GOLD (SODIUM AUROTHIOMALATE)
MEDICATION PROTOCOL FOR ADMINISTERING PHYSICIANS

I would like to Acknowledge Dr. Alice Klinkhoff & Jane Prince RN, BScN at the Mary Pack Arthritis Center in Vancouver, British Columbia for providing the information for the development of this document.

INDICATIONS
- Rheumatoid Arthritis, persistent polyarthritis, erosive polyarthritis

CONTRAINDICATIONS
- Blood dyscrasias, Baseline proteinuria, Renal failure, Systemic Lupus Erythematosus, Previous myelotoxic reaction to gold

DOSE & SUPPLY
- Supplied in boxes of 3 – 1mL ampules containing 10, 25, or 50 mg/mL
- Week #1: 10 mg IM injection, Week #2: 25 mg IM injection, Weekly thereafter: 50 mg until RA is optimally controlled or side effects develop
- Every 2 weeks: When optimal control is achieved

ADMINISTRATION
- Given by intramuscular injection (buttock) one day per week. May be self-injected into the thigh muscle

MONITORING

Time Period	Recommended Monitoring Parameters
Baseline	Hemoglobin, WBC with differential, Platelets, Creatinine, & Urinalysis
Weekly for the first 4 weeks	CBC, Platelets, & Urinalysis
Every 2 weeks until 20 weeks	CBC, Platelets, & Urinalysis
Every 3 weeks until 52 weeks	CBC, Platelets, & Urinalysis
Every 4-8 injections ongoing	CBC, Platelets, & Urinalysis

SIDE EFFECTS AND MANAGING SIDE EFFECTS

Side Effect	Manifestations	Management
Mucocutaneous Reactions	• **Pruritis:** Commonly precedes a rash (30%). Common sites are behind or in the ears, the axillae, groin, antecubital region, or periorbital. • **Skin Rash:** (30%) • **Mouth Sores:** On tongue, gums or inner cheeks (20%) • **Metallic Taste** • **Vaginal Burning or Itching**	➢ Hold the gold until the side effects subside and reintroduce at 50% of the previous dosage ➢ If side effects recur, discontinue again and resume at 50% of the previous dosage ➢ Following this protocol, gold may be administered to sensitive patients at doses as low as 2 mg weekly. If weekly 2 mg causes side effects, give gold at 2-6 week intervals. ➢ Topical therapy for itchiness or rash are Aveeno bath treatment (100% natural colloidal oatmeal), and various anti-itch creams (Benadryl, Aveeno, or Hydrocortisone). ➢ Severe generalized rash may require prednisone for 1-3 weeks. ➢ Antihistamines such as benadryl 25-50 mg every 4-6 hours prn may be required. ➢ Therapy for mouth sores are mouth rinses with warm water and salt; Orabase non-prescriptive protective ointment; and by prescription Oracort or Topsyn gel may be required.
Post Injection Arthralgia/Flare	• Usually occurs within 1-2 days following an injection.	➢ Reduce the dose by 50% until reactions no longer occur.

	Appear to be dose related and typically occur early in gold therapy.	
Nitritoid Reactions	• May occur any time during the treatment course. • Usually mild and transient, with symptoms including nausea, facial flushing, dizziness, and hypotension occasionally leading to syncope. • Increased incidence of nitritoid reactions with the use of ACE inhibitors	➢ When possible, avoid ACE inhibitors or modify gold regimen using 25 mg weekly dosage initially. ➢ Reduce gold therapy to 50% of previous dosage and observe patient following each injection until reactions no longer occur.
Chrysiasis	• A graying discolouration of the skin and cornea has been observed after many years of gold therapy. • Chrysiasis is increased after sun exposure.	➢ In patients on long term gold therapy, protection from ultraviolet light is recommended.
Proteinuria	• Usually occurs in patients on 50 mg/week	➢ Hold gold and do 24 hour urine for protein. ➢ If proteinuria is >500 mg/dL/24 hours, discontinue gold while proteinuria subsides. May take up to 3 months. ➢ When proteinuria is <250 mg/dL/24 hours, gold may be safely resumed at 50% of the previous dosage.
Falling WBC (Leukopenia)	• Occurs in up to 2%	➢ If WBC <4000, hold the gold and evaluate for potentially confounding factors, viral illness or Felty's syndrome. ➢ If neutropenia is temporary or non-progressive, gold may be resumed with careful monitoring.
Thrombocytopenia	• Occurs typically in the first 6 months of therapy. • Sudden drop in platelets by 50% of the previous amount is worrisome.	➢ Platelets <125,000 – Discontinue gold permanently. Evaluate for gold induced thrombocytopenia, which manifests with continuous and exponential fall in platelets leading to petechiae and bleeding complications. Treatment requires 30-60 mg of prednisone per day.
Pneumonitis	• Rare, occurs in < 1 in 1000 patients. • Manifest by shortness of breath, couth, and interstitial pneumonitis on Chest x-ray.	➢ High dose prednisone is required. ➢ Gold therapy is discontinued permanently.
Colitis	• Rare	➢ Requires permanent discontinuation of gold.

DRUG INTERACTIONS
- ACE-Inhibitors may increase the risk of nitritoid reactions.

PRECAUTIONS
- Q-switched, Ruby Laser skin therapy can result in disfiguring skin pigmentation

PREGNANCY
- Gold therapy is usually stopped when pregnancy is confirmed. However, it has been used safely during pregnancy and by nursing mothers.

ILLNESS/SURGERY
- Gold therapy may be continued safely throughout illness or surgery.