

# THIS WEEK in the JOURNAL

## ORIGINAL ARTICLE

### A Gene Signature and Outcome in Breast and Other Cancers

A small population of distinctive breast-cancer cells can recapitulate an entire breast cancer when injected into immunodeficient mice. These cells express a unique group of genes, which when expressed in patients with breast cancer portend a poor outcome. Surprisingly, this group of genes is also expressed in prostate and lung cancer and medulloblastoma. This gene group is associated with invasiveness in a range of neoplasms.

SEE P. 217; EDITORIAL, P. 294

## ORIGINAL ARTICLE

### Mammographic Density and the Risk of Breast Cancer

The light appearance of epithelium and stroma in a mammogram (mammographic density) can hide the presence of a cancer. A careful study of this problem found that extensive mammographic density is an important risk factor for breast cancer.

SEE P. 227; EDITORIAL, P. 297; CME, P. 323

## ORIGINAL ARTICLE

### Prevalence and Effects of Mutations in the Leptin-Receptor Gene

Of 300 persons selected for early-onset obesity, hyperphagia, and consanguineous parentage, 8 had mutations in the leptin-receptor gene (*LEPR*). Biochemical and clinical analyses of the affected subjects suggest that the assay of serum leptin levels is not an appropriate screening tool for *LEPR* mutations and that the *LEPR* protein product may not be the only leptin receptor in humans.

SEE P. 237

## ORIGINAL ARTICLE

### Tympanostomy Tubes and Developmental Outcomes at 9 to 11 Years of Age

The authors report long-term follow-up of otherwise healthy young children with persistent middle-ear effusion who received either prompt insertion of tympanostomy tubes or delayed insertion if effusion persisted, as part of a randomized clinical trial or a separate observational cohort study. Prompt insertion of tympanostomy tubes did not improve developmental out-

comes at 9 to 11 years of age — findings that were consistent with the results up to the age of 6 years. These findings provide additional support for a strategy of watchful waiting for children who have persistent middle-ear effusion.

SEE P. 248; EDITORIAL, P. 300

## CURRENT CONCEPTS

### International Aeromedical Evacuation

Thousands of international aeromedical evacuations are conducted every year. An increasing number of travelers are elderly or have chronic illnesses, and there is more travel to regions where road trauma and infectious diseases are endemic but dependable medical care is not available. This review explains the indications for aeromedical evacuation, as well as the logistics, safety considerations, and principles of in-flight care for sick or injured patients.

SEE P. 262; CME, P. 321

## MECHANISMS OF DISEASE

### Parturition

Preterm birth is associated with high rates of infant mortality and morbidity. This review emphasizes that the onset of labor entails a molecular collaboration between the mother and the fetus. Knowledge of these molecular mechanisms will be essential in understanding the causes and prevention of preterm birth.

SEE P. 271

## CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

### A Woman with a Pigmented Lesion on the Arm

A 49-year-old woman was seen in consultation for management of cutaneous melanoma. A pigmented lesion on her upper arm had been excised at another facility, and a superficial spreading malignant melanoma, 0.91 mm thick, with a vertical growth phase was diagnosed. Sentinel lymph-node biopsy disclosed a nest of tumor cells in one of two lymph nodes. A decision on management was made.

SEE P. 285; CME, P. 322

## CLINICAL IMPLICATIONS OF BASIC RESEARCH

### Wound Healing with Electric Potential

Molecules that mediate cell migration in response to a chemical gradient also mediate migration in response to a gradient of electric potential in the context of wound healing.

SEE P. 303