

STABILITY OF DILUTED AND RECONSTITUTED ANTINEOPLASTIC DRUGS: UPDATED 2014

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BACKGROUND: The lack of studies published on stability of antineoplastic drugs and the contradictory character of the information available raised the need to carry out an internal review process in our hospital.

PURPOSE: To identify the antineoplastic drugs included in the hospitals' Therapeutic Prescription Guide in search for data concerning the physico-chemical stability of vials after opening and/or reconstitution.

MATERIALS AND METHODS:

All information available in Technical Data Sheets (AGEMED) Micromedex®, Stabilis®, and papers was bibliographically reviewed on PubMed and updated guides published by other hospitals in order to establish the physico-chemical stability of these type of drugs.

RESULTS: The stability of 35 cytostatic drugs being used at the hospital was studied in order to establish the following conditions and maximum conservation times:



24 months refrigerated (α 2-B interferon), 90 days at room temperature (RT) (cetuximab), 90 days refrigerated and protected from light (PL) (bevacizumab), 31 days refrigerated PL (pemetrexed), 30 days refrigerated and PL (methotrexate, rituximab, vinorelbine), 28 days at RT (eribulin, etoposide, paclitaxel), 28 days at RT and PL (cisplatin, docetaxel, fluorouracil), 28 days refrigerated (vinblastine), 28 days refrigerated and PL (doxorubicin, pegylated liposomal doxorubicin), 26 days at RT and PL (fludarabine), 22 days refrigerated (mitoxantrone), 21 days refrigerated and PL (carboplatin, ifosfamide), 14 days refrigerated and PL (cyclophosphamide, farmorubicina (epirubicin), oxaliplatin, topotecan, mitomycin, vincristine), 8 days frozen with WFI (water for injection) (azacitidine), 7 days at RT (carmustine, irinotecan), 7 days refrigerated (cytarabine), 7 days refrigerated and PL (dactinomycin, daunoblastina (daunorubicin), gemcitabine, liposomal doxorubicin unpegylated, idarubicin).

CONCLUSIONS:

The conservation protocol was modified for cytostatic vials that had been open/ reconstituted under aseptic conditions using a vertical laminar flow cabin depending on their maximum stabilities. The resulting document was therefore incorporated to the work's regular practice. This fact implies the safe use of medicines and significant savings on these costly drugs.