

PEGYLATED INTERFERON (PEGINTERFERON) alfa-2a

CLASS: Interferon

INDICATIONS:

Chronic hepatitis B: Treatment of adults with hepatitis B e antigen (HBeAg)-positive and HBeAG-negative chronic hepatitis B virus (HBV) infection who have compensated liver disease and evidence of viral replication and liver inflammation

Chronic hepatitis C:

Treatment of patients with chronic hepatitis C virus (HCV) infection who have compensated liver disease and have not been previously treated with interferon alfa, alone or in combination with ribavirin (monotherapy with peginterferon alfa-2a is not recommended for treatment of chronic hepatitis C infection unless a patient has a contraindication to or significant intolerance of ribavirin). Efficacy was demonstrated in patients with compensated liver disease and histological evidence of cirrhosis (Child-Pugh class A), and adult patients with clinically stable HIV disease (CD4 count >100 cells/mm³).

Combination with ribavirin and an HCV NS3/4A protease inhibitor is indicated in adults with HCV genotype 1.

Combination with ribavirin is indicated in patients with HCV genotypes other than 1, children ≥ 5 years of age and adolescents, or patients with HCV genotype 1 where use of an HCV NS3/4A protease inhibitor is not warranted based on tolerability, contraindications or other clinical factors.

AVAILABLE DOSAGE FROM THE HOSPITAL:

PEG INTERFERON 100MCG VIAL

PEG INTERFERON 135MCG/VIAL

PEG INTERFERON 180MCG/1VIAL

PEG INTERFERON 80MCG VIAL

PEG INTERFERON 120MCG VIAL

PEG INTERFERON 150MCG VIAL

DOSAGE:

-Chronic hepatitis C (mono-infection or coinfection with HIV): SubQ: 180 mcg once weekly for 48 weeks as monotherapy or in combination with ribavirin (Copegus®)

Duration of combination therapy: Mono-infection (based on genotype):

Genotypes 1,4: 48 weeks

Genotypes 2,3: 24 weeks

Genotypes 5,6: No dosing recommendations provided; data insufficient

Duration of therapy: Coinfection with HIV: 48 weeks

Note: American Association for the Study of Liver Diseases (AASLD) guidelines recommendation: Adults with chronic HCV infection (Ghany, 2009): Treatment of choice: Ribavirin plus peginterferon; clinical condition and ability of patient to tolerate therapy should be evaluated to determine length and/or likely benefit of therapy. Recommended treatment duration (AASLD guidelines): Genotypes 1,4: 48 weeks; Genotypes 2,3: 24 weeks; Coinfection with HIV: 48 weeks.

-Chronic hepatitis B: SubQ: 180 mcg once weekly for 48 weeks

Geriatric

Refer to adult dosing.

Renal Impairment

- $\text{Cl}_{\text{cr}} \geq 30$ mL/minute: No adjustment required.
- $\text{Cl}_{\text{cr}} < 30$ mL/minute: 135 mcg weekly; monitor for toxicity
- End-stage renal disease (ESRD) requiring hemodialysis: 135 mcg weekly; monitor for toxicity

Hepatic Impairment:

HCV: ALT progressively rising above baseline: Decrease dose to 135 mcg weekly and monitor LFTs more frequently. If ALT continues to rise despite dose reduction or ALT increase is accompanied by increased bilirubin or hepatic decompensation, discontinue therapy immediately. Therapy may resume after ALT flare subsides.

HBV:

- ALT > 5 x ULN: Consider decreasing dose to 135 mcg weekly or temporarily discontinuing (may resume after ALT flare subsides) and monitor LFTs more frequently. If ALT continues to rise despite dose reduction or ALT increase is accompanied by increased bilirubin or hepatic decompensation, discontinue therapy immediately.
- ALT > 10 x ULN: Consider discontinuing

Dosing: Adjustment for Toxicity

Dosage modifications for adverse reactions and/or toxicity:

HCV, HBV:

-Moderate-to-severe adverse reactions: Decrease to 135 mcg weekly for initial dose reduction; further dose reductions to 90 mcg weekly may be necessary in some cases if reaction persists or recurs.

-Based on hematologic parameters:

- ANC <750/mm³: 135 mcg weekly
- ANC <500/mm³: Suspend therapy until >1000/mm³, then restart at 90 mcg weekly; monitor ANC
- Platelet count <50,000/mm³: 90 mcg weekly
- Platelet count <25,000/mm³: Discontinue therapy

-Depression (severity based on DSM-IV criteria):

- Mild depression: No dosage adjustment required; evaluate once weekly by visit/phone call. If depression remains stable, continue weekly visits. If depression improves, resume normal visit schedule
- Moderate depression: Decrease interferon dose to 135 mcg once weekly (or to 90 mcg once weekly); evaluate once weekly with an office visit at least every other week. If depression remains stable, consider psychiatric evaluation and continue with reduced dosing. If symptoms improve and remain stable for 4 weeks, resume normal visit schedule; continue reduced dosing or return to normal dose.
- Severe depression: Discontinue interferon permanently. Obtain immediate psychiatric consultation.

COMMON SIDE EFFECT:

Note: Percentages are reported for peginterferon alfa-2a in chronic hepatitis C (CHC) patients. Other percentages indicated as “with ribavirin” or “in HIV/CHC” are those which significantly exceed incidence reported for peginterferon monotherapy in CHC patients.

>10%:

Central nervous system: Headache (54%), fatigue (56%), fever (37%; 41% with ribavirin; 54% in hepatitis B), insomnia (19%; 30% with ribavirin), depression (18%), dizziness (16%), irritability/anxiety/nervousness (19%; 33% with ribavirin), pain (11%)

Dermatologic: Alopecia (23%; 28% with ribavirin), pruritus (12%; 19% with ribavirin), dermatitis (16% with ribavirin)

Endocrine & metabolic: Growth suppression (children) percentile decrease (≥ 15 percentiles), weight (43%), height (25%)

Gastrointestinal: Nausea/vomiting (24%), anorexia (17%; 24% with ribavirin), diarrhea (16%), weight loss (16% in HIV/CHC), abdominal pain (15%)

Hematologic: Neutropenia (21%; 27% with ribavirin; 40% in HIV/CHC), lymphopenia (14% with ribavirin), anemia (11% with ribavirin; 14% in HIV/CHC)

Hepatic: ALT increases 5-10 x ULN during treatment (25% to 27% in hepatitis B); ALT increases >10 x ULN during treatment (12% to 18% in hepatitis B); ALT increases 5-10 x ULN after treatment (13% to 16% in hepatitis B); ALT increases >10 x ULN after treatment (7% to 12% in hepatitis B)

Local: Injection site reaction (22%)

Neuromuscular & skeletal: Weakness (56%; 65% with ribavirin), myalgia (37%), rigors (35%; 25% to 27% in hepatitis B), arthralgia (28%)

Respiratory: Dyspnea (13% with ribavirin)

PREGNANCY RISK FACTORS: C / X in combination with ribavirin