Medical Policy
 Vectra DA Blood Test for Rheumatoid Arthritis

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Policy Number: 677
BCBSA Reference Number: 2.04.119
NCD/LCD: N/A
Vectra DA Coding and Billing Guidelines (M00031, V10)

Related Policies
None

Policy
Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

The use of a multi-biomarker disease activity score for rheumatoid arthritis (RA) (eg, Vectra DA score) is considered INVESTIGATIONAL in all situations.

Medicare HMO BlueSM and Medicare PPO BlueSM Members

Medical necessity and coding guidance for Medicare Advantage members living in Massachusetts can be found through the link below.

Vectra DA Coding and Billing Guidelines (M00031, V10)

For medical necessity criteria and coding guidance for Medicare Advantage members living outside of Massachusetts, please see the Centers for Medicare and Medicaid Services website for information regarding your specific jurisdiction at https://www.cms.gov.

Prior Authorization Information
Pre-service approval is required for all inpatient services for all products.
See below for situations where prior authorization may be required or may not be required for outpatient services.
Yes indicates that prior authorization is required.
No indicates that prior authorization is not required.
N/A indicates that this service is primarily performed in an inpatient setting.
Outpatient

| Commercial Managed Care (HMO and POS) | This is not a covered service. |
| Commercial PPO and Indemnity | This is not a covered service. |
| Medicare HMO BlueSM | No |
| Medicare PPO BlueSM | No |

### CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The following CPT codes are considered investigational for Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity:

<table>
<thead>
<tr>
<th>CPT Codes</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>81490</td>
<td>Autoimmune (rheumatoid arthritis), analysis of 12 biomarkers using immunoassays, utilizing serum, prognostic algorithm reported as a disease activity score</td>
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### Description

Assessment of disease activity in rheumatoid arthritis (RA) is an important component of treatment management, as one of the main goals of treatment is to maintain low disease activity or remission. There are a variety of available instruments for measuring RA disease activity. One potential approach is the use of a multibiomarker disease activity (MBDA) score. The Vectra DA test is a commercially available MBDA blood test that uses 12 biomarkers to construct a disease activity score ranging from 0 to 100.

### Background

RA is a disorder characterized by chronic joint inflammation leading to painful symptoms, progressive joint destruction and loss of function. The disorder is relatively common and is associated a high burden of morbidity for affected patients.

Treatment of RA has undergone a shift from symptom management to a more proactive strategy of reducing disease activity and delaying disease progression.¹ The goal of treatment is to reduce irreversible joint damage that occurs from ongoing joint inflammation and synovitis by keeping disease activity as low as possible. The availability of an increasing number of effective disease modifying antirheumatic drugs has made achievement of remission, or sustained low disease activity, a feasible goal in a large proportion of patients with RA. This treatment strategy has been called a “tight control” approach.

The concept of “tight control” in the management of RA has gained wide acceptance as evidence from clinical trials have demonstrated that outcomes are improved with a tight control strategy. In a tight control strategy, treatment targets are used that are mainly based on measures of disease activity. In a systematic review published in 2010, Schoels et al identified 7 trials that evaluated the efficacy of tight control.² Four of these trials randomized patients to either a tight control using treatment targets or routine management. The treatment targets used were heterogeneous, including symptom-based measures, joint scores on exam, validated treatment activity measures, lab values, or combinations of these factors. In all 4 trials, there was a significant decrease in the Disease Activity Score (DAS) and in the likelihood of achieving remission for patients in the tight control group.
For a strategy of tight control to be successful, a reliable and valid measurement of disease activity is important. There are numerous disease activity measurements that can be used in clinical care. Composite measures include information from multiple sources, including patient self-report, physician examination and/or biomarker measurement. Composite measures are the most comprehensive but have the disadvantage of being more cumbersome and difficult to complete. Patient reported measures are intended to be simpler, and rely only on information that patients can provide expeditiously, but have the disadvantage of being more subjective. Measurements that rely only on biomarkers are objective and do not require patient input but do involve the cost and inconvenience of laboratory tests.

The most widely used and validated in clinical research is the DAS28 score. This is a composite measure that includes examination of 28 joints for swelling and tenderness, combined with a patient report of disease activity and measurement of C-reactive protein (CRP) (or erythrocyte sedimentation rate). This score has been widely validated and used for both research and clinical care and is often considered the criterion standard for measuring disease activity. However, it requires a thorough joint examination, information obtained from the patient, and laboratory testing. Therefore, there have been many attempts to create a valid disease activity measure that is simpler. Some measures include only patient self-report and thus can be completed quickly in the setting of an office visit. An example of this type of measure is the Simplified Disease Activity Index (SDAI). Another approach is to use only serum biomarkers, which only requires a blood draw. The Vectra DA is this type of biomarker-based measure. Proponents of a biomarker approach have argued that this is simpler and avoids the subjectivity of physical examination and patient report.

There is a fairly large body of evidence comparing the performance of different disease activity measures in clinical care, including a number of systematic reviews. In a systematic review of disease activity measures sponsored by the American College of Rheumatology in 2012, more than 60 measurement instruments were identified. Through a 5-stage process that included review by an expert advisory panel in RA disease activity and detailed evaluation of psychometric properties, the workgroup selected 6 that were most useful and feasible for point-of-care clinical care. These were the Clinical Disease Activity Index (CDAI), DAS28, Patient Activity Scale (PAS), Patient Activity Scale II (PAS-II), Routine Assessment of Patient Index (RAPI) data with 3 measures, and the SDAI.

In another systematic review, Gaujoux-Viala et al compared 4 composite indices, DAS, DAS28, SDAI, and CDAI. In general, the concordance between measures was good, with kappa values in the range of 0.7. An exception to this level of concordance was in the definition of remission, for which the DAS28 had lower levels of concordance with other measures, with kappa values ranging from 0.48 to 0.63. All of the measures had fair-to-good correlations with an independent health status measure, the Health Assessment Questionnaire (HAQ) and with radiologic examination of joint structural damage.

Salaffi et al compared the responsiveness of numerous disease activity measures, including patient self-report measures and composite indices, over a 6-month period of treatment with disease modifying drugs. The composite indices evaluated were DAS28, SDAI, CDAI, and the Mean Overall Index for RA. The patient-reported measures evaluated were the Clinical Arthritis Index, the Rheumatoid Disease Activity Index, the Routine Assessment of Patient Index Data (RAPID3), and PAS. Across all measures, there was wide variability in internal responsiveness, with the highest value obtained for the DAS28 measure. There were some differences in responsiveness between the measures, but all were considered suitable for use in clinical care. When comparing the patient-reported measures with the composite measures, there was no difference in internal or external responsiveness.

**Vectra DA test**
The Vectra DA test (Crescendo Bioscience, South San Francisco, CA) consists of 12 individual biomarkers. These are:
- Interleukin-6 (IL-6)
- Tumor necrosis factor receptor type I (TNFRI)
- Vascular cell adhesion molecule 1 (VCAM-1)
- Epidermal growth factor (EGF)
- Vascular endothelial growth factor A (VEGF-A)
- YKL-40
- Matrix metalloproteinase 1 (MMP-1)
- Matrix metalloproteinase 3 (MMP-3)
- CRP
- Serum amyloid A (SAA)
- Leptin
- Resistin.

**Summary**
The Vectra DA is a biomarker-based measurement of disease activity in rheumatoid arthritis (RA) that uses results of 12 serum biomarkers to construct a score ranging from 0 to 100. It is one of numerous disease activity measures that are available for use in clinical care, and there are other disease activity scores (eg, Disease Activity Score with 28 joints [DAS28]) that have been more extensively validated. Evidence of validity for the measure consists of several studies that correlate Vectra DA with other previously validated measures such as the DAS28. These studies show moderate correlations of Vectra with the DAS28. A small number of studies evaluate clinical utility by examining changes in decision making associated with use of Vectra, but these are limited by the design of using simulated cases or physician surveys and do not report any outcome data. This limited body of evidence on the Vectra DA test is not sufficient to determine whether it is as good as or better than other disease activity measures, and it is possible that it is not as accurate as the DAS28. As a result, the Vectra DA test is considered investigational for use as a measure of disease activity in the patients with RA.

**Policy History**

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<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>7/2017</td>
<td>New references added from BCBSA National medical policy.</td>
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<tr>
<td>7/2016</td>
<td>New references added from BCBSA National medical policy.</td>
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<tr>
<td>1/2016</td>
<td>Clarified coding information.</td>
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**Information Pertaining to All Blue Cross Blue Shield Medical Policies**
Click on any of the following terms to access the relevant information:
- Medical Policy Terms of Use
- Managed Care Guidelines
- Indemnity/PPO Guidelines
- Clinical Exception Process
- Medical Technology Assessment Guidelines

**References**


