MASSACHUSETTS

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Medical Policy

Leukocyte Histamine Release Test

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Policy Number: 589

BCBSA Reference Number: 2.04.42A
NCD/LCD: N/A

Related Policies

None

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO Blue℠ and Medicare PPO Blue℠ Members

The leukocyte histamine release test (LHRT) is **INVESTIGATIONAL** as a technique for the diagnosis and management of allergic disorders.

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	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 Blue℠	This is **not** a covered service.
Medicare PPO Blue℠	This is **not** a covered service.

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.

CPT Codes

CPT codes:	Code Description
86343	Leukocyte histamine release test (LHR)

Description

The leukocyte histamine release test (LHRT) is designed to provide an in vitro correlate to an in vivo allergic response (i.e., skin prick testing). An allergen is added to the peripheral blood leukocytes of the individual being tested and the in vitro release of histamine from basophils in response to exposure to the allergen is measured. Histamine is normally released as a consequence of the interaction of allergen with cell-bound IgE antibodies.

In contrast, the RAST test (radioallergosorbent test) attempts to correlate the presence of allergy to serum levels of antigen-specific IgE as an index of allergic reactivity. Initially, measurements of histamine release required isolation of leukocytes from whole blood followed by the isolation of the released histamine; the laboratory techniques were difficult and time consuming and thus LHRT was primarily used as a research tool only.

Recently, a special type of glass fiber has been developed that binds histamine with high affinity and selectivity. These glass fibers can be used as a "solid phase" to absorb the histamine that is released directly into the blood. The recent commercial availability of simplified and automated methods of laboratory analysis (i.e., both ELISA and radioimmunoassays) have renewed interest in the clinical applications of LHRT in the evaluation of food, inhalant, and drug allergies.

Summary

Overall, the studies published on this test are potentially prone to spectrum bias, referral bias, and ascertainment bias, and are not sufficient to permit conclusions on the diagnostic accuracy of LHRT. It has been suggested that LHRT may be a valuable test in those patients with discordant results of skin prick testing and RAST testing, but studies focusing on this subgroup of patients were not identified in a literature search. Thus, this testing is considered investigational.

Policy History

Date	Action
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
3/2011	Reviewed - Medical Policy Group - Allergy and ENT/Otolaryngology. No changes to policy statements.
3/2010	Reviewed - Medical Policy Group - Allergy and ENT/Otolaryngology. No changes to policy statements.
3/2009	Reviewed - Medical Policy Group - Allergy and ENT/Otolaryngology. No changes to policy statements.
3/2008	Reviewed - Medical Policy Group - Allergy and ENT/Otolaryngology. No changes to policy statements.
3/2007	Reviewed - Medical Policy Group - Allergy and ENT/Otolaryngology. No changes to policy statements.
3/2007	BCBSA National medical policy review. No changes to policy statements.

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

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2. Skov PS, Mosbech M, Norn S et al. Sensitive glass microfibre-based histamine analysis for allergy testing in washed blood cells. Results compared with conventional leukocyte histamine release assay. Allergy 1985; 40(3):213-8.
3. Ostergaard PA, Ebbensen F, Nolte H et al. Basophil histamine release in the diagnosis of house dust mite and dander allergy of asthmatic children. Comparison between prick test, RAST, basophil histamine release and bronchial provocation. Allergy 1990; 45(3):231-5.
4. Kleine-Tebbe J, Werfel S, Roedsgaard D et al. Comparison of fiberglass-based histamine assay with a conventional automated fluorometric histamine assay, case history, skin prick test, and specific serum IgE in patients with milk and egg allergic reactions. Allergy 1993; 48(1):49-53.
5. Kleine-Tebbe J, Galleani M, Jeep S et al. Basophil histamine release in patients with birch pollen hypersensitivity with and without allergic symptoms to fruits. Allergy 1992; 47(6):618-23.
6. Paris-Kohler A, Demoly P, Persi L et al. In vitro diagnosis of cypress pollen allergy by using cytofluorimetric analysis of basophils (Bastotest). J Allergy Clin Immunol 2000; 105(2 pt 1):339-45.
7. Nolte H, Storm K, Schiotz PO. Diagnostic value of a glass fibre-based histamine analysis for allergy testing in children. Allergy 1990; 45(3):213-23.