORUBICIN PFS (EPIRUBICIN HYDROCHLORIDE INJECTION) IS A POTENT DRUG AND SHOULD BE USED ONLY BY PHYSICIANS EXPERIENCED WITH CANCER CHEMOTHERAPEUTIC DRUGS (SEE WARNINGS AND PRECAUTIONS). BLOOD COUNTS AND HEPATIC FUNCTION TESTS SHOULD BE PERFORMED REGULARLY. IRREVERSIBLE CARDIAC TOXICITY MAY OCCUR AS THE CUMULATIVE DOSE APPROACHES 1000 mg/m<sup>2</sup>. CARDIAC MONITORING IS ADVISED IN THOSE PATIENTS WHO HAVE RECEIVED MEDIASTINAL RADIOTHERAPY, OTHER ANTHRACYCLINE OR ANTHRACENE THERAPY, WITH PRE-EXISTING CARDIAC DISEASE, OR RECEIVED PRIOR EPIRUBICIN CUMULATIVE DOSES EXCEEDING 650 mg/m<sup>2</sup>.
- SECONDARY ACUTE MYELOID LEUKEMIA (AML) WITH OR WITHOUT A PRELEUKEMIC PHASE (MYELODYSPLASTIC SYNDROME OR MDS) HAS BEEN REPORTED IN PATIENTS TREATED WITH EPIRUBICIN-CONTAINING REGIMENS. THE CUMULATIVE RISK OF DEVELOPING TREATMENT-RELATED AML/MDS IN 7110 PATIENTS WITH EARLY BREAST CANCER WHO RECEIVED ADJUVANT TREATMENT WITH EPIRUBICIN-CONTAINING REGIMENS WAS ESTIMATED AS 0.27% AT 3 YEARS, 0.46% AT 5 YEARS, AND 0.55% AT 8 YEARS.
- SEVERE LOCAL TISSUE NECROSIS ASSOCIATED WITH EXTRAVASATION DURING ADMINISTRATION
- MYOCARDIA TOXICITY, MANIFESTED IN ITS MOST SEVERE FORM BY POTENTIALLY FATAL CONGESTIVE HEART FAILURE (CHF)
- SEVERE MYELOSUPPRESSION

### **Cardiac Function:**

Cardiotoxicity is a risk of anthracycline treatment that may be manifested by early (i.e., acute) or late (i.e., delayed) events.

**Early (i.e., Acute) Events.** Early cardiotoxicity of epirubicin consists mainly of sinus tachycardia and/or ECG abnormalities such as non-specific ST-T wave changes. Tachyarrhythmias, including premature ventricular contractions, ventricular tachycardia, and bradycardia, as well as atrioventricular and bundle-branch block have also been reported. These effects do not usually predict subsequent development of delayed cardiotoxicity, are rarely of

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