

## ASISA STANDARD ON DISCLOSURES FOR CRITICAL ILLNESS PRODUCTS

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### 1 Introduction

Critical Illness products are designed to pay out a benefit when a policyholder has a serious illness or suffers a traumatic event which results in financial difficulty. In order for the product to be practical and affordable, the illness or trauma needs to be sufficiently serious before the sum insured is paid out. If this were not the case there would be many benefits paid which would make the product expensive and therefore less accessible.

To ensure that consistent and objective claims decisions can be made, the definitions used to determine whether a policyholder qualifies for a benefit need to be sufficiently detailed. Some level of medical terminology is required which can be difficult for many people to understand.

It is acknowledged that this is a necessarily complex product that requires certain of the definitions to be standardised, which formed the objective of the past SCIDEP. (Standardised Critical Illness Definitions Project). There was consensus from the participating companies with regard to four of the definitions and this is the core of the “standard on disclosures” document. However, medical conditions change from time to time and this requires this document to be regularly updated. This document is a table of the updated definitions, with additional clarity to assist customers, intermediaries, regulators and companies in understanding the detail of the definitions. The intention of the updated definitions is to be cost neutral to companies. However it is accepted that there might be some very minor pricing implications as a result of the new definitions, for certain companies.

It needs to be strongly emphasised that standardised definitions do not necessarily mean simpler definitions. In many instances the definitions are more detailed, but the policyholder will only need to understand one set of definitions. The outcome of the necessary detail in these standardised definitions however, is to ensure consistency in claims assessment and therefore decisions.

Due to the fact that all Critical Illness claims triggers are medically based, the industry often comes into conflict with medical practitioners whose clinical definition of the severity of a heart attack, for example, is not the same as the insurance definition. In order to ensure the most recent clinical definitions for medical impairments were aligned to the policy wordings in as many instances as possible, collaborative workshops were held to give all parties the opportunity to give their input and reach consensus.

### 2 Positioning

The SCIDEP definitions apply to any product that uses any of the four core diseases (listed in Section 3 below) except:

- functional impairment products
- disability products
- products that only cover a part of a disease, for example a breast cancer product.

For clarity the following products are examples of those that need to use the SCIDEP definitions:

- Traditional individual life Critical Illness products
- Group Critical Illness products
- Critical Illness with and without severity based definitions
- Life cover with acceleration on the diagnosis of a Critical Illness
- Waiver of premium on Critical Illness cover
- Mortgage protection Critical Illness cover.

The definitions apply to all ASISA member companies and adherence to the disclosures later in this document is mandatory.

It is not necessary for insurers to change their product philosophy or marketing material. The purpose of the standardised definitions is that it will provide some “underpin” to the product therefore providing policyholders and intermediaries with (a) the comfort that they can get their claim assessed on industry approved definitions, and (b) that they can get a better understanding of when and at what level different insurers will pay out. The process does not attempt to stifle competition as insurers are not restricted in terms of the number of diseases covered, the percentage paid out, the number of payments that can be made, or the rates that they charge. It is possible for insurers to keep all of their documentation the same, except for the fact that they must state clearly in the contract what percentage they would pay out for the SCIDEP definitions. Hence insurers merely need to map their current pay-outs to the SCIDEP definitions and it is likely that no more or less claims will be paid.

These definitions are only applicable to Critical Illness policies sold after the implementation of the previous SCIDEP definitions.

### 3 Application

The standard definitions apply to the following four “core” diseases, which make up more than half of all Critical Illness claims:

- Heart attack
- Cancer
- Stroke
- Coronary Artery By-pass Graft (CABG).

The definitions cover four tiers, A, B, C, and D, with A being the most severe and D being the least severe.

The definitions for “Heart attack” and “Stroke” allow for several functional parameter definitions to allow for insurers’ existing product philosophies.

Although the sixteen definitions (four diseases with four severities) are standardised, the percentage benefit paid for each of the definitions is up to the discretion of each insurance company. Therefore an insurer can pay between 0% and 100% for each severity of each disease. An insurer cannot pay a lower

percentage for a more severe definition, although they can pay the same percentage. Examples of possible pay-outs could be:

	Insurer 1	Insurer 2	Insurer 3	Insurer 4	Insurer 5
<b>Severity A</b>	100%	100%	100%	100%	100%
<b>Severity B</b>	75%	0%	100%	100%	100%
<b>Severity C</b>	50%	0%	10%	0%	100%
<b>Severity D</b>	25%	0%	10%	0%	100%

An insurer can add more severity conditions, either more severe than A or less severe than D, but again the more severe conditions must pay more than or the same percentage benefit paid as A, and the less severe conditions must pay out less than or the same percentage benefit paid as D.

Any product that offers one or more of the four core diseases must use at least one of the four severity definitions. This also applies to single disease products, for example “cancer products”. For the purpose of clarity, if an insurer selects one of the lower severity levels as their starting point then all of the more severe levels must also cover at least at the same percentage as the chosen severity definition.

### Contract Wording

Although it would be ideal for all insurers to use the standardised definitions in their quotations and contracts, there are some practical restrictions that may make this difficult to implement. Hence insurers must state that they will honour claims according to the SCIDEP definitions, for at least one severity level of each of the four core diseases that they cover. This means that no insurer can have 0% cover for all four severity levels of any given condition. If a claim is declined on the insurer’s definition, the policyholder will have the right to insist that it is also assessed according to the SCIDEP definitions. In practice it would be preferable for all claims to be assessed according to the SCIDEP definitions. This will only apply to those levels of definitions where the insurer has indicated a certain percentage benefit. In cases where 0% cover has been indicated, the SCIDEP definitions will of course not be enforceable. In practice it would be preferable for all claims to be assessed according to the SCIDEP definitions where applicable, i.e. where a benefit is offered.

The quotation or contract must state what percentages the insurer will pay out for the sixteen standard definitions in a 4 x 4 grid. This will enable policyholders to easily compare the benefits of different insurance companies.

## 1. Stroke

### 1.1 Definition for SCIDEP for Tiered Products

Death of brain tissue due to inadequate blood supply or haemorrhage within the skull resulting in neurological deficit lasting longer than 24 hours, confirmed by neuro-imaging investigation and appropriate clinical findings by a specialist neurologist.

For the above definition, the following are not covered:

- Transient ischaemic attack;
- Vascular disease affecting the eye or optic nerve;
- Migraine and vestibular disorders;
- Traumatic injury to brain tissue or blood vessels.

Severity levels will be assessed by a full neurological examination by a specialist neurologist any time after three months.

#### **Level A: Stroke with severe impairment**

Needs constant assistance, as measured by:

- the inability to do 3 or more basic ADL's, or
- a Whole Person Impairment (WPI) of greater than 35%.

#### **Level B: Stroke with moderate impairment**

Cannot function independently, as measured by:

- the inability to do 6 or more advanced ADL's, or
- a WPI of 21% to 35%.

#### **Level C: Stroke with mild impairment**

Can function independently, but has impairment as measured by:

- the inability to do 3 or more advanced ADL's, or
- a WPI of 11% to 20%.

**Level D: Stroke with almost full recovery**

Almost full recovery, with little residual symptoms or signs, as measured by:

- the ability to do all basic and advanced ADL's, or
- a WPI of 10% or less.

WPI figures are calculated as per the American Medical Association Guides to the Evaluation of Permanent Impairment 6<sup>th</sup> edition.

**Basic activities of Daily Living**

- **Bathing** - the ability to wash/bathe oneself independently
- **Transferring** - the ability to move oneself from a bed to a chair or from a bed to a toilet independently
- **Dressing** - the ability to take off and put on one's clothes independently
- **Eating** - the ability to feed oneself independently. This does not include the making of food
- **Toileting** - the ability to use a toilet and cleanse oneself thereafter, independently
- **Locomotion on a level surface** - the ability to walk on a flat surface, independently
- **Locomotion on an incline** - the ability to walk up a gentle slope, or a flight of steps independently

**Advanced activities of Daily Living**

- **Driving a car** - the ability to open a car door, change gears or use a steering wheel
- **Medical care:** the ability to prepare and take the correct medication
- **Money management** - the ability to do one's own banking and to make rational financial decisions
- **Communicative activities:** - the ability to communicate either verbally or written
- **Shopping:** - the ability to choose and lift groceries from shelves as well as carry them in bags
- **Food preparation** - the ability to prepare food for cooking as well as using kitchen utensils
- **Housework** - the ability to clean a house or iron clothing
- **Community ambulation with or without assistive device, but not requiring a mobility device** - the ability to walk around in public places using only a walking stick if necessary

- **Moderate activities:**-activities like moving a table, pushing a vacuum cleaner, bowling, golf
- **Vigorous activities:** - able to partake in running, heavy lifting, sports

#### Notes:

- TIA exclusion included only for clarity.
- Trauma is not covered in this instance as a “stroke” is meant to be as a result of an illness not a head injury. Companies could always add in a major head trauma product or include traumatic injury as a competitive advantage.

### 1.2 Layman’s Definition

A stroke occurs when the blood supply to a portion of the brain is obstructed and this part of the brain tissue dies. It can also happen when there is bleeding into the brain tissue due to a weakening or abnormality of the blood vessel wall. A common cause of the rupture of a brain blood vessel is longstanding uncontrolled high blood pressure.

The result of a stroke is usually paralysis of an arm and leg, sometimes with one half of the face affected as well. In some cases people also lose their ability to speak. The paralysis can recover to varying degrees. Some recover fully, whereas others may retain permanent weakness of a limb(s).

A Transient Ischaemic Attack (TIA) occurs when the blood supply is momentarily interrupted, but restored before any permanent damage can occur. It usually results in one or more of the following symptoms:

- a loss of sensation
- dizziness
- lameness of a limb
- loss of speech

which only occur for a few minutes to hours and recovery is quick and spontaneous.

### 1.3 SCIDEP Definition for Non-tiered Products

It is recommended that the primary definition of stroke with its exclusions are used for non-tiered products, as defined in 1.1 above the description of severity level A, in combination with any one of the 4 severity levels. The decision on which severity level to use will be a pricing and product philosophy issue.

If severity level D is used for a non-tiered product, it is recommended that the last bullet be changed from “a WPI of 10% or less” to “any quantifiable WPI of at least 1% or more”.

## 2 CABG definitions

### 2.1 Definition for SCIDEP for Tiered Products

The undergoing of surgery, regardless of method of surgical access, to correct the narrowing of, or blockage to, one or more coronary artery(ies) by means of a by-pass graft.

#### Level A

The undergoing of surgery to correct the narrowing of, or blockage to, three or more coronary arteries, by means of a by-pass graft.

#### Level B

The undergoing of surgery to correct the narrowing of, or blockage to, two coronary arteries, by means of a by-pass graft.

#### Level C

The undergoing of surgery to correct the narrowing of, or blockage to, the left main or proximal left anterior descending coronary artery, by means of a by-pass graft.

#### Level D

The undergoing of surgery to correct the narrowing of, or blockage to, any one coronary artery, by means of a by-pass graft.

### 2.2 Layman's definition

Coronary artery bypass graft surgery, also called heart bypass or bypass surgery, is a surgical procedure performed to relieve chest pain and reduce the risk of death from heart disease.

Arteries or veins from elsewhere in the patient's body (most commonly the leg) are joined to the coronary arteries of the heart to bypass the narrowing of the affected or diseased arteries. This improves the blood supply and circulation to the heart muscle. The terms "single bypass", "double bypass", "triple bypass", "quadruple bypass" and "quintuple bypass" refer to the number of coronary arteries bypassed in the procedure

This surgery is usually performed with the heart stopped necessitating the usage of highly specialised theatre equipment to keep the heart and the lungs working during the course of the operation.

## 2.3 Definition for SCIDEP for Non-Tiered Products

Any of the 4 severity level definitions can be used on its own for non-tiered products. The SCIDEP disclosure grid should indicate correctly that severity levels below the chosen definition will have a zero percentage pay-out.

## 3. Heart Attack Definitions

### 3.1 Definition for SCIDEP for Tiered Products

#### Level A: Heart attack with severe permanent impairment in function

A Heart attack that meets the criteria as defined under Level C, with permanent impairment in one or more of the following functional criteria, as measured 6 weeks post-infarction:

Criterion	Value
NYHA classification	Class 4
METS	1 or less
LVEF	< 30%
LVEDD	> 72
Ultrasound FS in %	< 16%

#### Notes:

1. If more than one functional criterion is impaired, but their values do not conform to one severity level (for example one impaired value is Level A and another Level B), the final severity level should be determined by giving preference to the more objective criteria, i.e. in the following order:
  1. LVEF
  2. LVEDD
  3. Ultrasound FS
  4. METS
  5. NYHA



### Level B: Heart attack with mild permanent impairment in function

A heart attack that meets the criteria as defined under Level C, with permanent impairment in one or more of the following functional criteria, as measured 6 weeks post-infarction:

Criterion	Value
METS	2-7
LVEF	30%-50%
LVEDD	59-72
Ultrasound FS in %	16%-25%

### Level C: Moderate heart attack of specified severity

This is defined as the death of heart muscle, due to inadequate blood supply, as evidenced by any of the following combinations of criteria:

1. Compatible clinical symptoms **AND** raised cardiac biomarkers  
**OR**
2. Compatible clinical symptoms **AND** new pathological Q-waves on ECG as defined in Annexure A (b)  
**OR**
3. New pathological Q-waves on ECG as defined in Annexure A (b) **AND** raised cardiac biomarkers  
**OR**
4. ST-segment and T-wave changes on ECG indicative of myocardial injury as defined in Annexure A (a) **AND** raised cardiac biomarkers

Where raised cardiac biomarkers are referenced above, they are defined as any **one** of the following Troponin or Non-Troponin Markers:

#### Sensitive Troponin Markers

Marker		Value**	
*Assay (test)	Troponin Type	Unit: ng/L	Unit: ng/ml
Roche hsTnT	TnT	> 1000	> 1,0
Abbott ARCHITECT	TnI	> 3000	> 3,0
Beckman AccuTnI	TnI	> 5000	> 5,0
Siemens Centaur Ultra	TnI	> 6000	> 6,0
Siemens Dimension RxL	TnI	> 6000	> 6,0
Siemens Stratus CS	TnI	> 6000	> 6,0

\* Use the relevant manufacturer's assay (test) or equivalent as it appears on the laboratory report.

\*\*Values represent multiples of the World Health Organisation (WHO) MI rule in levels and not the 99<sup>th</sup> percentile values (upper limit of normal) as quoted on the laboratory result.

### Conventional Troponin Markers:

Marker		Value	
Assay (test)	Troponin Type	Unit: ng/L	Unit: ng/ml
Conventional TnT	TnT	>1000	>1,0
Conventional AccuTnl***	Tnl	>500	>0,5

\*\*\* or equivalent threshold with other Troponin I methods

### Non-Troponin Markers

Marker	Value
Raised CK-MB mass	Raised 2 times or more the upper limit of normal laboratory reference range in acute presentation phase
Total CPK elevation	Raised 2 times or more the upper limit of normal laboratory reference range in acute presentation phase, with at least 6% being CK-MB

### Level D: Mild heart attack of specified severity

This is defined as the death of heart muscle, due to inadequate blood supply, as evidenced by all three of the following criteria:

1. Compatible clinical symptoms **AND**
2. Characteristic ECG changes indicative of myocardial ischaemia or myocardial infarction as per Annexure A (a) **AND**
3. Raised cardiac biomarkers defined as any one of the following Troponin or Non-Troponin Markers:

### Sensitive Troponin Markers:

Marker		Value**	
*Assay (test)	Troponin Type	Unit: ng/L	Unit: ng/ml
Roche hsTnT	TnT	>500	>0,5
Abbott ARCHITECT	Tnl	>1500	>1,5
Beckman AccuTnl	Tnl	>2500	>2,5
Siemens Centaur Ultra	Tnl	>3000	>3,0
Siemens Dimension RxL	Tnl	>3000	>3,0
Siemens Stratus CS	Tnl	>3000	>3,0

\* Use the relevant manufacturer's assay (test) as it appears on the laboratory report.

\*\*Values represent multiples of the World Health Organisation (WHO) MI rule in levels and not the 99<sup>th</sup> percentile values (upper limit of normal) as quoted on the laboratory result.

### Conventional Troponin Markers:

Marker		Value	
Assay (test)	Troponin Type	Unit: ng/L	Unit: ng/ml
Conventional TnT	TnT	>500	>0,5
Conventional AccuTnI***	TnI	>250	>0,25

\*\*\* or equivalent threshold with other Troponin I methods

### Non-Troponin Markers:

Marker	Value
Raised CK-MB mass	Raised above the upper limit of normal laboratory reference range but not meeting the severity C definition (i.e. below 2 times the upper limit of normal laboratory reference range) in acute presentation phase
Total CPK elevation	Raised above the upper limit of normal laboratory reference range but not meeting the severity C definition (i.e. below 2 times the upper limit of normal laboratory reference range) in acute presentation phase, with at least 6% being CK-MB

The evidence must show a definite acute myocardial infarction. Other acute coronary syndromes, including but not limited to angina, are not covered by this definition.

### Post coronary artery intervention Myocardial Infarction (MI)

1. Confirmed acute MI that has occurred post percutaneous coronary intervention (PCI) with a detection of cardiac biomarkers as follows:

Marker	Parameter
Cardiac troponin assay	As it appears in the definition of at least a heart attack of mild severity (Level D) post intervention
Raised CK-MB mass	Raised above the upper limit of normal laboratory reference range but below 4 times the upper limit of normal laboratory reference range post intervention

2. Confirmed acute MI that has occurred post coronary artery bypass graft (CABG) with a detection of cardiac biomarkers as follows:

Marker	Parameter
Cardiac troponin assay	As it appears in the definition of at least a heart attack of moderate severity (Level C) post intervention
Raised CK-MB mass	Raised 4 times or more the upper limit of normal laboratory reference range post intervention

## Annexure A

### Definitions of ECG changes

#### a. ECG changes indicative of Myocardial Ischaemia that may progress to Myocardial Infarction:

- Patients with ST-segment elevation:
  - New or presumed new ST segment elevation at the J point in two or more contiguous leads with the cut-off points greater than or equal to 0.2mV in leads V1, V2, or V3, and greater than or equal to 0.1mV in other leads.
  - Contiguity in the frontal plane is defined by the lead sequence AVL, I and II, AVF, III.
- Patients without ST-segment elevation:
  - ST-segment depression of at least 0.1 mV;
  - T-wave abnormalities only.

#### b. Definition of new pathological Q-waves:

- Any new Q-wave in leads V1 through V3;
- A Q-wave greater than or equal to 40 ms (0.04s) in leads I, II, AVL, AVF, V4, V5 or V6;
- The Q-wave changes must be present in any two contiguous leads, and be greater than or equal to 1mm in depth;
- Appearance of new complete bundle branch block.

#### Reference:

Joint European Society of Cardiology/American College of Cardiology Committee for the Redefinition of Myocardial Infarction: "Myocardial Infarction Redefined - A Consensus Document"; Journal of the American College of Cardiology, Vol. 36, No 3, 2000, p959-968. Table 3 & 4, p962.

### 3.2 Layman's description

Four levels of severity of heart attacks are defined:

- Level D is the mildest and Level A the most severe.
- In both levels C and D the patient recovers fully and the heart function returns to normal.
- In levels A and B, more permanent damage has resulted, which means the heart function is less than 100% after recovery.
- The effect of the heart attack on heart function should be measured 6 weeks after the heart attack.

#### **Level A: Heart attack severe impairment in function**

These are heart attacks where a significant proportion of the heart muscle was damaged. The same tests are used to measure the damage as under Level B but the results would show a more serious level of impaired function.

This person will have difficulty coping with normal activities of daily living, and will most likely not be able to work.

#### **Level B: Heart attack with mild permanent impairment in function.**

This is usually a heart attack that does not recover 100% of normal function. The degree of permanent damage can be measured by a heart sonar, an exercise tolerance test or a measurement of physical abilities. These measurements should be performed 6 weeks after the heart attack.

A person with this level of heart damage should still be able to manage normal daily activities and even his/her occupation, if the occupation does not involve strenuous physical work. However, this person's insurability will be adversely affected, and the future risk for a repeat cardiac event is high. Significant life-style adaptation and risk factor modification are indicated.

#### **Level C: Moderate heart attack of specified severity**

In this case damage to the heart muscle is more than in Level D. In some cases a cardiologist will intervene early and reverse the potential damage. This intervention may include administration of drugs to dissolve the blood clot in the coronary artery(ies), balloon stretching of the coronary artery, with or without a stent.

Because the clinical methods of diagnosing this level of heart attack are unambiguous, only two of the three criteria are required:

- Typical chest pain or other symptoms typically associated with a heart attack.

- Certain defined ECG changes. At this level the changes are more marked and more specific to a heart attack.
- Elevated blood test results greater than required for Level D.

#### **Level D: Mild heart attack with full recovery**

This is a heart attack where the ECG changes and blood test results are mildly abnormal. Therefore, all three criteria are required, i.e.

- Typical chest pain or other symptoms associated with a heart attack, and
- Certain defined ECG changes, and
- An elevation in certain blood test results.

### **3.3 Definition for SCIDEP for Non-tiered Products**

Any of the 4 levels of severity may be used on its own for the definition of a heart attack for non-tiered products. The final choice will be determined by price and company philosophy.

It needs to be noted that:

Levels C and D are diagnosis-based and do not require permanent impairment. It will therefore pay a benefit even if full recovery has taken place.

Levels A and B are impairment based and do require some degree of permanent impairment. Full recovery will not qualify for a claim under these definitions.

It is also important to note that the definitions of levels A and B are based on the basic definition of level C, with some impairment criteria added. Therefore, if either levels A or B are to be used as a standalone non-tiered benefit, the level C criteria (and ECG changes description) should be used as a starting basis, to which the criteria of either A or B are added.

## 4. Cancer

### 4.1 Definition for SCIDEP for Tiered Products

A malignant tumour positively diagnosed with histological confirmation and characterised by the uncontrolled growth of malignant cells and invasion of tissue. The term malignant tumour includes leukaemia, lymphoma and sarcoma.

The following conditions are excluded from this definition:

- All cancers in situ and all pre-malignant conditions or conditions with low malignant potential, or classified as borderline malignancy.
- All tumours of the prostate unless histologically classified as having a Gleason score greater than 6 or having progressed to at least pathological TNM classification T2N0M0.
- All skin cancers are excluded. The only exception is malignant melanoma that has been histologically classified as T1N0M0 or worse.

Cancers are generally classified by severity into four stages. However brain and prostate cancer, leukaemia and lymphoma do not conform to this general classification. Therefore additional tiering levels are proposed for these cancers.

#### **Tiering of all Cancers except prostate, leukemia, lymphoma and brain tumours**

**The levels are correlated to the general classification used by the American Joint Committee for Cancer for the type of cancer involved:**

Level A - Stage 4 cancer

Level B - Stage 3 cancer

Level C - Stage 2 cancer

Level D - Stage 1 cancer

### Tiering of prostate cancer

Stage 1	T1a, N0, M0, Gleason $\leq$ 4	Excluded
Stage 2	T1a, N0, M0, Gleason 5-6	Excluded
	T1b-c, N0, M0, Gleason 2-6	Excluded
	T1a-c, N0, M0 Gleason $\geq$ 7	Severity D
	T2, N0, M0 any Gleason	Severity D
Stage 3	T3, N0, M0 any Gleason	Severity C
Stage 4	T4, N0, M0 any Gleason	Severity B
	Any T, N1 - 3, M0 any Gleason	Severity A
	Any T, any N, M1, any Gleason	Severity A

### Tiering of leukemia and lymphoma

#### Level A:

This benefit will pay for any one of the following diagnoses:

- Acute Myeloid Leukaemia;
- Chronic Lymphocytic Leukaemia, stage III or IV on the Rai classification;
- Chronic Myeloid Leukaemia (requiring bone marrow transplant);
- Acute Lymphocytic Leukaemia (adults);
- Hodgkins/Non Hodgkins lymphoma Stage IV on Ann Arbor classification system;
- Multiple Myeloma Stage III on the Durie-Salmon Scale.



**Level B:**

**This benefit will pay for the following diagnoses:**

- Hodgkins and Non Hodgkins lymphoma Stage III on Ann Arbor classification system

**Level C:**

**This benefit will pay for any one of the following diagnoses:**

- Chronic Lymphocytic Leukaemia (stage II on the Rai classification);
- Acute Lymphocytic Leukaemia (children);
- Chronic Myeloid Leukaemia (no bone marrow transplantation);
- Hodgkins/Non Hodgkins lymphoma Stage II on Ann Arbor classification system;
- Multiple myeloma Stage I and II on the Durie-Salmon scale.

**Level D:**

**This benefit will pay for any one of the following:**

- Chronic Lymphocytic Leukaemia (Stage 0 or 1);
- Hairy cell leukaemia;
- Hodgkins/Non Hodgkins lymphoma Stage 1 on Ann Arbor classification.

**Tiering of brain tumours**

WHO grade II	Without neurological deficit	Severity D
WHO grade II	With neurological deficit	Severity C
WHO grade III	On diagnosis	Severity B
WHO grade IV	On diagnosis	Severity A

**Grade I** brain tumours will be considered under the Benign Brain Tumour benefit should a life office contract such a benefit in their critical illness product.

A table of the WHO grading for specific tumours has been included for reference purposes.

This table is not prescriptive and it is an individual companies decision should they wish to exclude certain tumours in the table below from any of their tumour/cancer benefits.

## WHO Grades of CNS Tumors

Grades	I	II	III	IV
<b>Astrocytic tumors</b>				
Subependymal giant cell astrocytoma	X			
Pilocytic astrocytoma	X			
Pilomyxoid astrocytoma		X		
Diffuse astrocytoma		X		
Pleomorphic xanthoastrocytoma		X		
Anaplastic astrocytoma			X	
Glioblastoma				X
Giant cell glioblastoma				X
Gliosarcoma				X
<b>Oligodendroglial tumors</b>				
Oligodendroglioma		X		
Anaplastic oligodendroglioma			X	
<b>Oligoastrocytic tumors</b>				
Oligoastrocytoma		X		
Anaplastic oligoastrocytoma			X	
<b>Ependymal tumors</b>				
Subependymoma	X			
Myxopapillary ependymoma	X			
Ependymoma		X		
Anaplastic ependymoma			X	
<b>Choroid plexus tumors</b>				
Choroid plexus papilloma	X			
Atypical choroid plexus papilloma		X		
Choroid plexus carcinoma			X	
<b>Other neuroepithelial tumors</b>				
Angiocentric glioma	X			
Chordoid glioma of the third ventricle		X		
<b>Neuronal and mixed neuronal-gliial tumors</b>				

Grades	I	II	III	IV
Gangliocytoma	X			
Ganglioglioma	X			
Anaplastic ganglioma			X	
Desmoplastic infantile astrocytoma and ganglioglioma	X			
Dysembryoplastic neuroepithelial tumor	X			
Central neurocytoma		X		
Extraventricular neurocytoma		X		
Cerebellar liponeurocytoma		X		
Paraganglioma of the spinal cord	X			
Papillary glioneuronal tumor	X			
Rosette-forming glioneuronal tumor of the fourth ventricle	X			
<b>Pineal tumors</b>				
Pineocytoma	X			
Pineal parenchymal tumor of intermediate differentiation		X	X	
Pineoblastoma				X
Papillary tumor of the pineal region		X	X	
<b>Embryonal tumors</b>				
Medulloblastoma				X
CNS primitive neuroectodermal tumor (PNET)				X
Atypical teratoid/rhabdoid tumor				X
<b>Tumors of the cranial and paraspinal nerves</b>				
Schwannoma	X			
Neurofibroma	X			
Perineurioma	X	X	X	
Malignant peripheral nerve sheath tumor (MPNST)		X	X	X
<b>Meningeal tumors</b>				
Meningioma	X			
Atypical meningioma		X		
Anaplastic/malignant meningioma			X	

Grades	I	II	III	IV
Hemangiopericytoma		X		
Anaplastic hemangiopericytoma			X	
Hemangioblastoma	X			
<b>Tumors of the sellar region</b>				
Craniopharyngioma	X			
Granular cell tumor of the neurohypophysis	X			
Pituicytoma	X			
Spindle cell oncocytoma of the adenohypophysis	X			

#### Notes:

- Histological confirmation is required
- There is no requirement to undergo treatment.
- Prophylactic mastectomy for carcinoma in situ will not qualify under this definition as the cancer is not invasive.
- The committee tried to avoid using classification or staging terms, but could not in the case of prostate. This was because staging definitions may change over time and are complex for the consumer.
- The committee decided not to exclude any HIV related cancers.

#### 4.2 Layman's description

Cancer is an uncontrolled growth that spreads into the normal tissue surrounding the organ where the cancer originates. The diagnosis must be supported by tests where a pathologist confirms the presence of cancer cells using a microscope. Some cancers have been specifically excluded because:

- The long term outcome is good and the effect on quality of life is minimal;
- Treatment is neither expensive nor extensive;

There are specific exclusions to this definition that include;

- Cancerous cells that have not invaded the surrounding or underlying tissue;
- Early cancer of the prostate gland and breast;
- All cancers of the skin except cancerous moles that have invaded underlying tissue.

## Staging of cancer

As a general rule there are four stages of cancer. Stage 1 cancer is defined by an invasive cancer confined to the tissue or organ of origin. Stage 2 cancer is defined by the involvement of adjacent structures or organs. Stage 3 cancer involves spreading to regional lymph nodes. Stage 4 cancer is characterized by distant metastasis.

However, each type of cancer is staged specifically by the American joint Committee for cancer (AJCC). This staging is based on the outcome of the specific cancer and does not always follow the general rule as stated above. In order to standardise staging we have used the AJCC system which is the same system used in clinical practice by specialists who treat cancer.

### 4.3 Definition for SCIDEP for Non-Tiered Products

The cancer definitions all have two components:

- The basic definition of cancer, with the standard exclusions, as defined under the tiered product definitions (4.)
- A severity level definition (A-D) comprising of two elements:
  - General severity levels for all cancers
  - Separate severity levels for brain and prostate cancer, leukaemia and lymphoma.

The severity levels (A-D) of all cancers, and those for brain and prostate cancer, leukaemia and lymphoma, are more or less comparable across all 4 levels.

For non-tiered definitions any severity level can be chosen depending on pricing and product philosophy. It however needs to be noted that the definition should start with the generic definition of cancer and its' standard exclusions as defined in 4.1. This needs to be followed by the definitions under the chosen severity level, including the definition for all cancers, as well as for brain and prostate cancer, leukemia and lymphoma.

The SCIDEP grid should reflect the payment per benefit appropriately.

### Annexure: Detail on Cancer Staging

The classification systems referred to in the annexure is for reference purposes only and will not form part of the definitions.

#### Lymphoma

#### HODGKIN'S and NON-HODGKIN'S LYMPHOMA

#### 2. Ann Arbor Staging System

<p>Stage I</p>	<p>The lymphoma is in a lymph node or nodes in only 1 region</p> <p>The lymphoma is found only in 1 area of a single organ outside of the lymphatic system(E)</p>
<p>Stage II</p>	<p>The lymphoma is in 2 or more groups of lymph nodes on the same side of the diaphragm</p> <p>The lymphoma extends locally from a single group of lymph nodes into a nearby organ (IIE). It may also affect other groups of lymph nodes on the same side of the diaphragm.</p>
<p>Stage III</p>	<p>The lymphoma is found in lymph node areas on both sides of the diaphragm</p> <p>The lymphoma may also have extended into an area or organ next t the lymph nodes(IIIE), into the spleen(IIIS), or both(IIE,S)</p>
<p>Stage IV</p>	<p>The lymphoma has spread outside of the lymph system into an organ that is not right next to an involved node</p> <p>The lymphoma has spread to the bone marrow, liver, brain or spinal cord or the pleura</p>

The letter A or B denotes the absence or presence of symptoms.

**3. Burkitt's lymphoma staging**

A - Single solitary extra-abdominal site

AR - Intra-abdominal, more than 90% tumour resected

B - Multiple extra abdominal tumours

C - Intra abdominal tumour

D - Intra-abdominal plus one or more extra-abdominal sites

#### 4. Leukaemia

Binet Clinical staging system

Stage	Clinical features at diagnosis	Median survival (years)
A	Lymphocytosis and <3 areas of palpable lymph nodes	>7
B	Lymphocytosis and >3 areas of palpable lymph nodes	<5
C	Same as stage B with anaemia or thrombocytopenia	<2

#### 5. Durie-Salmon classification

Stage	Durie-Salmon Criteria	ISS Criteria	Prognosis
I	All of the following		
	<ul style="list-style-type: none"> <li>- Hemoglobin value &gt; 10g/dL</li> <li>- Serum calcium value normal or <math>\leq 12</math> mg/dL</li> <li>- Bone x-ray, normal bone structure (scale 0) or solitary bone plasmacytoma only               <ul style="list-style-type: none"> <li>- Low M - component production rate - IgG value &lt;5 g/dL; IgA value &lt;3 g/dL</li> </ul> </li> <li>Bence Jones protein &lt; 4 g/24 h</li> </ul>	$\beta_2$ -M < 3.5 mg/dL and albumin $\geq 3.5$ g/dL	60 months Median Survival
II *	Neither stage I or III	Neither stage I nor stage III	41 months
III	On or more of the following:	$\beta_2$ -M $\geq 5.5$ mg/dL	23 months

<ul style="list-style-type: none"> <li>- Haemoglobin value &lt;8.5 g/dL</li> <li>- Serum calcium value &gt;12 mg/dL</li> <li>- Advanced lytic bone lesions (scale 3)</li> <li>- High M-component production rate IgG value &gt;7 g/dL; IgA value &gt;5 g/dL - Bence Jones Protein &gt;12g/24 h</li> </ul>		
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Durie-Salmon sub classification (either A or B)

A: Relatively normal renal function (serum creatinine value <2.0 mg/dL (<177  $\mu\text{mol}/\ell$ ))

B: Abnormal renal function (serum creatinine value  $\geq$  2.0 mg/dL (> 177  $\mu\text{mol}/\ell$ )) - Stage B worse outcome

\* Stage II =  $\beta_2$ -M <3.5 or  $\beta_2$ -M 3.5 - 5.5 mg/dL, and albumin <3.5 g/dL

Stage	Clinical features at diagnosis	Median survival (years)
A	Lymphocytosis and <3 areas of palpable lymph nodes	>7
B	Lymphocytosis and >3 areas of palpable lymph nodes	<5
C	Same as stage B with anaemia or thrombocytopenia	<2