Promoter—The region of a gene that binds RNA polymerase and initiates and controls gene transcription.

Proto-oncogene—A gene present in the normal vertebrate cell genome. Many proto-oncogenes code for growth factors, growth factor receptors, or intracellular mediators of cell division.

Recombinant DNA—A DNA molecule produced by insertion of foreign DNA into an autonomously replicating DNA molecule such as a virus or plasmid.

Retrovirus—An RNA virus that propagates via conversion into DNA using the enzyme reverse transcriptase.

Reverse transcriptase—An enzyme found in retroviruses that can catalyse the synthesis of cDNA from mRNA.

Somatic cells—Cells other than sperm cells and egg cells. Gene transfer to these cells does not affect the offspring of the individual treated.

Transcription—The process of synthesising RNA on a DNA template.

Transfection—The transfer of new genetic material to a cell by the introduction of DNA.

Translation—The process of synthesising protein on an RNA template.

Vector—A molecule capable of autonomous replication, usually a bacteriophage or plasmid, that can grow in a particular host. It is used to receive, replicate, and allow the selection of the genomic DNA or cDNA of interest after introduction into the host.

IMAGES IN CARDIOLOGY

An unusual cause of poor cardiac output

The photograph shows the development of a marked superficial collateral circulation in a patient in his late twenties who had had a retroperitoneal lymphoma with ligation of the inferior vena cava. I was asked to see him several years later because heart failure was suspected. His dyspnoea on exertion was caused by poor cardiac output which was the result of inadequate venous return. Left ventricular function was normal and his symptoms improved considerably when the dose of diuretic was reduced. Diuretics had been prescribed for peripheral leg oedema.

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