CONFIDENTIAL

The National Clinical Coding Examination [UK]

27 September 2016

Paper 2 Theory - ANSWERS
1:30 pm - 4:35 pm
[THREE HOURS]

The first 5 minutes will be spent reading through this Examination Paper and the ‘Instructions to Candidates’

This Examination Paper consists of 3 Sections: C, D and E.

Section C – General Short Theory Questions [20% of the Marks]
Answer all questions in this Section in the space provided on the Examination Paper.

Section D [45% of the Marks]
Answer all questions on the lined paper provided. Use a new sheet(s) of paper for each answer. Write only on one side of the paper.

- General Theory ICD-10 Questions D [1] [15% of the Marks]
- General Theory OPCS-4 Questions D [2] [15% of the Marks]
- Clinical Terms Questions D [3] [10% of the Marks]
- Miscellaneous Questions D [4] [5% of the Marks]

Section E – Anatomy & Physiology (including Medical Terminology) [35% of the Marks]
- Section E [1] Anatomy & Physiology – Answer all Questions 1-15
- Section E [2] Medical Terminology – Answer all Questions 1-10
- Section E [3] Diagrams – Label both diagrams

Answer all questions in this Section in the space provided on the Examination Paper.
Section C – General Theory Short Questions [20% of the Marks]

Answer ALL 20 questions in this Section writing your answers in the spaces provided.

1. List four of the predominantly secondary sites described in DCS.II.1: Primary and secondary malignant neoplasms (C00-C97). [4 Marks]

   - Bone
   - Brain and spinal cord (including meninges)
   - Lymph nodes
   - Pleura
   - Peritoneum and retroperitoneum
   - Heart
   - Mediastinum and diaphragm
   - Liver

   Reference: DCS.II.1: Primary and secondary malignant neoplasms (C00-C97)


   If a more definitive diagnosis is made (e.g. pneumonia), this should be coded instead of the chest infection. Any uncertainty must be referred back to the responsible consultant.

   Reference: Chapter X Diseases of the Respiratory System, page 80

3. According to coding standard PCSJ2: Failed or abandoned endoscopic retrograde cholangiopancreatography (J43.9), what is a failed or abandoned ERCP described as? [2 Marks]

   An ERCP with: Incomplete insertion of the endoscope, or complete insertion of the endoscope but the ampulla cannot be cannulated.

   Reference: PCSJ2: Failed or abandoned endoscopic retrograde cholangiopancreatography (J43.9)
   National Clinical Coding Standards OPCS-4 2016 reference book
4. A diagnosis of delirium is synonymous with what other term when assigning code **F05.9 Delirium, unspecified**? [1 Mark]

Acute confusional state.

**Reference:** DCS.V.3: Delirium and acute confusional state

5. What is the OPCS-4.7 sequencing rule described in coding standard **PGCS14: Sequencing of codes in Chapter Y with codes in Chapter Z**? [1 Mark]

When assigning codes from both Chapter Y Subsidiary Classification of Methods of Operation and Chapter Z Subsidiary Classification of Sites of Operation the Chapter Y code must precede the Chapter Z code.

**Reference:** PGCS14: Sequencing of codes in Chapter Y with codes in Chapter Z
National Clinical Coding Standards OPCS-4 2016 reference book

6. According to **DCS.XI.1: Oesophageal web (K22.2, Q39.4)**, what type of condition does the ICD-10 Alphabetical Index assume an oesophageal web is according to the default code provided? [1 Mark]

Congenital.

**Reference:** DCS.XI.1: Oesophageal web (K22.2, Q39.4)

7. When a patient undergoes further/wider excision for a previously removed malignancy, how must this be diagnostically coded? [2 Marks]

It must continue to be recorded as a malignancy, even if the responsible consultant reports that the histology from this further surgery is negative.

**Reference:** DCS.II.6: Further/wider excision of malignant neoplasm

8. On what occasion is it applicable to assign OPCS-4.7 code **T91.1 Biopsy of sentinel lymph node NEC**? [1 Mark]

It must only be used when the exact site of the sentinel lymph node is unknown.

**Reference:** PCST3: Sampling, excision, biopsy or drainage of sentinel lymph node (T86-T88, T91.1 and O14.2)
National Clinical Coding Standards OPCS-4 2016 reference book
9. To which body site should the code Y39.4 Lipofilling injection into organ never be assigned? [1 Mark]

Breast.


10. Describe the diagnostic coding rule relating to inadvertent or unintentional loss of pregnancy due to a direct cause. [3 Marks]

A code from category (O06.-) Unspecified abortion must be assigned in addition to the code for the disorder that is the reason for the uterine surgery.


11. Describe the ICD-10 coding rule when a patient has HIV disease resulting in more than one malignant neoplasm. [2 Marks]

Code (B21.7) HIV disease resulting in multiple malignant neoplasms followed by the codes for the specific malignancies.


12. What are the two occasions related to orthopaedics when image control must not be recorded? [2 Marks]

When checking the position of a reduced fracture, or checking the correct siting of a fixator.


It is contained within a white box.

14. There are four terms other than ‘immobility’ that must be classified to ICD-10 code **R26.3 Immobility** when documented in the medical record, in accordance with national clinical coding standards. List three of the four terms. [3 Marks]

- Chairfast
- Bedfast
- Bedbound
- Bedridden


15. List the three routes of administration of chemotherapy associated with body system chapter codes. [3 Marks]

- Intrathecal (into the cerebrospinal fluid in the spinal cord)
- Intravesical (into the bladder)
- Intracavitary (into a body cavity)

Reference: CRCS2: Route of administration Chemotherapy Regimens Clinical Coding Standards and Guidance OPCS-4 April 2016

16. In accordance with coding standard **PCSZ2: Laterality of operation (Z94)**, when must a laterality code not be recorded? [2 Marks]

- When the laterality is implicit in the code description
- When coding procedures on organs that are not paired.


17. For neoplasms with functional activity, a code for which type of disorder must also be recorded? [1 Mark]

Endocrine.

18. Describe the coding standard associated with the recording of OPCS-4.7 categories **E85-E98**. [3 Marks]

Codes in these categories must only be used for outpatient coding, or if the patient is admitted solely for the purpose of a procedure/intervention. The exception to this standard is category E85 Ventilation support.

**Reference:** PCSE4: Non operations on lower respiratory tract (E85–E98) and ventilation support (E85)
National Clinical Coding Standards OPCS-4 2016 reference book

19. Describe the coding standard for recording high cost drugs administered in theatre. [2 Marks]

They must be recorded in addition to the code(s) classifying the intervention(s).

**Reference:** HCDCS3: High cost drugs administered in theatre
High Cost Drugs Clinical Coding Standards OPCS-4

20. **What two** pre-cancerous terms, that do not affect the ICD-10 code assignment, are associated with Barrett oesophagus? [2 Marks]

Low grade dysplasia and high grade dysplasia.

**Reference:** DCS.XI.2: Barrett oesophagus with low or high grade dysplasia (K22.7)
Section D – General Theory Questions

Please use separate Answer Sheets found at the end of this Question Paper, to answer your chosen questions in Section D.

- You must use new Answer Sheet(s) for each question.
- Write on only one side of the Answer Sheet(s).
- You must write your Candidate Number in the top right hand corner of each Answer Sheet(s) that you use.
- You must write the Question Number in the top left hand corner of each Answer Sheet(s) that you use.

Section D[1] – ICD-10 Theory [15% of the Marks]

Answer either Part A or Part B of the following:

Please make it clear which question you are answering and label each Section accordingly.

Question D1 Part A: [Answer all parts of this question, i and ii]

<table>
<thead>
<tr>
<th>i) There are four ‘relational terms’ described in DConvention.5. ‘Without’ is an example of one; list the other three ‘relational terms’ and give a brief description of each. [9 Marks]</th>
</tr>
</thead>
</table>

  **And** - The use of ‘and’ within code descriptions means and/or. It indicates that the code can be assigned if either one or both elements within the code description are present.

  **With or with mention of** - These terms indicate that both elements in the code description must be present in the diagnostic statement in order to assign the code.

  **In, due to and resulting in** - Indicate a causal relationship between the elements in the title and requires the responsible consultant to confirm a cause-effect relationship within the medical record before the code(s) can be assigned.

**Reference:** DConvention.5: Relational terms
Describe the coding standard if a condition is stated as ‘acute (or sub-acute) on chronic’. [4 Marks]

If separate codes for each are available, codes for both the acute and chronic condition must be assigned. The acute condition must be sequenced before the chronic condition unless the chronic condition is the main condition treated or investigated.

Reference: DGCS.9: Acute on chronic conditions

OR
Question D1 Part B: [Answer all parts of this question i and ii]

Please use separate Answer Sheets making it clear which question you are answering and label each Section accordingly.

### i)
Describe the use of fifth characters in Chapter XIII Diseases of the Musculoskeletal System and Connective Tissue. [8 Marks]

The fifth characters in Chapter XIII indicate the site of musculoskeletal involvement. The notes at chapter, category or code level indicate which codes can be further specified by the addition of a fifth character and the location of the fifth character code lists in the classification.

The following must be applied when assigning fifth characters in Chapter XIII:

- Fifth characters must be used where the data is present in the medical record and where doing so adds more specific information about the site.
- In cases where the four character code is already site specific and the addition of a fifth character will not add further specific information about the site, the fifth character is not required.
- The fifth character of ‘0’ indicates involvement of multiple sites. It should be assigned when the condition classified at the fourth character code affects more than one site. The ‘0’ must not be assigned for conditions only affecting bilateral sites; in these instances, the fifth character reflecting that site must be recorded.
- The ‘X’ filler code must be assigned in the fourth character position for three character codes which require assignment of a fifth character, for example M45.X6.

Reference: DChS.XIII.1: Fifth characters in Chapter XIII

### ii)
Describe the use of fifth characters in Chapter XIX Injury, Poisoning and Certain Other Consequences of External Causes. [5 Marks]

Fifth characters are used in this chapter to identify open and closed fractures, intracranial/internal injuries with or without open intracranial wound/wound into cavity.

An injury not indicated as ‘open/with’ or ‘closed/without’ must be recorded using fifth character ‘0’.

Reference: DChS.XIX.2: Fifth characters in Chapter XIX
### Question D2 Part A: [Answer all parts of this question i, ii and iii]

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>Describe ‘paired codes’ and the associated coding convention.</td>
<td>7</td>
</tr>
</tbody>
</table>
|      | Some interventions/procedures are frequently carried out together but are classified at separate codes or categories. Where this is the case the categories concerned contain instructional Notes to indicate the associated code and correct sequencing. The following paired codes notes appear in the OPCS-4 Tabular List:  
* ‘Use a supplementary code/Use an additional code/Use a subsidiary code’ – use the code this note appears at in primary position.  
* ‘Use as a supplementary code/Use as an additional code/For use as a subsidiary code, Use as a secondary code’ – use the code this note appears at in a secondary position.  
Paired codes may be classified within the same or a different body system chapter. They can be used alone when only one intervention/procedure is performed.  
Reference: PConvention 2: Instructional notes and paired codes  
National Clinical Coding Standards OPCS-4 2016 reference book | |
| ii)  | Describe the coding standard associated with unintentional actions occurring during a procedure. | 4 |
|      | This unintentional action must not be recorded using OPCS-4 codes. The unintentional action must be coded using the appropriate ICD-10 code. Any surgical procedures performed after the unintentional injury, e.g. suture of accidentally perforated organ, must be recorded using the appropriate OPCS-4 code(s). It is possible that the procedure carried out on the injured organ may become the primary procedure if it becomes the main procedure carried out.  
Reference: PGCS5: Unintentional procedures  
National Clinical Coding Standards OPCS-4 2016 reference book | |
iii) What does the coding standard state regarding excisional biopsy (excision biopsy), and why? [2 Marks]

Only assign a code(s) for the excision as a biopsy is an integral part of an excision.

Reference: PGCS9: Excision and biopsy procedures
National Clinical Coding Standards OPCS-4 2016 reference book

OR

Question D2 Part B: [Answer all parts of this question i and ii]

Please use separate Answer Sheets making it clear which question you are answering and label each Section accordingly.

i) Describe the use of site codes in Chapter Z Subsidiary Classification of Sites of Operation in diagnostic endoscopic procedures. [7 Marks]

Where multiple organs are examined during a diagnostic endoscopy, a site code from Chapter Z must be added to identify the furthest site examined (the sites included at each category are indicated at the category includes notes).

During a diagnostic endoscopy if a biopsy is performed at the same time as other multiple sites are examined, the site of the biopsy is of greater importance than the other sites examined and the site of the biopsy is the only site code required. This includes if the site of biopsy is not the furthest site examined.

Where multiple biopsies are taken, it is only necessary to site code the furthest point biopsied.

Reference: PGCS10: Coding endoscopic procedures
National Clinical Coding Standards OPCS-4 2016 reference book

ii) Describe the ‘diagnostic versus therapeutic procedures’ coding standard. [6 Marks]

If a diagnostic procedure proceeds to, or is performed at the same time as, a therapeutic procedure on the same site then only the code for the therapeutic procedure is required.

This includes:

• diagnostic endoscopies performed prior to an open procedure
• diagnostic endoscopies performed prior to a therapeutic endoscopic procedure (as indicated by the instructional Notes at all therapeutic endoscopic codes).

Reference: PGCS2: Diagnostic versus therapeutic procedures
National Clinical Coding Standards OPCS-4 2016 reference book
Section D[3] – Clinical Terms [10% of the Marks]

Answer either Part A or Part B of the following:

Please use separate Answer Sheets making it clear which question you are answering and label each Section accordingly.

Question D3 Part A: [Answer all parts of this question i, ii and iii]

i) Which body has specified that SNOMED CT is to be used as the single terminology in all care settings in England? [1 Mark]

National Information Board.

Reference: SNOMED CT - What are the Plans for Implementation?
http://systems.hscic.gov.uk/data/uktc/snomed

ii) Describe hierarchies as used within SNOMED CT. [3 Marks]

Hierarchies are specific groups used to organise concepts. Each hierarchy has sub hierarchies within it.

Reference: What is SNOMED CT?
https://isd.hscic.gov.uk/artefacts/trud3/e-learning/flash/EL_SCT/10_UKTC_Intro-SNOMED_eLearning_V06.htm

iii) Name six of the 19 hierarchies in SNOMED CT. [6 Marks]

<table>
<thead>
<tr>
<th>Body structure</th>
<th>Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical finding</td>
<td>Qualifier value</td>
</tr>
<tr>
<td>Environment or geographical</td>
<td>Record artifact</td>
</tr>
<tr>
<td>location</td>
<td></td>
</tr>
<tr>
<td>Event</td>
<td>Situation with explicit context</td>
</tr>
<tr>
<td>Linkage concept</td>
<td>Social context</td>
</tr>
<tr>
<td>Observable entity</td>
<td>Special concept</td>
</tr>
<tr>
<td>Organism</td>
<td>Specimen</td>
</tr>
<tr>
<td>Pharmaceutical / biologic product</td>
<td>Substance</td>
</tr>
<tr>
<td>Physical force</td>
<td>Staging and scales</td>
</tr>
<tr>
<td>Physical object</td>
<td></td>
</tr>
</tbody>
</table>

Reference: SNOMED CT Hierarchies
https://isd.hscic.gov.uk/artefacts/trud3/e-learning/flash/EL_SCT/10_UKTC_Intro-SNOMED_eLearning_V06.htm
Question D3 Part B: [Answer all parts of this question i, ii and iii]

Please use separate Answer Sheets making it clear which question you are answering and label each Section accordingly.

<table>
<thead>
<tr>
<th>i)</th>
<th>Which organisation did the NHS collaborate with to develop SNOMED CT? [1 Mark]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>College of American Pathologists.</td>
</tr>
</tbody>
</table>
|  | Reference: Background to coding  
https://isd.hscic.gov.uk/artefacts/trud3/e-learning/flash/EL_SCT/10_UKTC_Intro-SNOMED_eLearning_V06.htm |

<table>
<thead>
<tr>
<th>ii)</th>
<th>There are two main types of relationship found in SNOMED CT. Name them and give a brief description of both. [4 Marks]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IS-A – this is a parent-child relationship.</td>
</tr>
<tr>
<td></td>
<td>Attribute – relate two concepts together in a particular way.</td>
</tr>
</tbody>
</table>
|  | Reference: Relationships  
https://isd.hscic.gov.uk/artefacts/trud3/e-learning/flash/EL_SCT/10_UKTC_Intro-SNOMED_eLearning_V06.htm |

<table>
<thead>
<tr>
<th>iii)</th>
<th>List five benefits of SNOMED CT to a clinician. [5 Marks]</th>
</tr>
</thead>
</table>
|  | • Legibility  
• Decreases duplication and re-recording of patient information  
• May encourage more complete documentation  
• Less ambiguous/better clarity of clinical information  
• More communicable between systems and professionals  
• Consistency leads to improved sharing of information  
• Improved level of detail at which information is electronically recorded and thus viewed or described for research purposes. |
|  | [This is not an exhaustive list] |
|  | Reference: The benefits of SNOMED CT  
https://isd.hscic.gov.uk/artefacts/trud3/e-learning/flash/EL_SCT/10_UKTC_Intro-SNOMED_eLearning_V06.htm |
Section D[4] – Miscellaneous Section [5% of the Marks]

Answer either Part A or Part B of the following:

Please use separate Answer Sheets making it clear which question you are answering and label each Section accordingly.

Question D4 Part A:

When coding procedures that are performed for the correction of congenital deformities, what OPCS-4.7 rules must be applied? [7 Marks]

- If the Chapter X code can be directly index trailed from the OPCS-4 Alphabetical Index (Volume II), then the Chapter X code must be used.
- If a code that more accurately reflects the procedure can be found elsewhere within the main body system Chapters (A–W), the code(s) from the main body system chapter(s) must be used, unless there is a specific instruction to do otherwise.
- The coder must ensure that the codes assigned fully and accurately describe the procedure(s) performed and it may, therefore, be appropriate to seek advice from the responsible clinician.

Reference: PGCS11: Coding procedures performed for the correction of congenital deformities
National Clinical Coding Standards OPCS-4 2016 reference book

OR
Question D4 Part B:

Please use separate Answer Sheets making it clear which question you are answering and label each Section accordingly.

The ‘brace’ | and ‘square brackets [ ]’ are two types of punctuation documented in DConvention.3. Describe the use of these two types of punctuation (clearly indicate in your answer which punctuation type you are describing). [7 Marks]

Braces | are used in inclusion and exclusion notes to indicate that both the listed condition and one of its modifiers must be present in order to complete the instruction. Braces enclose a series of terms, modified by the statement appearing at the right of the brace.

Square brackets [ ] are used to:

• enclose synonyms, alternative words, or explanatory phrases
• enclose an instruction to ‘see’ previously listed subdivisions common to a number of categories
• refer to a previous ‘see’ note.

Reference: DConvention.3: Punctuation
National Clinical Coding Standards OPCS-4 2016 reference book
### SECTION E - Anatomy & Physiology (including Medical Terminology) [35% of the Marks]

Please be aware that spelling will be taken into account during the marking process.

Section E[1] – Anatomy & Physiology

Answer ALL 15 questions in this Section, writing your answers in the spaces provided.

1. Name the **three** continuous parts of the small intestine. [3 Marks]
   - Duodenum
   - Jejunum
   - Ileum
   
   **Reference:** Basic Anatomy & Physiology Clinical Coding Instruction Manual Page 85.

2. What substance is contained in the medullary canal of long bones and in cancellous tissue of all bone types? [1 Mark]
   - Bone marrow
   

3. What element is stored in the thyroid gland and is necessary for the production of thyroid hormones? [1 Mark]
   - Iodine
   

4. Name the tubes found within the inner ear that provide information about the position of the head in space, contributing to the maintenance of equilibrium and balance. [1 Mark]
   - Semicircular canals
   
   **Reference:** Basic Anatomy & Physiology Clinical Coding Instruction Manual Page 65.
5. The aortic bifurcation is the point where the distal end of the abdominal aorta divides into what? [2 Marks]

Two common iliac arteries


6. What odourless, colourless gas excreted by the lungs is produced in tissue cells as a by-product of metabolism? [1 Mark]

Carbon dioxide


7. What is the name of the period of 42 days following birth? [1 Mark]

Puerperium

Reference: Basic Anatomy & Physiology Clinical Coding Instruction Manual Page 120.

8. What joint types are described as allowing slight movement, for example, between vertebrae? [1 Mark]

Cartilagenous


9. What makes up the peripheral nervous system? [3 Marks]

31 pairs of spinal nerves
12 pairs of cranial nerves
Autonomic part of the nervous system


10. Provide the name of the external opening of the urethra. [1 Mark]

Meatus

11. The scrotum is divided into two compartments each containing one of what **two** organs? [2 Marks]

   Testis or testicle and epididymis


12. What system of ducts and glands secrete and conduct tears? [1 Mark]

   Lacrimal

   **Reference:** Basic Anatomy & Physiology Clinical Coding Instruction Manual Page 63.

13. How many times per minute does the pumping cycle of the heart normally occur? [1 Mark]

   Between 60 and 80

   **Reference:** Basic Anatomy & Physiology Clinical Coding Instruction Manual Page 42.

14. The trachea is a passageway for air between the larynx and what other part of the respiratory system? [1 Mark]

   Bronchi

   **Reference:** Basic Anatomy & Physiology Clinical Coding Instruction Manual Page 75.

15. What **two** glands are part of the integumentary system? [2 Marks]

   Sebaceous glands and sweat glands

   **Reference:** Basic Anatomy & Physiology Clinical Coding Instruction Manual Page 34.
Section E[2] – Medical Terminology

Please be aware that spelling will be taken into account during the marking process.

Answer ALL 10 questions in this Section, writing your answers in the spaces provided.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. What body movement term is used to describe the act of drawing towards the median plane or axial line? [1 Mark]</td>
<td>Adduct or adduction. Reference: Basic Anatomy &amp; Physiology Clinical Coding Instruction Manual Page 15.</td>
</tr>
<tr>
<td>5. There are two root words to describe the lip; name one of them. [1 Mark]</td>
<td>Cheil-, Chil-. Reference: Basic Anatomy &amp; Physiology Clinical Coding Instruction Manual Page 6.</td>
</tr>
</tbody>
</table>
6. State the difference between the prefixes: [2 Marks]

‘Ante-’ – means before
‘Anti-’ – means against


7. What is the suffix used to describe ‘crushing’? [1 Mark]

-tripsy


8. What does the term ‘contralateral’ mean? [1 Mark]

Opposite side or other side


9. Identify the three root terms in this group. Circle your answers. [3 Marks]

tri  dys  phag
spondyl  penia  genic
trans  cost  retro


10. What prefix means ‘within’? [1 Mark]

End-

Section E[3] Diagrams

Precisely label the anatomical structure indicated by each line on the following two diagrams. Write your answers in the boxes below.

E 3[a] Pancreas [11 Marks]

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Cystic duct</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Gall bladder</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Ampulla of Vater</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Sphincter of Oddi</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Duodenum</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Head of pancreas</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Hepatic duct(s)</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Common bile duct</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Tail of pancreas</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Body of pancreas</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Pancreatic duct</td>
</tr>
</tbody>
</table>
### E 3[b] Internal View of the Heart [15 Marks]

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Superior vena cava</td>
</tr>
<tr>
<td>2</td>
<td>Aortic valve</td>
</tr>
<tr>
<td>3</td>
<td>Right atrium</td>
</tr>
<tr>
<td>4</td>
<td>Pulmonary valve</td>
</tr>
<tr>
<td>5</td>
<td>Right atrioventricular valve or tricuspid valve</td>
</tr>
<tr>
<td>6</td>
<td>Inferior vena cava</td>
</tr>
<tr>
<td>7</td>
<td>Right ventricle</td>
</tr>
<tr>
<td>8</td>
<td>Aorta</td>
</tr>
<tr>
<td>9</td>
<td>Pulmonary artery</td>
</tr>
<tr>
<td>10</td>
<td>(Left) pulmonary veins</td>
</tr>
<tr>
<td>11</td>
<td>Left atrium</td>
</tr>
<tr>
<td>12</td>
<td>Left atrioventricular valve or mitral valve or bicuspid valve</td>
</tr>
<tr>
<td>13</td>
<td>Septum</td>
</tr>
<tr>
<td>14</td>
<td>Left ventricle</td>
</tr>
<tr>
<td>15</td>
<td>Myocardium</td>
</tr>
</tbody>
</table>

END