

# AUSTRALIAN HIGH PERFORMANCE SPORT SYSTEM

## DXA - PRACTITIONER REFERRAL FORM

### Reason for Referral...

Total body composition

Bone mineral density      AP Spine      Left femur      Right femur      Forearm      Dual femur

Please confirm with your state-based radiation health guidelines requirements for medical referral

### Athlete Details

<b>Name:</b>	<b>Date of birth:</b>
<b>Sport:</b>	<b>Category/position</b> (eg. U23 lightweight rowing):
<b>Stature:</b>	*If <195cm scan should be acquired capturing total body, including head. *If >195cm please measure following total body less head (TBLH) positioning protocol.
<b>Body mass:</b>	*Please measure body mass immediately prior to scan. If this is not possible, use body mass provided here.

> If athlete is too broad for AIS standard positioning protocol:

**Offset scanning procedure (mirroring) – preferred method**

\*estimates missing side from complete side (assuming symmetry)

**Two partial scans (left + right)**

\*requires acquisition of two TBC scans, exposing athlete to double the radiation dose

> Is a blinded scale mass measurement required?

YES

NO

### Checklist

**Athlete informed of testing**

**Athlete consent obtained**

**Athlete 18 years of age (or over)**

\*If <18y parent/guardian consent required

**Total radiation exposure (12 months) does not exceed 1000 µSv**

**Athlete will not be exposed to nuclear medicine examinations or radiographic agents in the 48h prior to DXA**

**Repeat scan: Same machine, software, reference database, scan mode, and technician**

**Machine and technician precision error is available**

**Female only: Currently or at risk of becoming pregnant, or breastfeeding**

### Performance Health Support Practitioner

<b>Name:</b>	<b>Date:</b>
<b>Email:</b>	<b>Organisation:</b>

## Total radiation exposure

Use the table below to estimate radiation exposure from imaging sources in the last 12 months. **Total exposure should NOT exceed 1000  $\mu$ Sv.** Furthermore, the number of DXA scans permitted in the radiation safety plan of the group in which scans are undertaken should not be exceeded, irrespective of the total annual exposure. Typically, this is 3-4 scans per annum.

RADIATION SOURCE	RADIATION EXPOSURE ( $\mu$ Sv)	NUMBER (12 MTHS)	TOTAL EXPOSURE
DXA [total body]	1		
DXA [bone density]	4.4		
Dental x-ray	10		
Chest x-ray	20		
CT Scan	8000		
<b>Total Exposure</b>			

\*DXA radiation exposure is based on iDXA standard scan mode. Bone density radiation exposure is based on spine + [1x] femur. Please see table below for radiation exposure from specific GE machines and different scan modes.

### Indicative radiation dose to adult patients from common medical imaging procedures

REGION	PRODIGY (USV)			iDXA (USV)		
	Thin	Standard	Thick	Thin	Standard	Thick
AP Spine	0.1	0.3	0.6	0.3	1.0	2.3
Femur	0.2	0.9	1.9	0.9	3.4	7.6
Dual Femur	0.4	1.7	3.8	1.7	6.7	15.1
Forearm		0.002			0.01	
Total Body	0.1	0.1	0.3	1.0	1.0	2.0
BMD [Spine + Dual Femur]	0.5	1.8	4.1	2.7	7.7	17.1