

REDUCING RADIATION DOSE DURING CORONARY ANGIOGRAPHY

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INTRODUCTION

Minimising radiation dose during coronary angiography reduces risk to patients, the operator and staff.



AIM

To reduce radiation dose during coronary angiography by monitoring and adopting a new modified dose regime.

METHOD

We analysed radiation dose per coronary angiography for 3 experienced interventional cardiologists (IC) at Joondalup Hospital over a 2-year period. IC1 and IC2 used an optimised dose regime from 2021 onwards. IC3 adopted the optimised dose regime from late 2022 onwards. Body surface area (BSA) and c-arm angulations used were identical for the 3 operators. Source image distance (SID) was variable per operator due to their physical height



RESULTS

Coronary angiography was performed via the right radial approach in 84 % of patients. At baseline radiation dose per frame (DAP) and Skin Dose (SD) using a field of view (FOV) of 22 cm, was significantly lower for IC1 and IC2 compared with IC3. IC3 saw a significant reduction in radiation dose after the adoption of the new settings (**35-40% skin dose reduction**, $p < 0.01$) Feedback of these results has ensured IC3 has maintained using these settings.



CONCLUSION

Radiation dose during coronary angiography is significantly reduced by monitoring and then adopting an optimised dose regime.

