



<b>Title</b>	<b>Drug-induced agranulocytosis in Southern Chinese population: a twelve-year retrospective study</b>
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## An observational study to evaluate the therapeutic efficacy and safety of platelet components prepared with the INTERCEPT process

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Transfusion support is an essential part of haematopoietic stem cell transplant (HSCT). Platelet components for transfusion are stored at room temperature as cold temperatures induce aggregation of von Willebrand factor receptors and subsequent platelet elimination by liver macrophages. However, storage at room temperature increases the risk of bacterial contamination (estimated to be 1/2000 to 1/3000 platelet units).

The amotosalen / UVA-based INTERCEPT Blood System (IBS; Cerus Corporation, Concord CA, US) is one pathogen inactivation technology which inactivates pathogen through a photochemical reaction preventing DNA replication and RNA transcription. I-PLT (INTERCEPT-treated Platelet) has the further advantage of lymphocyte inactivation, obviating the need for gamma-irradiation for transfusion-associated graft-versus-host disease (TA-GvHD) prophylaxis in HSCT recipients. IBS has received national registration in France (Afssaps), Germany (Paul Ehrlich Institute), and Switzerland (Swissmedic) as well as in other countries. Here we conduct a prospective study to evaluate the therapeutic efficacy and safety of I-PLT in Hong Kong Chinese HSCT recipients.

## Drug-induced agranulocytosis in Southern Chinese population: a twelve-year retrospective study

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**Introduction:** Drug-induced agranulocytosis is a rare but serious adverse drug reaction. There are, however, limited studies on the epidemiology of drug-induced agranulocytosis in the Chinese population.

**Methods:** We performed a descriptive analysis on drug-induced agranulocytosis in Hong Kong. Data were obtained from Hong Kong Clinical Data Analysis and Reporting System database. Patients with agranulocytosis (ICD-9 code: 288.0) during 2002 to 2012 were investigated. Laboratory data and prescription records were reviewed to identify drug-induced cases.

**Results:** A total of 215 cases were identified from the database. The incidence rate was estimated to be 2.58 per million people per year. The mean age was 53±20.9 years and male-to-female ratio was 0.71:1. Case fatality rate was 7.4% and all the deaths were aged over 60 years. Anti-thyroid drugs (33%) was the most common group of causative drugs, in which 62% were derived from carbimazole. Antibiotics were the second most common in 32.6% of patients with penicillin (34.3%) being the most implicated drug. Anticonvulsants were responsible in 9.3% of cases, in which phenytoin (65%) was more common than other anticonvulsants. Other causative drugs include antipsychotics (clozapine), gout suppressants (allopurinol, colchicine), antiplatelet agent (clopidogrel), and iron-chelating agent (deferiprone).

**Conclusion:** This is the first epidemiological study in Southern Chinese population. Results were comparable to studies in other populations.