Ilaris® (Canakinumab) (for Indiana Only)

Policy Number: CSIND0066.01
Effective Date: April 1, 2021

Instructions for Use

Table of Contents Page

Related Policies
None

Application

This Medical Benefit Drug Policy only applies to the state of Indiana.

Coverage Rationale

Ilaris® (canakinumab) is proven and medically necessary for the treatment of juvenile idiopathic arthritis (JIA). For medical necessity clinical coverage criteria for Ilaris®, refer to the InterQual® 2020, Apr. 2020 Release, CP:Specialty Rx Non-Oncology Canakinumab (Ilaris).

Click here to view the InterQual® criteria.

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by federal, state, or contractual requirements and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

HCPCS Code	Description
J0638	Injection, canakinumab, 1 mg

Diagnosis Code	Description
M08.2A	Juvenile rheumatoid arthritis with systemic onset, other specified site
M08.20	Juvenile rheumatoid arthritis with systemic onset, unspecified site
M08.211	Juvenile rheumatoid arthritis with systemic onset, right shoulder
M08.212	Juvenile rheumatoid arthritis with systemic onset, left shoulder

Diagnosis Code	Description
M08.219	Juvenile rheumatoid arthritis with systemic onset, unspecified shoulder
M08.221	Juvenile rheumatoid arthritis with systemic onset, right elbow
M08.222	Juvenile rheumatoid arthritis with systemic onset, left elbow
M08.229	Juvenile rheumatoid arthritis with systemic onset, unspecified elbow
M08.231	Juvenile rheumatoid arthritis with systemic onset, right wrist
M08.232	Juvenile rheumatoid arthritis with systemic onset, left wrist
M08.239	Juvenile rheumatoid arthritis with systemic onset, unspecified wrist
M08.241	Juvenile rheumatoid arthritis with systemic onset, right hand
M08.242	Juvenile rheumatoid arthritis with systemic onset, left hand
M08.249	Juvenile rheumatoid arthritis with systemic onset, unspecified hand
M08.251	Juvenile rheumatoid arthritis with systemic onset, right hip
M08.252	Juvenile rheumatoid arthritis with systemic onset, left hip
M08.259	Juvenile rheumatoid arthritis with systemic onset, unspecified hip
M08.261	Juvenile rheumatoid arthritis with systemic onset, right knee
M08.262	Juvenile rheumatoid arthritis with systemic onset, left knee
M08.269	Juvenile rheumatoid arthritis with systemic onset, unspecified knee
M08.271	Juvenile rheumatoid arthritis with systemic onset, right ankle and foot
M08.272	Juvenile rheumatoid arthritis with systemic onset, left ankle and foot
M08.279	Juvenile rheumatoid arthritis with systemic onset, unspecified ankle and foot
M08.28	Juvenile rheumatoid arthritis with systemic onset, vertebrae
M08.29	Juvenile rheumatoid arthritis with systemic onset, multiple sites

Background

CAPS refer to rare genetic syndromes generally caused by mutations in the NLRP-3 [nucleotide-binding domain, leucine rich family (NLR), pyrin domain containing 3] gene. CAPS disorders are inherited in an autosomal dominant pattern with male and female offspring equally affected. Features common to all disorders include fever, urticaria-like rash, arthralgia, myalgia, fatigue, and conjunctivitis.[1]

The NLRP-3 gene encodes the protein cryopyrin, an important component of the inflammasome. Cryopyrin regulates the protease caspase-1 and controls the activation of IL-1β. Mutations in NLRP-3 result in an overactive inflammasome resulting in excessive release of activated IL-1β that drives inflammation. SJIA is a severe autoinflammatory disease, driven by innate immunity by means of proinflammatory cytokines such as IL-1β.[1]

Canakinumab is a recombinant, human anti-human-IL-1β monoclonal antibody that belongs to the IgG1/κ isotype subclass. It is expressed in a murine Sp2/0-Ag14 cell line and comprised of two 447- (or 448-) residue heavy chains and two 214-residue light chains, with a molecular mass of 145157 Daltons when deglycosylated. Both heavy chains of canakinumab contain oligosaccharide chains linked to the protein backbone at asparagine 298. The biological activity of canakinumab is measured by comparing its inhibition of IL-1β-dependent expression of the reporter gene luciferase to that of a canakinumab internal reference standard, using a stably transfected cell line.[1]

Canakinumab binds to human IL-1β and neutralizes its activity by blocking its interaction with IL-1 receptors, but it does not bind IL-1α or IL-1 receptor antagonist (IL-1ra).[1]

Cryopyrin-Associated Periodic Syndromes

Kuemmerle-Deschner et al (2011) assessed the long-term safety and tolerability of canakinumab in a multinational, open-label, single treatment arm study in in patients with cryopyrin-associated periodic syndrome. [2] In this study, adult and pediatric patients received canakinumab every 8 weeks for up to two years. The 166 patients included canakinumab-naïve, as well as treatment experienced patients from previous studies. C-reactive protein (CRP), serum amyloid A (SAA) levels, disease activity, and/or skin rash were used to assess response to therapy. In the study, 85 of 109 canakinumab-naive patients (78%; 79/85 patients within 8 days, and five patients between days 10 and 21) achieved complete response. In the 141 patients who were assessed for relapse, 90% did not relapse, and experienced normalization of CRP/SAA levels (<10 mg/l) by day 8, which were sustained. Treatment duration ranged from 29-687 days, with a median of 414 days. Of the population, 24.1% of patients received dose increase or frequency adjustments. The most common adverse events were infections (65.7%). In addition, 18 (10.8%) patients experienced serious adverse events, which were mostly infections that responded to standard care. Regarding injection site reactions, 92% reported no injection-site reaction, while 8% reported mild-to-moderate reactions. Normal immune response was seen in patients receiving a vaccine (15%). The investigators concluded that canakinumab 150 mg every 8 weeks was well tolerated and provided substantial disease control in children and adults across all CAPS phenotypes. Higher canakinumab doses in younger patients and more severe CAPS disease were efficacious in achieving complete responses without evidence of increased adverse events.[2]

Lachmann et al (2009) evaluated the use of use of canakinumab in the cryopyrin- associated periodic syndrome in a three-part, 48-week, double-blind, placebo-controlled, randomized withdrawal study of canakinumab in patients with CAPS. [3] In the first part 1 of the study, 35 patients received 150 mg of canakinumab subcutaneously. Patients experiencing a complete response to therapy were enrolled in part 2, where they received either 150 mg of canakinumab or placebo every 8 weeks for up to 24 weeks, based on random group assignment. Patients were moved to part 3 upon completion of part 2 or at the time of relapse, whichever occurred first. In part 3, patients received at least two more doses of canakinumab. Therapeutic responses using disease-activity scores and analysis of levels of C-reactive protein (CRP) and serum amyloid A protein (SAA) were used for evaluation. In part 1 of the study, complete response was achieved by 34 out of 35 patients (97%). Form part 1, 31 patents moved to part 2, and all 15 patients receiving canakinumab remained in remission. For patients in the placebo group, 13 of the 16 patients (81%) ($P<0.001$) experienced disease flares. At the end of part 2, Median CRP and SAA values were normal (<10 mg per liter for both measures) in patients receiving canakinumab at the end of part 2. For the placebo group median CRP and SAA values were elevated ($P<0.001$ and $P = 0.002$, respectively). Of the 31 patients, 28 (90%) remained in remission at the close of part 3. Specific to adverse events, there was a higher incidence of suspected infections in the treatment group compared to the placebo group ($P = 0.03$), as well as two serious adverse events in the treatment group, one case of urosepsis and an episode of vertigo.[3]

Familial Mediterranean Fever, Hyperimmunoglobulin D (Hyper-IgD) Syndrome/Mevalonate Kinase Deficiency and Tumor Necrosis Factor Receptor Associated Periodic Syndrome

The efficacy and safety of Ilaris for the treatment of TRAPS, HIDS/MKD, and FMF were demonstrated in a randomized, double-blind, placebo-controlled study of canakinumab in patients with FMF, HIDS/MKD or TRAPS.[7] The study followed 3 randomized groups (FMF, HIDS/MKD, TRAPS) over 4 Epochs as follow: a 12 week lead in period, randomization at flare onset, to a blinded or open-label treatment group, a randomized withdrawal of 24 weeks, followed by an open-label treatment of 72 weeks. The proportion of patients who were responders for the primary outcome at week 16 was significantly higher with canakinumab than that with placebo for all 3 disease cohorts. The median duration of exposure to canakinumab (150 mg every 4 weeks) and placebo was 113 days (range: 110-129 days) and 113 days (range: 12-119 days), respectively, for all disease cohorts. Regarding adverse events, infections and infestations were the most frequently affected system organ class across the 3 cohorts, with the most common infection being upper respiratory tract infection. The investigators concluded that the results demonstrate canakinumab had a higher rate, compared with placebo in the proportion of patients who resolved their index disease flare at Day 15 and had no new flare over the 16 weeks of treatment.

Ahmet et al conducted an open-label pilot study to investigate the efficacy of canakinumab in FMF patients.[6] Patients taking colchicine experiencing ore or more attach per month in the most recent 3 months were eligible to enter a 30-day run-in period. Patients experiencing an attack during the first run-in period moved to a second 30-day period, where they received canakinumab upon their first attack, 150mg subcutaneously every 4 weeks. The dose was increased to 300 mg, if a patient experienced an attack between the first and second doses. Patients were permitted to remain on their current dose of

colchicine throughout the study. After 12 weeks of treatment, patients were followed for an additional 2 months or until the next attack happened. All the included patients, in the treatment period achieved the primary endpoint of ≥50 % reduction in frequency of attacks compared with the time-adjusted pre-treatment frequency of attacks. The time-adjusted frequency of attacks over 84 days observed both in the screening and run-in periods, including the baseline attack (median 3.29, range 2.47 to 4.2), saw a steep decrease during the treatment period (median 0, mean 0.11). 5 of the patients receiving 2 mg/day colchicine, experienced an attack within the 2-month follow up, which occurred at a range of 31 to 78 days (median 71 days) after the last canakinumab injection.

Systemic Juvenile Idiopathic Arthritis and Adult Onset Still's Disease

Ruperto et al conducted an open-label active treatment extension study, which enrolled SJIA patients, previously treated with canakinumab in phase III trials as well as those who did not.[8] Patients received canakinumab (4 mg/kg) subcutaneously every 4 weeks. In the trial, the proportion of patients with inactive disease increased over time, from 32.7% at baseline to 49.0% at the last assessment. The most frequently affected system organ class was infections, with nasopharyngitis being the most common event at 32%. The investigators concluded that in patients previously treated with canakinumab in pivotal trials, response to treatment was sustained or improved during long-term treatment in the extension study.

Ruperto et al conducted 2 phase 3, randomized, double-blind, placebo controlled trials to evaluate the efficacy and safety of canakinumab for the treatment of SJIA.[4] In trial 1, patients aged 2-19 years, with systemic JIA with active systemic features (fever; ≥2 active joints; C-reactive protein, >30 mg per liter; and glucocorticoid dose, ≤1.0 mg per kilogram of body weight per day), were randomly assigned in a double-blind fashion, to a single subcutaneous dose of canakinumab (4 mg per kilogram) or placebo. The study used the adapted JIA ACR 30 response and the primary outcome, which was defined as improvement of 30% or more in at least three of the six core criteria for JIA, worsening of more than 30% in no more than one of the criteria, and resolution of fever. In trial 2, after 32 weeks of open-label treatment with canakinumab, patients who had a response and underwent glucocorticoid tapering were randomly assigned to continued treatment with canakinumab or to placebo. The primary outcome was time to flare of SJIA. For trial 1, 36 of 43 (84%) patients had an adapted JIA ACR 30 response at day 15 compared to the placebo group, for which 4 of 41 (10%) P<0.001 patients had an adapted JIA ACR 30 response at day 15. In trial 2, among the 100 patients (of 177 in the open-label phase) who underwent randomization in the withdrawal phase, the risk of flare was lower among patients who continued to receive canakinumab than among those who were switched to placebo (74% of patients in the canakinumab group had no flare, vs. 25% in the placebo group, according to Kaplan–Meier estimates; hazard ratio, 0.36; P = 0.003). Regarding glucocorticoids, use was discontinued in 33% of patients (42 of 128) and the average dose decreased to 0.05 mg per kilogram per day from 0.34 mg per kilogram per day. Seven patients experienced macrophage activation syndrome. The patients receiving canakinumab had a higher frequency of infection than with placebo. The investigators concluded that these two phase 3 studies show efficacy of canakinumab in systemic JIA with active systemic features.

Kedor et al conducted a double-blind, randomized placebo-controlled trial to evaluate the efficacy and safety of canakinumab in patients with AOSD and active joint involvement. Patients aged 22-70 years, with high active AOSD were enrolled, with 12 patients in the canakinumab group and 7 patients in the placebo group. The primary outcome was defined as the proportion of patients with a clinically relevant reduction of the articular manifestation measured by change in disease activity score. The study was terminated prematurely, due to the rarity and severity of disease and conditional approval of AOSD by the European Medicines Agency, therefore, only 36 out of the planned 68 patients could be included in the efficacy analysis. The primary endpoint did not achieve statical significance, however, treatment of patient with AOSD and active joint involvement led to an improvement of ACR30, ACR 50% response and ACR 70% response, as well as disease activity score. The safety profile was similar to that reporting in SJIA. The authors concluded that efficacy data were generally consistent with the results of the pooled efficacy analysis of SJIA patients.[9]

U.S. Food and Drug Administration (FDA)

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

Ilaris is indicated for the treatment of cryopyrin-associated periodic syndromes (CAPS), in adults and children 4 years of age and older including, familial cold autoinflammatory syndrome (FCAS) and Muckle-Wells syndrome (MWS). Ilaris is also indicated for the treatment of tumor necrosis factor (TNF) receptor-associated periodic syndrome (TRAPS) in adult and pediatric patients, hyperimmunoglobulin D (Hyper-IgD) syndrome (HIDS)/mevalonate kinase deficiency (MKD) in adult and

pediatric patients, familial mediterranean fever (FMF) in adult and pediatric patients, and active Still's disease, including adult-onset Still's disease (AOSD) and systemic juvenile idiopathic arthritis (SJIA), in patients aged 2 years and older.[1]

References

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Policy History/Revision Information

Date	Summary of Changes
04/01/2021	• New Medical Benefit Drug Policy

Instructions for Use

This Medical Benefit Drug Policy provides assistance in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the federal, state or contractual requirements for benefit plan coverage must be referenced as the terms of the federal, state or contractual requirements for benefit plan coverage may differ from the standard benefit plan. In the event of a conflict, the federal, state or contractual requirements for benefit plan coverage govern. Before using this policy, please check the federal, state or contractual requirements for benefit plan coverage. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Medical Benefit Drug Policy is provided for informational purposes. It does not constitute medical advice.

UnitedHealthcare may also use tools developed by third parties, such as the InterQual® criteria, to assist us in administering health benefits. The UnitedHealthcare Medical Benefit Drug Policies are intended to be used in connection with the independent professional medical judgment of a qualified health care provider and do not constitute the practice of medicine or medical advice.