



## PAML Adopts American Heart Association Guidelines for High-Sensitivity C-Reactive Protein

*Lawrence M. Killingsworth, Ph.D., DABCC*  
*Chief Science & Technical Officer*

The January 2003 issue of the journal *Circulation* featured an extensive article reporting on a consensus conference convened by the Centers for Disease Control and the American Heart Association to examine inflammation markers in cardiovascular disease. The conference called together experts to achieve the following objectives:

- To review the scientific literature on the association between inflammation markers and cardiovascular disease
- To consider the analytical methodology for measuring inflammation markers
- To determine areas for further research on inflammatory markers and cardiovascular disease
- To recommend which tests should be performed for which patients in which clinical settings
- To explore the public health implications of the association between inflammation and cardiovascular disease

The scientific statement developed at the conference was reviewed and approved by the Science Advisory and Coordinating Committee of the AHA and the CDC. The following recommendations were made:

- Of current inflammatory markers, hsCRP is the most useful in clinical practice.
- hsCRP results should be reported in the units mg/L.
- Measurement of hsCRP should be done twice (averaging results), optimally two weeks apart, in metabolically stable patients.
- If the hsCRP level is > 10 mg/L, the test should be repeated and the patient examined for non-cardiovascular sources of inflammation, such as infection.
- The relative risk categories for average hsCRP levels are:

|              |              |
|--------------|--------------|
| Low risk     | < 1.0 mg/L   |
| Average risk | 1.0-3.0 mg/L |
| High risk    | > 3.0 mg/L   |

In light of this thorough review of hsCRP by experts in the field, PAML is immediately adopting the AHA/CDC recommendations. Reports will reflect the new units of mg/L and the new risk cut-offs. Interpretive comments in reports will be consistent with the recommendations.

### Reference

Pearson TA, et al. AHA/CDC Scientific Statement. Markers of Inflammation and Cardiovascular Disease. Application to Clinical and Public Health Practice: A Statement for Healthcare Professionals from the Centers for Disease Control and Prevention and the American Heart Association. *Circulation* 2003;107:499-511.

This article can be found on the Web at <http://www.circ.ahajournals.org/cgi/content/full/107/3/499>.

### GRAB AND GO FACTS

- ▶ Measurement of hsCRP should be done twice (averaging results), optimally two weeks apart, in metabolically stable patients.
- ▶ hsCRP will be reported in the units mg/L
- ▶ If the hsCRP level is > 10 mg/L, the test should be repeated and the patient examined for non-cardiovascular sources of inflammation, such as infection.
- ▶ The relative risk categories for average hsCRP levels are:

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## Test Information

**DESCRIPTION** **HIGH SENSITIVITY CRP**

**METHOD** Nephelometry

**ORDER CODE** HCRP

**CPT CODE** 86141

**SPECIMEN** 1 mL serum (red-top tube). Separate serum from cells and put in separate plastic tube. Store and transport refrigerated.

**COMMENTS** *Minimum amount:* 0.5 mL

*Other acceptable specimens:* plasma samples (EDTA, lithium heparin, sodium heparin).

*Unacceptable conditions:* frozen plasma samples.

Very lipemic or turbid specimens should be clarified by centrifugation.

**SCHEDULE** Sunday – Friday nights

**TURNAROUND** 1-2 days

**RANGES** **High Sensitivity CRP**

|              |         |      |
|--------------|---------|------|
| Low risk     | LT 1.0  | mg/L |
| Average risk | 1.0-3.0 |      |
| High risk    | GT 3.0  |      |

Relative risk categories follow the recommendations of the American Heart Association and the CDC. Measurement of hsCRP should be done twice (averaging results), optimally two weeks apart, in metabolically stable patients. If the hsCRP level is GT 10 mg/L, the test should be repeated and the patient examined for non-cardiovascular sources of inflammation, such as infection.

**DESCRIPTION** **HSCRP AND CHOLESTEROL PROFILE**

**METHOD** Enzymatic, Nephelometry

**ORDER CODE** HCRPP

**CPT CODE** 86141, 82465, 83718

**SPECIMEN** 3 mL serum (red-top tube). Separate serum from cells and put in separate plastic tube. Store and transport refrigerated.

**COMMENTS** *Minimum amount:* 2 mL

*Stability:* 1 day at room temperature, 5 days refrigerated, 3 months frozen.

**SCHEDULE** Sunday – Friday nights

**TURNAROUND** 1-2 days

**RANGES** **High Sensitivity CRP**

|              |         |      |
|--------------|---------|------|
| Low risk     | LT 1.0  | mg/L |
| Average risk | 1.0-3.0 |      |
| High risk    | GT 3.0  |      |

Relative risk categories follow the recommendations of the American Heart Association and the CDC. Measurement of hsCRP should be done twice (averaging results), optimally two weeks apart, in metabolically stable patients. If the hsCRP level is GT 10 mg/L, the test should be repeated and the patient examined for non-cardiovascular sources of inflammation, such as infection.

**Cholesterol**

|             |                 |
|-------------|-----------------|
| LT 200 mg/L | Desirable       |
| 200-239     | Borderline high |
| 240 or more | High            |

**HDL**

|            |                      |
|------------|----------------------|
| LT 40 mg/L | Low                  |
| 40-59      | Within normal limits |
| 60 or more | High                 |

HDL Cholesterol greater or equal to 60 mg/dL is considered to be a “negative” risk factor, serving to remove one risk factor from the total count.

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