DIAC member feedback form – Deloitte capital sensitivity final report – November 2020

DIAC Member name: Karen THOMAS (ASMIRT)

Equipment recommendations							
Equipment type	**Current life age (years)**	**Deloitte rec**	**DIAC member suggested age**	**Current extended life age (years)**	**Deloitte rec**	**DIAC member suggested age**	**Comments**
Ultrasound	10	7 to 8	Eight (8) years.	15	9 to 10 or no extended life age	No extended life age.	
CT	10	7 to 10	Eight (8) years.	15	10 to 12	Twelve (12) years.	
Mammography	10	8 to 10	Eight (8) years.	15	10 to 12	Twelve (12) years.	
Angiography	10	7 to 10	Eight (8) years.	15	10 to 12	Twelve (12) years.	
Other diagnostic radiology	15	8 to 10	Ten (10) years	20	12 to 15	Fifteen (15) years.	
Nuclear Medicine Imaging - SPECT	10	Retain	Agreed.	15	Retain	Agreed.	
MRI	10	7-10	Eight (8) years	20	13 to 16	Sixteen (16) years.	
PET	None	None	Agreed.	None	None or same as SPECT.	Agreed.	

Primary, secondary and peripheral components - definitions				
Category	**Current definition**	**Deloitte rec**	**DIAC member views**	**Comments**

			(Agree/ not agree)	
Primary	None	Directly impacts or controls the image quality and radiation dose (ionising equipment).	Agreed.	
Secondary	None	Contributes but does not directly control the image quality and radiation dose.	Agreed.	
Peripheral	None	Other components that do not affect image quality or radiation exposure.	Agreed.	

Upgrade, refurbishment and upgrade definitions				
Category	**Current definition**	**Deloitte rec**	**DIAC member views (Agree/ not agree)**	**Comments**
Update	None	Improvement to a diagnostic imaging machine that is delivered by updating operating system software.	Agreed.	
Refurbishment	None	A systematic process of rebuilding an equipment from one or more used equipment of that kind, that ensures the safety and effectiveness of the diagnostic imaging machine, without significantly changing the equipment's or system's performance, safety specifications and/or changing intended use as in its original registration	Agreed.	
Upgrade	• An additional reasonable investment has been made that improves the overall performance of the imaging system so that it is equivalent to new equipment supplied in	The provision of enhancements to the primary or secondary hardware and software components to provide improved diagnostic outcomes, which will include improved image quality	Agreed.	

Upgrade, refurbishment and upgrade definitions				
Category	**Current definition**	**Deloitte rec**	**DIAC member views (Agree/ not agree)**	**Comments**
	Australia at the time of the improvement; or • in the case of mammography equipment, the equipment is currently accredited under RANZCR Mammography Quality Assurance Program.	and optimisation of ionising radiation dosage.		

Additional questions

How should refurbishments as defined by Deloitte affect the life age? Is refurbished equipment regarded as new equipment?

ASMIRT notes that refurbishment is defined (by Deloitte) as a systematic process of rebuilding an equipment from one or more used equipment of that kind, that ensures the safety and effectiveness of the diagnostic imaging machine, without significantly changing the equipment's or system's performance, safety specifications and / or changing intended use as in its original registration.

If this definition is accepted without any changes, then ASMIRT would contend that the term "refurbishment" **does not** affect the equipment life age, and certainly **not** extend the life age.

ASMIRT would **not** regard this type of refurbished equipment as new equipment.

For each equipment type, has Deloitte captured the primary components correctly?

Ultrasound:	Yes / no (if no, what should they be)	Yes
CT:	Yes / no (if no, what should they be)	Yes
Mammography:	Yes / no (if no, what should they be)	**No**

Additional comments:
ASMIRT would recommend that the definition "Screen Film System" (page 66) be incorporated with the definition of "Detectors" and moved from "Periphery Components" to "Primary Components". Both "Screen Film System" and "Detectors" describe the types and range of mammographic imaging which are available in this modality. The type of mammographic imaging can have a bearing on the subsequent image quality.

Angiography:	Yes / no (if no, what should they be)	Yes
Rest of DR:	Yes / no (if no, what should they be)	Yes
Nuclear medicine (SPECT):	Yes / no (if no, what should they be)	Yes
MRI:	Yes / no (if no, what should they be)	Yes

For each equipment type, has Deloitte captured the secondary components correctly?

Ultrasound:	Yes / no (if no, what should they be)	Yes
CT:	Yes / no (if no, what should they be)	Yes
Mammography:	Yes / no (if no, what should they be)	Yes
Angiography:	Yes / no (if no, what should they be)	Yes
Rest of DR:	Yes / no (if no, what should they be)	**Please Note**

Additional comments:

ASMIRT agrees that the "Control Console" (page 79) should be considered a "Secondary Component". However, it should be noted that the definition (see below) states that, "the control console allows the radiologist to control the X-ray tube current and voltage". This statement is incorrect, as it is the diagnostic radiographer who controls the X-ray tube current and voltage.

A control console includes a table, imaging system as well as peripherals such as a mouse, keyboard Yes and monitor for controlling the operations of the machine, patient table and imaging system. The control console allows the radiologist to control the X-ray tube current and voltage so that the useful X-ray beam is of proper quantity and quality.

Nuclear medicine (SPECT):	Yes / no (if no, what should they be)	Yes
MRI:	Yes / no (if no, what should they be)	Yes

What are DIAC's thoughts on the recommendations regarding the certification requirements proposed by Deloitte below:

In order for a diagnostic imaging establishment to be entitled to receive MBS rebates for the original effective life age of a machine, a maintenance record must be maintained by a certified engineering authority in accordance with the original equipment manufacturer's (OEM) recommendations.

Member comments

ASMIRT notes that the vast majority of diagnostic imaging equipment given its technical sophistication is inspected, serviced and repaired by a certified medical imaging engineer from the company (OEM) who manufactured the equipment, as well as other third-party personnel who are both accredited and specifically vendor trained by the company (OEM). This has been the case over many years and is seen as acceptable process to ensure the equipment is both OH&S compliant and fit for purpose.

Currently, if a practice applies for an extension of equipment life age, there is a requirement to show documentation of the upgrade from the engineer(s) of the parent company of what type of upgrade has been performed and its particular enhancements which allows the potential extension of equipment life age.

ASMIRT would strongly suggest that a "certified engineering engineer" is an accredited individual(s) who is / are **directly employed or a third-party who is accredited and specifically vendor trained** by the parent (OEM) company. This process allows for a consistent quality process for inspection, servicing and equipment upgrades to occur.
ASMIRT would **not** recommend the outsourcing this form of engineering to a third party, such as an engineering department of a hospital.

In order for a diagnostic imaging establishment to access the extended life age of a machine for MBS rebate purposes, they must have the equipment inspected and certified by an accredited certified engineer to say that the equipment has been maintained in accordance with the OEM recommendations and upgraded. The OEM certified engineer would also be required to inspect the equipment and sign off the equipment as upgraded and fully compliant to all OH&S specifications as well as being functionally and physically fit for purpose.

Member comments
ASMIRT would endorse this action as a logical extension to what is regarded as a widely accepted process of inspection, servicing and the installation of specific updates and upgrades.

What are DIAC's thoughts regarding the Deloitte's recommendation that the Department consider the feasibility of regulating upgrades via a performance-based approach (similar to the mammography quality assurance program) and the use of such an approach for determining what the maximum extended life age of equipment should be?

Member comments

ASMIRT believes that this proposal has merit. It would recommend that the basis of this performance based approach use established programs such the Diagnostic Imaging Accreditation Scheme which was to establish a diagnostic imaging accreditation scheme linking mandatory accreditation to the payment of Medicare benefits for clinical radiology and non-radiology services in 2017 and the RANZCR/NATA Medical Imaging Accreditation Program (MIAP) which is jointly administered by the College and the National Association of Testing Authorities (NATA) to accredit medical imaging services against the Standards of Practice for Diagnostic and Interventional Radiology as the initial benchmark.

To ensure that there is a comprehensive and sustainable outcome achieved, ASMIRT would recommend there should be a multi-stakeholder initiative, in conjunction with the RANZCR to drive this approach. These stakeholders include:

Australasian Association of Nuclear Medicine Specialists (AANMS)

Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM)

Australasian Society for Ultrasound in Medicine (ASUM)

Australasian Sonographers Association (ASA)

Australian And New Zealand Society of Nuclear Medicine (ANZSNM)

Australian Diagnostic Imaging Association (ADIA)

Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)

Australian Society of Medical Imaging and Radiation Therapy (ASMIRT)

Deloitte has identified three types of multifunctional equipment – SPECT/CT, PET/CT and PET MRI

Are there any other types of multimodality diagnostic imaging equipment not considered by Deloitte?

Not that the Australian Society of Medical Imaging and Radiation Therapy (ASMIRT) is aware of.

Do you have any additional comments? (if so, please provide your comments here).

COMMENT No. 1

CONSULTATION BRIEF / DIAGNOSTIC IMAGING EQUIPMENT LIFE AGES (PAGE 150 OF THE REPORT)

The Department of Health has specified that equipment is considered to be upgraded if: *An additional reasonable investment has been made within the new effective life age for the equipment that improves the overall performance of the imaging system so that it is equivalent to new equipment supplied at the time of the improvement.* Practices can contact the relevant equipment supplier for advice on what constitutes 'as new' performance, as they should have a good understanding of contemporary up-to-date aspects of diagnostic imaging equipment. The life extension commences at the end of the effective life age. For example, if an additional investment is made to upgrade a unit at year five of a ten year effective life, the five year extension period will commence at the end of year ten, giving the equipment a maximum extended life of 15 years.

ASMIRT would like to comment on the highlighted statement above. While it recognizes that there will be changes to the equipment age life in the future, it would like to use the existing timeframe (above) to highlight an issue.

If a piece of diagnostic imaging equipment is upgraded at the half way point of its life span to extend its life by 50% and this equipment is used for the entire extended age life of fifteen years, then the upgrade effectively occurred with **the first third** of the extended age life. This means that for the final 2/3 of the extended life age, there is no requirement for an upgrade, which may be at a time when potential significant upgrades for equipment technology evolve.

To achieve a potentially better outcome for equipment life age extensions, ASMIRT would recommend consideration for the upgrade being installed in **the last third** of the original life age (the above example is 10 years). This would mean that if an upgrade was installed at that time, the equipment would have an extended life age of 15 years, with the upgrade being installed at around the half way point of its life span. ASMIRT believes it would then give each piece of diagnostic imaging equipment the best possible chance of staying technologically relevant for a longer period of time.

COMMENT No. 2

As indicated in the Deloitte report, there is a recognition that the diagnostic imaging equipment life age should be primarily reduced, with some equipment to remain the same life age.

If and when changes to this legislation are enacted, there will obviously be a designated date for the enactment to commence. For example, when the legislation is enacted, and the life age is reduced from (say) 10 to 8 years, there will be equipment which will be over 8 or 9 years old in life age terms. When this occurs, there will be then some equipment which is Medicare eligible on one day and potentially Medicare ineligible the following day.

ASMIRT would urge DIAC to consider the ramifications of this occurrence and to formulate a process which does not penalise a private practice that does have this type of equipment at their sites. ASMIRT believes there must be a provision for a clear pathway, so this equipment to still obtain Medicare eligibility while waiting for the upgrade process to occur.

COMMENT No. 3

Radiation therapy has utilised dedicated CT scanners for many years as stand-alone units required for treatment planning. Most patients undergo a planning CT scan in their treatment position with appropriate stability and reproducibility equipment, such as thermoplastic masks. These CT scans are used to delineate target contours of the tumour and surrounding tissues along with organs at risk. The electron density information from the CT numbers (or Hounsfield units) are utilised by the treatment planning software algorithms to accurately calculate the maximum radiation dose to the target whilst minimising radiation dose to the surrounding healthy tissue. These radiation therapy CT scanners have the same characteristics as a diagnostic CT scanner, generally a 64-slice helical scanner as a minimum, with large bore. Dual-energy CT acquisition is also gaining operational traction in radiation therapy, allowing improved tissue composition scans, improving the accuracy of therapeutic dose calculations, particularly for metal artefact reduction, proton therapy and low-energy brachytherapy.

ASMIRT notes that the recommendation that the diagnostic imaging equipment life age of CT is to be lowered from 10 years to (potentially) 7 years, and if an upgrade was installed from 15 years to (potentially) 10 years. This is a significant decision as the number of Medicare rebated CT examinations nationally in the 2019-2020 financial year totaled 3,714,716.

This decision however does not take into account that there is dedicated stand-alone diagnostic imaging CT scanning equipment which is used in conjunction with radiation therapy treatment equipment. These two pieces of equipment form the cornerstone of all radiation therapy (Medicare and non-Medicare related) treatment in the Australian health system. These types of dedicated diagnostic imaging CT scanning equipment has never been subjected to Capital Sensitivity legislation, and it would seem this has not been considered in this review.

ASMIRT questions why when it is technically possible for diagnostic imaging CT scanning equipment in a radiation therapy environment to perform both treatment planning examinations (which is just another form of diagnostic CT scanning) is not subjected to any form of scrutiny under Capital Sensitivity legislation.