

### Influence of caffeine intake on intravenous adenosine-induced fractional flow reserve

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**Background:** This study evaluated whether caffeine abstention is required before fractional flow reserve (FFR) measurement by intravenous adenosine triphosphate (ATP) administration in Japanese patients.

**Methods and results:** This study was a subanalysis of a previously published study and a total of 208 intermediate lesions that underwent FFR measurements were enrolled for this analysis. Hyperemia was induced by continuous intravenous ATP infusion at 150 $\mu$ g/kg/min (IVATP150) and 210 $\mu$ g/kg/min (IVATP210), and by intracoronary administration of nicorandil 2mg (ICNIC2mg) as a reference standard. The degree of change in the FFR value both after IVATP150 and after IVATP210, as compared with the FFR value after ICNIC2mg was similar between the caffeine and non-

caffeine groups ( $-0.04\pm 0.05$  vs.  $-0.04\pm 0.07$ , and  $0.00\pm 0.02$  vs.  $0.01\pm 0.02$ , respectively). In patients who consumed caffeine before the FFR measurement, the degree of FFR change was independent of the time interval (<12 hours, 12–24 hours, and 24–48 hours) between caffeine intake and catheterization both after IVATP150 and ICNIC2mg and after IVATP210 and ICNIC2mg.

**Conclusion:** When compared with the FFR value after ICNIC2mg, the degree of change in the FFR value both after IVATP150 and after IVATP210 remained similar regardless of caffeine intake. Strict caffeine abstention before intravenous ATP-induced FFR measurement may not be required in clinical practice.