Am J Cardiol (2004);94:178-81
Effect of rescue or adjunctive percutaneous coronary intervention of the culprit artery after fibrinolytic administration on epicardial flow in nonculprit arteries
G. S. Gardner*, et al.*
Department of Medicine, Beth Israel Deaconess Medical Center, Boston, Massachusetts, USA.
We hypothesized that blood flow in noninfarct arteries would improve after percutaneous coronary intervention of the culprit artery in the setting of ST-elevation myocardial infarction (STEMI). The corrected Thrombolysis In Myocardial Infarction (TIMI) frame count was measured in 94 patients (102 arteries) enrolled in the INTEGRITI, ENTIRE, and FASTER trials of reduced dose fibrinolytic and glycoprotein IIb/IIIa inhibition. The corrected TIMI frame count in nonculprit arteries improved by 3.4 +/- 13.4 frames after percutaneous coronary intervention but remained significantly slower than flow in normal arteries.
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=15246895

Am Heart J (2004);148:336-40
Angiographic perfusion score: an angiographic variable that integrates both epicardial and tissue level perfusion before and after facilitated percutaneous coronary intervention in acute myocardial infarction
C. M. Gibson*, et al.*
TIMI Study Group, the Department of Medicine, Brigham & Women's Hospital, Boston, Mass., USA.
BACKGROUND: Both epicardial and myocardial perfusion have been associated with clinical outcomes in the setting of ST elevation myocardial infarction (STEMI), and the performance of adjunctive/rescue percutaneous coronary intervention (PCI) may further improve clinical outcomes after fibrinolytic administration. METHODS: The goal was to develop a simple, broadly applicable angiographic metric that takes into account indices of epicardial and myocardial perfusion both before and after PCI to arrive at a single perfusion grade in patients undergoing cardiac catheterization after fibrinolysis. The angiographic perfusion score (APS) is the sum of the Thrombolysis in Myocardial Infarction (TIMI) flow grade (TFG; 0-3) added to the TIMI myocardial perfusion grade (TMPG; 0-3) before and after PCI (total possible grade, 0-12). Failed perfusion was defined as an APS of 0 to 3, partial perfusion was defined as an APS of 4 to 9, and full perfusion was defined as an APS of 10 to 12. The APS was evaluated in patients from the Double-blind, Placebo-contolled, Multicenter Angiographic Trial of Rhumab CD18 in Acute Myocardial Infarction (LIMIT-AMI; n = 394) and Enoxaparin as Adjunctive Antithrombin Therapy for ST-Elevation Myocardial Infarction-Thrombolysis In Myocardial Infarction (ENTIRE-TIMI) 23 trials (n = 483), and infarct size (120-216 hours after AMI SPECT Technetium-99m Sestamibi data) was assessed in the LIMIT-AMI trial. RESULTS: The APS was associated with the incidence of death or myocardial infarction (failed, 16.7% [n = 18]; partial, 2.5% [n = 155]; full, 2.4% [n = 82]; P =.039 for trend) and larger SPECT infarct sizes (failed, median 39% [n = 10]; partial, 12% [n = 79]; and full, 8% [n = 35]; P =.002). No patient with full APS died, whereas the mortality rate was 11.1% in patients with a failed APS (P =.03). CONCLUSIONS: The APS combines grades of epicardial and tissue level perfusion before and after PCI or at the

end of diagnostic cardiac catheterization to arrive at a single angiographic variable that is associated with infarct size and the rates of 30-day death or MI. Partial or full angiographic perfusion scores are associated with a halving of infarct size, and no patients with full angiographic perfusion died.
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=15309006