

BioJoin Phase 3: Biomedical Information Systems for Future Healthcare

by Daniel Alejandro Rosa Aparicio and Tulga-Erdene Sobjargal

Patient Name: Mr. Chad Cook
Patient ID: 114

Disease Risk Information:

\$Hyperbilirubinemia, Rotor type, digenic\$

Pharmacogenomics data:

Affected Drugs:

hmg coa reductase inhibitors

Other Names: statin, statins
No side effects found

rosuvastatin

Other Names: ZD-4522, rosuvastatin calcium

Side effects found: Abdominal pain, from 1.8% to 2.4%, common; Amnesia, very rare; Angioedema, rare; Arrhythmia, postmarketing; Arthralgia, from 10% to 7.1%, very rare; Asthenia, from 0.9% to 4.7%, common; Mental disorder, postmarketing; Breast disorder, postmarketing; Cognitive disorder, postmarketing; Confusional state, postmarketing; Constipation, from 2.1% to 4.7%, common; Depression, postmarketing; Dermatitis, uncommon; Diabetes mellitus, from 2.3% to 2.8%; Dizziness, from 2.8% to 4%, common; Rash, uncommon; Gynaecomastia, very rare; Headache, from 3.1% to 8.5%, common; Blood disorder, postmarketing; Hepatitis, very rare; Hypersensitivity, rare; Jaundice, very rare; Renal failure acute, postmarketing; Myopathy, rare; Musculoskeletal disorder, postmarketing; Myoglobinuria, postmarketing; Myositis, rare; Nausea, from 0% to 6.3%, common; Nervous system disorder, very rare; Nightmare, postmarketing; Pancreatitis, rare; Neuropathy peripheral, postmarketing; Pruritus, uncommon; Rhabdomyolysis, very rare; Thrombocytopenia, postmarketing; Urticaria, uncommon; Hepatic failure, postmarketing; Muscular weakness, postmarketing; Myalgia, from 1.3% to 7.6%, postmarketing; Memory impairment, postmarketing; Hepatobiliary disease, postmarketing; Muscle swelling, postmarketing; Cognitive impairment, postmarketing; Forgetfulness, postmarketing; Drug interaction, postmarketing; Gastrointestinal pain, from 1.8% to 2.4%, common; Memory loss, very rare; Sleep disorder, postmarketing; Myoglobin urine present, postmarketing; Insomnia, postmarketing; Musculoskeletal discomfort, from 1.3% to 7.6%, very rare; Feeling abnormal, postmarketing; Immune-mediated necrotising myopathy, postmarketing

A study on this pharmacogenomic interaction is found. A direct quote is below.

In 247 patients with good adherence, the rs4149081 G>A polymorphism was significantly associated with a 4.6 and 4.0% greater low-density lipoprotein cholesterol (LDL-C) reduction compared with those with wild-type alleles in response to rosuvastatin and simvastatin, respectively ($P < 0.05$ for both). This effect was reported in Pharmacogenetics and genomics in 2012 in a study called "Intronic variants in SLCO1B1 related to statin-induced myopathy are associated with the low-density lipoprotein

cholesterol response to statins in Chinese patients with hyperlipidaemia.". You can find more information by searching the paper by its PMID, which is 22668755.

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