



TECHNOLOGY

Prednisone Taper Calculator: Steroid Taper Calculator for the Treatment of Immune Adverse Reactions to Immune Checkpoint Inhibitors

OVERVIEW

Immune check-point inhibitors (ICPI) in combination with immunotherapies have been successful in treating solid tumors. However, 7-60% of patients using the ICPI combination therapy experience side effects, which can manifest as autoimmune attacks and can potentially become life threatening. The side effects can be treated successfully with high doses of corticosteroids (e.g. Prednisone 0.5 – 2 mg/kg), which must then be gradually tapered off to minimize withdrawal, usually over the course of one to several months. Currently there is no guideline or standard procedure to assist healthcare providers in scheduling a patient's dosage reduction of Prednisone. Abrupt changes can lead to a Prednisone withdrawal, which can necessitate admission into a hospital. In order to allow a more gradual change in dosage, a Prednisone Taper Calculator has been developed to easily and reproducibly calculate a gradual reduction of a patient's Prednisone dosage over the course of a month. A patient's specifications, starting dose, ending dose, and taper period can be adjusted and customized as needed. The output can be provided as a simple scheduling sheet with detailed instructions for a patient's daily dose in the morning, afternoon, and evening. The instructions will also include the number of pills required in the varying concentrations and combinations. With the Prednisone Taper Calculator, patients with autoimmune adverse events from ICPIs can be treated according to a logical, reproducible schedule to reduce the possibility of prednisone withdrawal.

APPLICATIONS

Prednisone is a synthetic corticosteroid commonly used as an immunosuppressant.

About 10 million new prescriptions for oral glucocorticoids are issued each year in the USA

ADVANTAGES

Prednisone Taper Calculator provides a simple, user friendly platform to automatically calculate a patient's medication schedule in a detailed but easily understood format.

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