

Labquality Histology 1. 2014

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Case 1: LQ778114011

- **Case history:**

- 66 years, male.
- Itching dermatitis.
- Biopsy from a papule.

Case 1. Histological findings

- Epidermis is spongiotic and acanthotic
- A scabies mite is seen under the horny layer.
- All but one reported the scabies mite or an insect bite.
- Additional examinations were not considered necessary.
- Acceptable diagnoses are scabies and insect bite although scabies mite as a matter of fact is not an insect but it belongs to arachnids.

Case 1. Histological diagnosis:

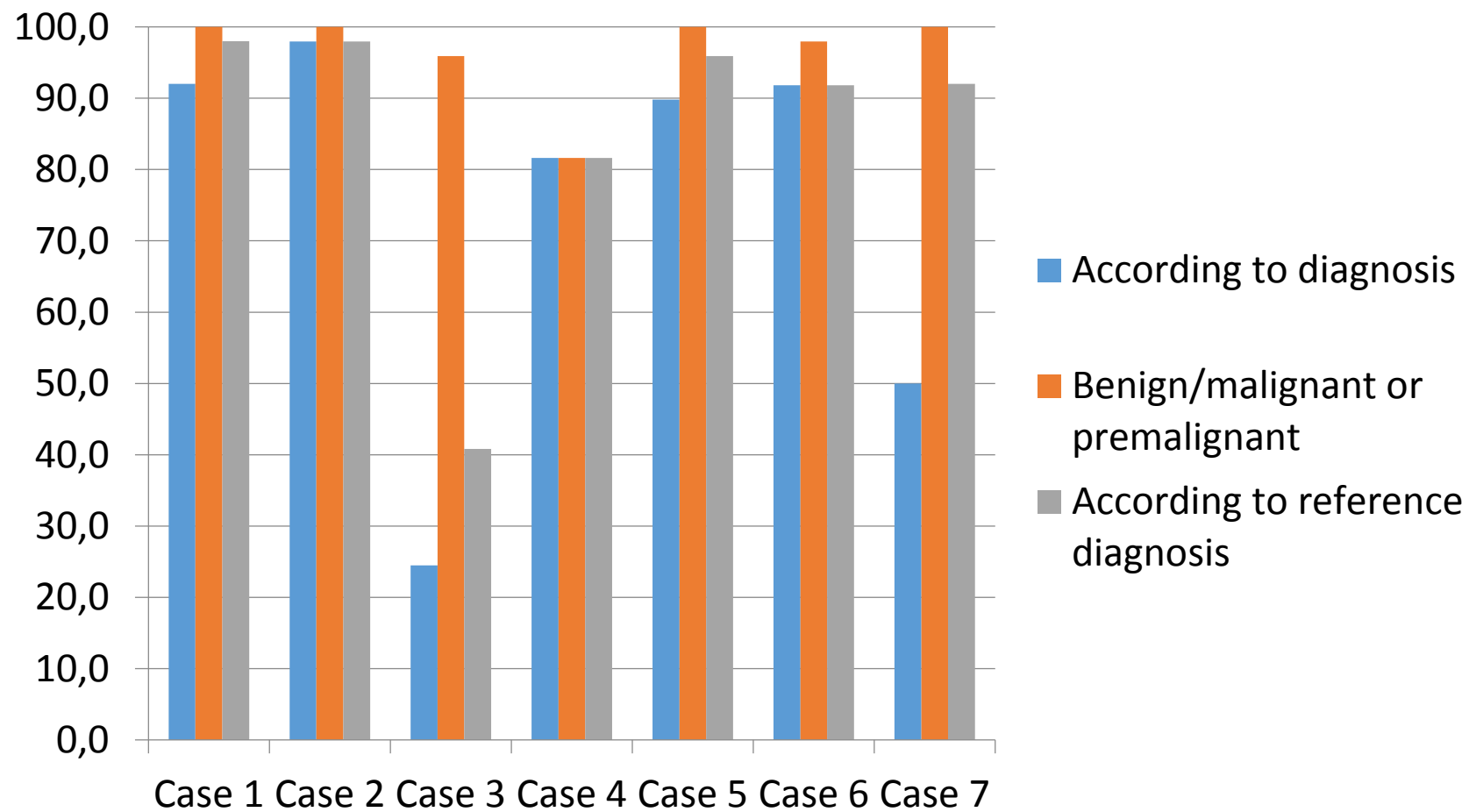
- Skin: Scabies
- Skin: Insect bite

Case 1. Results.

Diagnosis	Case 1
Scabies	46
Insect bite	3
Urticaria	1

Diagnostic agreement %

Agreement %	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Mean
According to diagnosis	92,0	98,0	24,5	81,6	89,8	91,8	50,0	75,4
Benign/malignant or premalignant	100,0	100,0	95,9	81,6	100,0	98,0	100,0	96,5
According to reference diagnosis	98,0	98,0	40,8	81,6	95,9	91,8	92,0	85,5



Case 2: LQ778114012

- **Case history:**
- 83 years, female.
- A nodule removed from finger.
- It was known that the patient suffered from gout.

Case 2. Histological findings

- Needle-like spaces, crystals in polarized light .
- A foreign body reaction with giant cells is seen.
- This is a gout granuloma (tophus).
- This was also very easy case and only one misdiagnosis was given.
- Additional examinations were mostly not needed although many mentioned polarized light microscopy.
- Acceptable diagnoses are gout and tophus.

Case 2. Histological diagnosis:

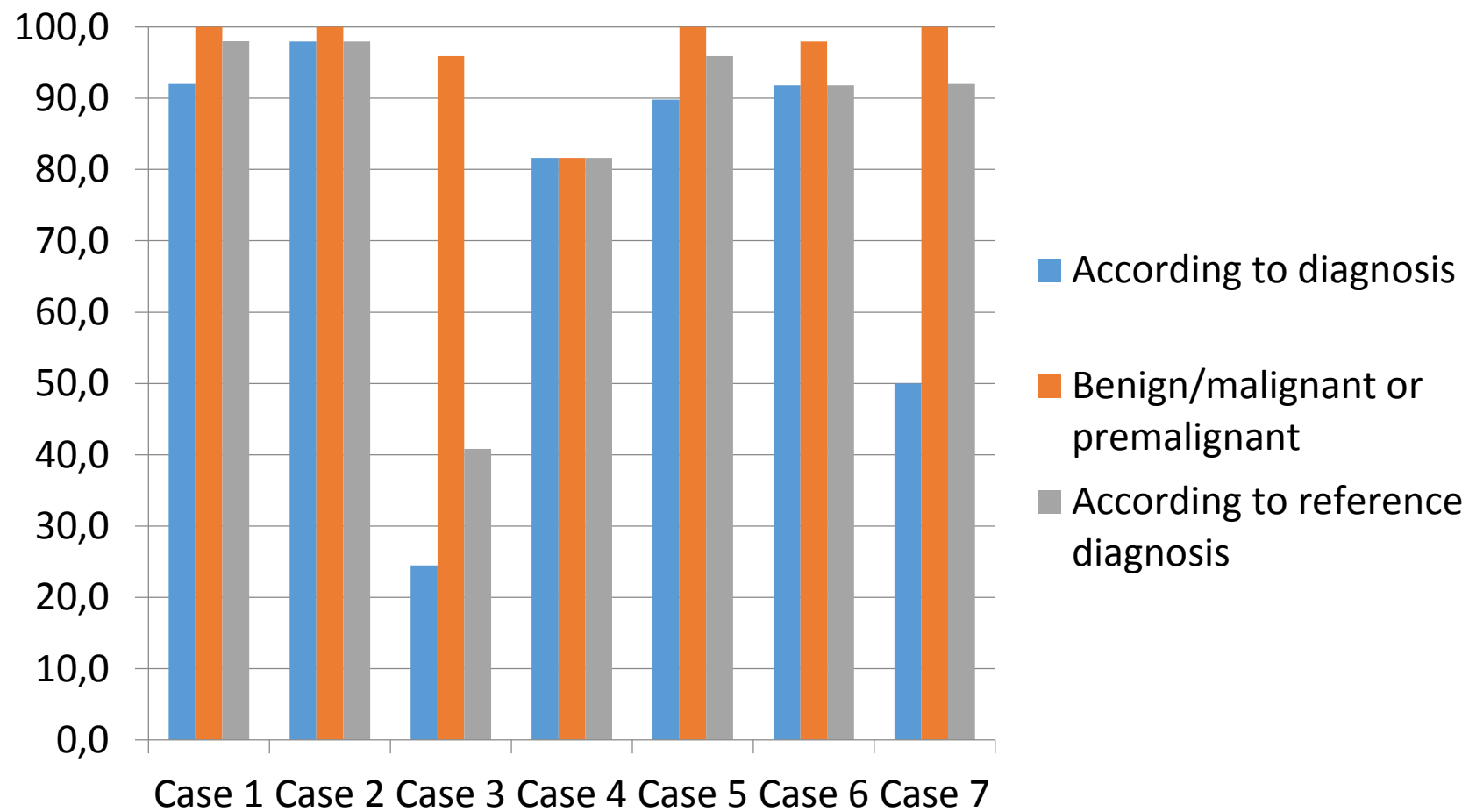
- Skin: Gout
- Skin: Tophus

Case 2. Results.

Diagnosis	Case 2
Gout	48
Pilomatixoma	1

Diagnostic agreement %

Agreement %	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Mean
According to diagnosis	92,0	98,0	24,5	81,6	89,8	91,8	50,0	75,4
Benign/malignant or premalignant	100,0	100,0	95,9	81,6	100,0	98,0	100,0	96,5
According to reference diagnosis	98,0	98,0	40,8	81,6	95,9	91,8	92,0	85,5



Case 3: LQ778114013

- **Case history:**
- 75 years, female.
- Pulmonary tumor above diaphragm.

Case 3. Histological findings

- Slightly spindle shaped only moderately atypical cells are seen.
- Mitotic activity is low, below 1/10HPF.
- Necrosis were not seen.

Case 3. Results.

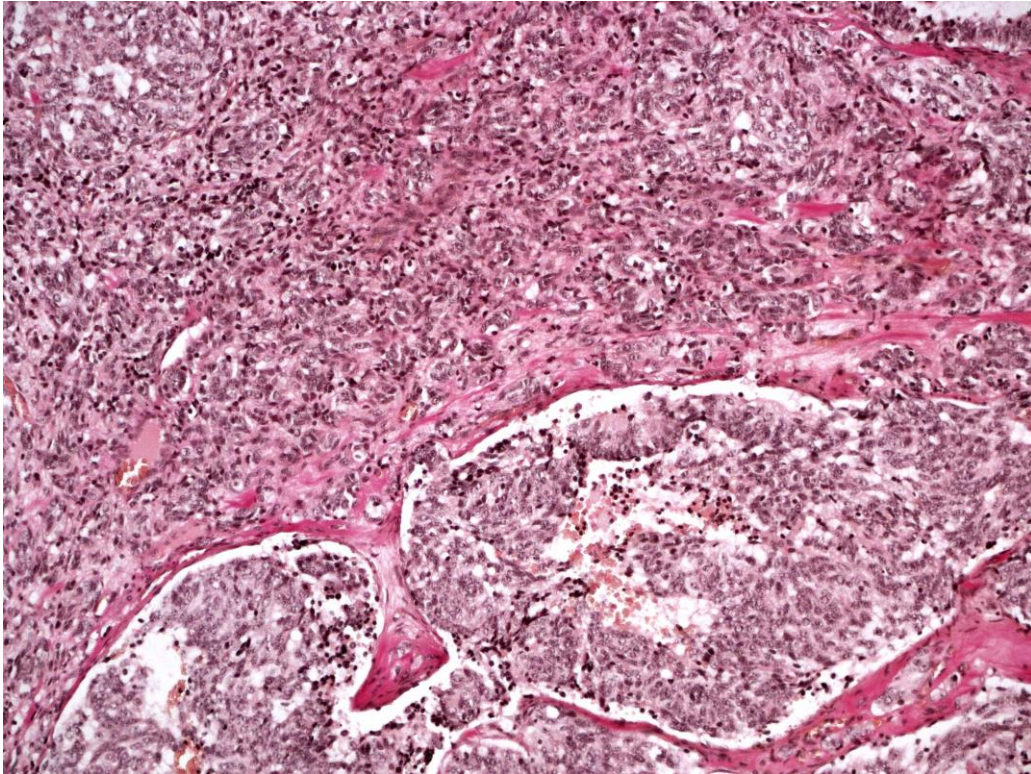
Carcinoid	6
Atypical carcinoid	10
Neuroendocrine tumor	3
Neuroendocrine carcinoma	1
Small cell carcinoma	5
Squamous cell carcinoma	1
Malignant neoplasm	2
Solitary fibrous tumor	12
Hemangiopericytoma	1
Epithelioid	
hemangioendothelioma	1
Pecoma	1
Mesothelioma	2
Sarcoma	3
Lymphangi leiomyomatosis	1

Diagnostic agreement %

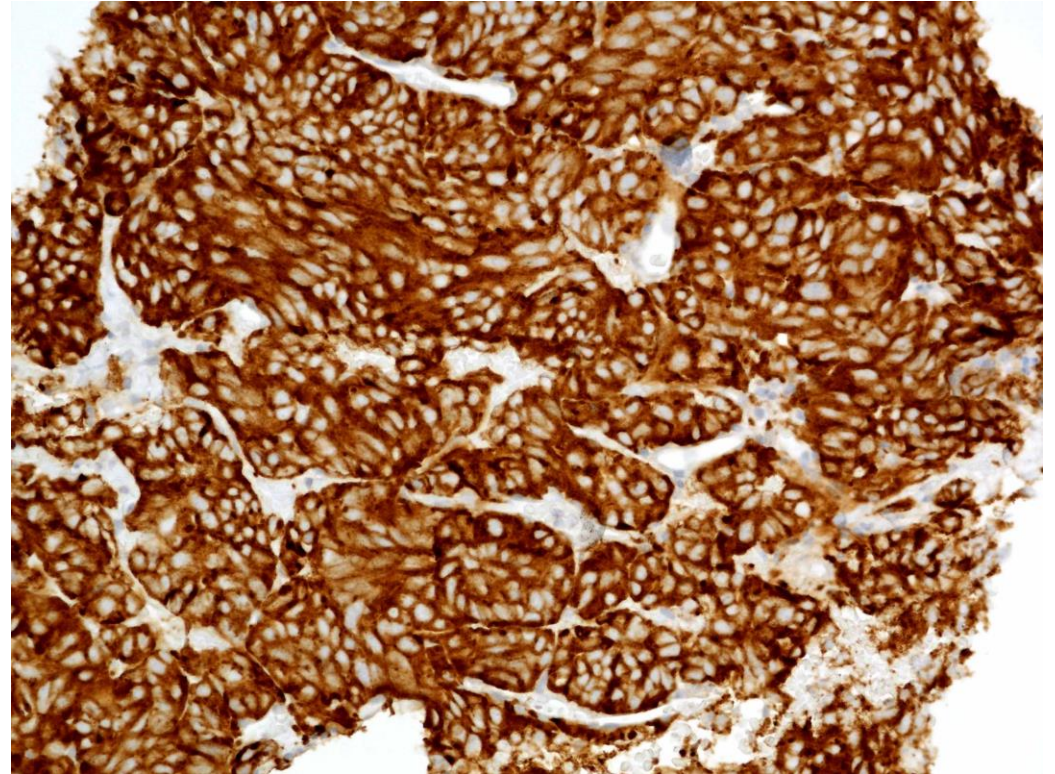
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Case 3. Immunohistochemistry

Case 3 Herovici



Case 3 Synaptophysin A

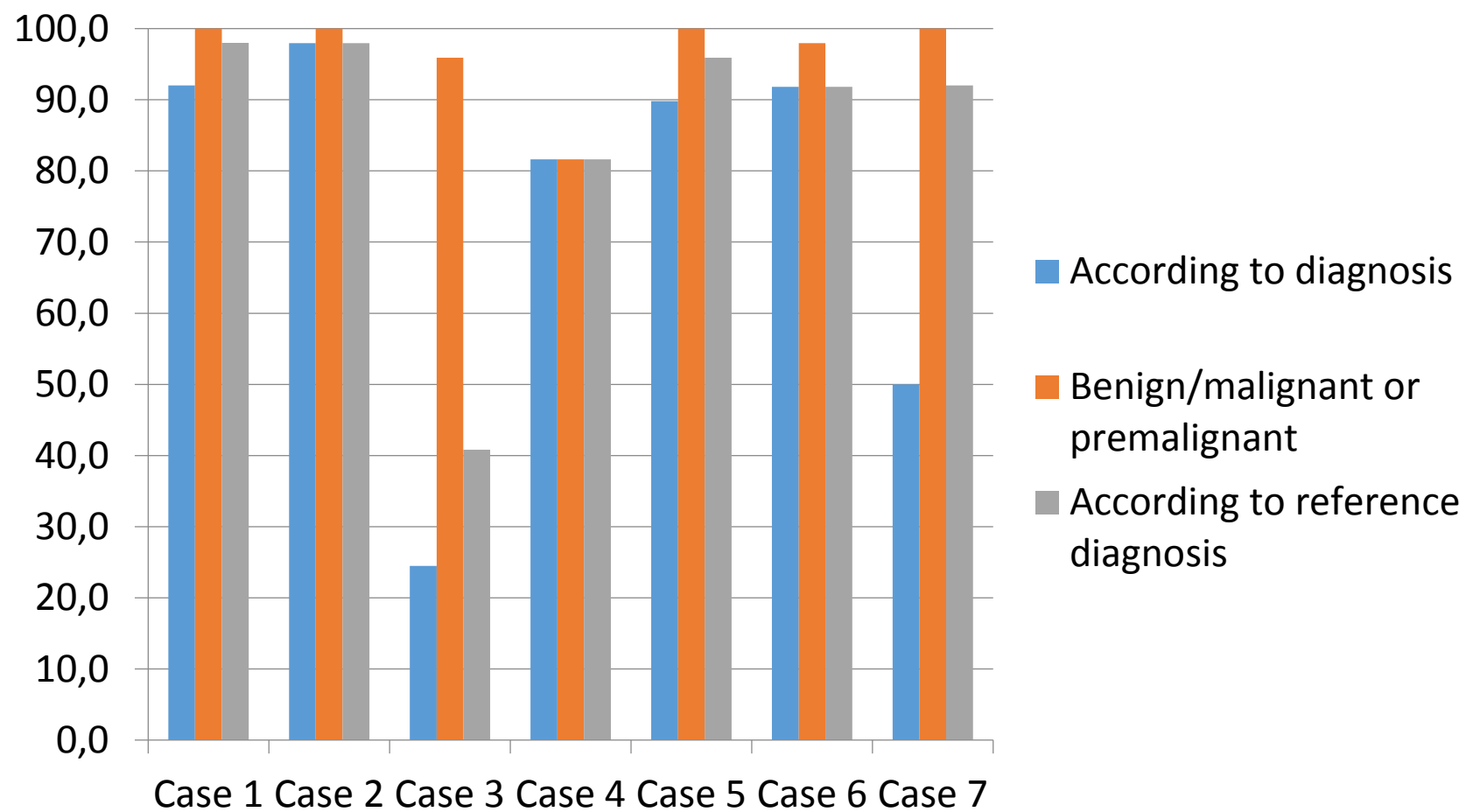


Case 3. Immunohistochemistry

- In immunohistochemistry positive
 - pancytokeratin
 - synaptophysin
 - TTF-1.
 - Ki-67 was positive in 10 % of nuclei indicating moderate proliferation.
 - Negative: Ber-EP4, calretinin, CD31, CD34, cytokeratin 5/6, D2-40, desmin, S-100, panmelanocyte, CD117 and DOG-1.

Case 3. Diagnosis

- ***DX: Atypical carcinoid***
- ***Acceptable diagnoses:***
- Carcinoid, atypical carcinoid, neuroendocrine tumor and neuroendocrine carcinoma.



Case 3. Discussion

- Spindle cell classical carcinoid was diagnosed.
- This was the most difficult case in this series.
- Approximately 41 % noticed that this was a neuroendocrine tumor (other than small cell carcinoma).
- Most common single diagnosis, however, was solitary fibrous tumor which closely histologically resembles spindle cell carcinoid.
- However, this kind of microscopic structure is well a known feature of bronchial carcinoids.
- Almost all recommended additional examinations, especially immunohistochemistry.
- Three of those suggesting solitary fibrous tumor named some neuroendocrine markers.
- Later the tumor was removed and histology revealed also clearly atypical cells and necrosis as well as lymph node metastases.
- Therefore **final diagnosis was atypical carcinoid.**
- Acceptable diagnoses were carcinoid, atypical carcinoid, neuroendocrine tumor and neuroendocrine carcinoma.

Case 4: LQ778114014

- **Case history:**

- 82 years, male.
- Enlarged nodule in the right lobe of prostatic gland.
- Prostate specific antigen (PSA) 10 ug/L.

Case 4. Histological findings

- Histologic structure of prostatic gland is normal
- Only benign changes are seen.

Case 4. Diagnosis.

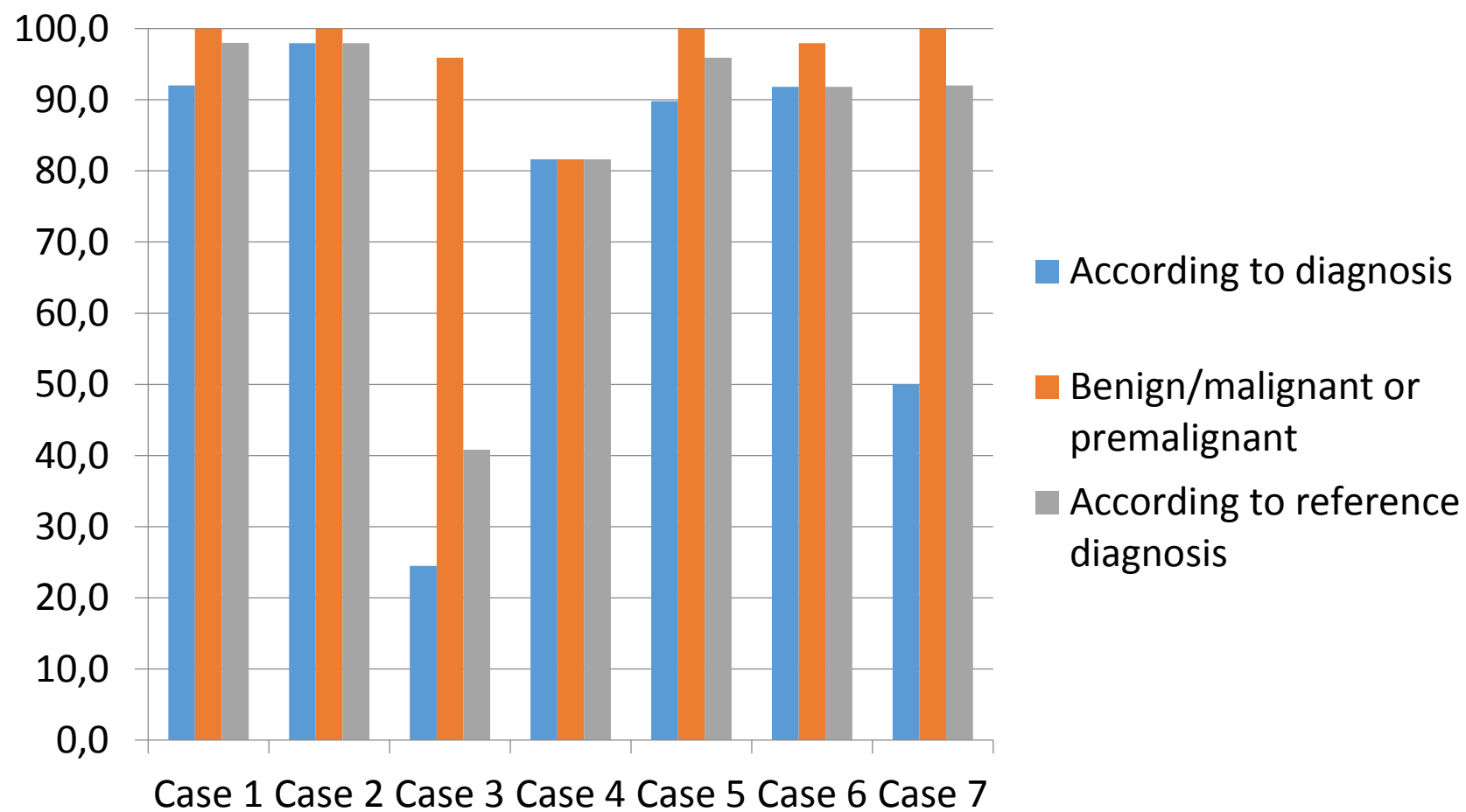
- Benign prostate.
- No signs of malignancy.

Case 4. Results

<i>Diagnosis</i>	<i>Case 4</i>
Benign prostate	40
PIN	7
Adenocarcinoma	2

Diagnostic agreement %

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Case 4. Discussion

- This slide was an example of normal or almost normal benign structure without precancerous signs.
- Most proposed various benign diagnoses.
- Only two regarded this as an adenocarcinoma and seven saw high grade intraepithelial neoplasia (PIN).
- Immunohistochemistry to visualize basal cells (e.g. p63) and AMACR were recommended by some participants.
- Acceptable diagnosis is benign prostate or equivalent.

Case 5: LQ778114015

- **Case history:**
- 20 years, male.
- Colon removed because of severe inflammation.
- It was known that the patient had also perianal fistules.

Case 5. Histological findings

- Fissure like ulcers and submucosal abscess and fibrosis are evident.
- Granulomas were present in all intestinal layers in accordance with Crohn's disease.

Case 5. Diagnosis

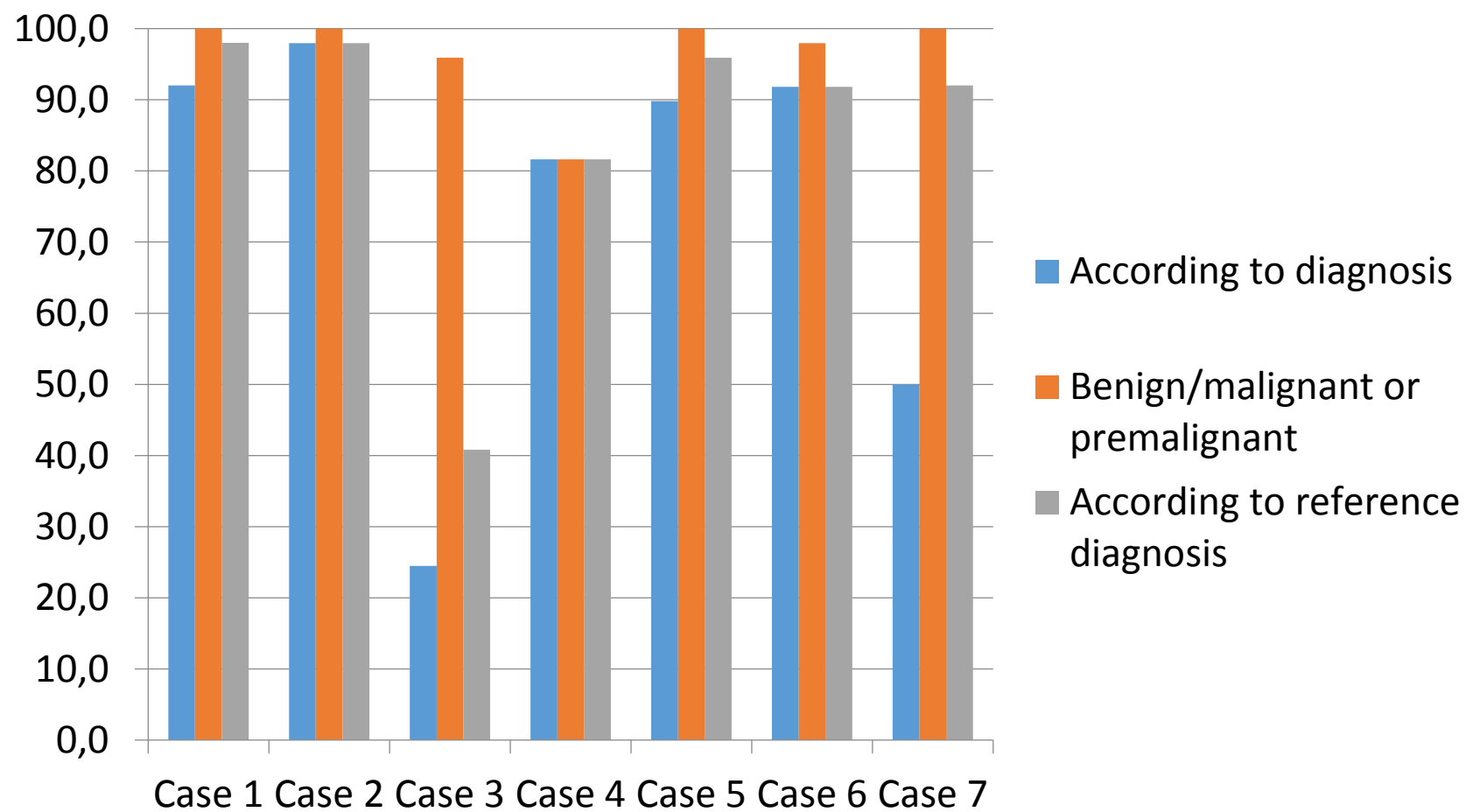
- ***DX:***
 - **Crohn's diseases**
 - **Granulomatous inflammation**
-
- ***Acceptable reference diagnoses were***
 - Crohn's disease
 - Granulomatous inflammation.

Case 5. Results

Diagnosis	Case 5
Crohn's disease	44
Granulomatous inflammation	3
Ulcerative colitis	1
Vasculitis	1

Diagnostic agreement %

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Case 5. Discussion.

- Crohn's disease or granulomatous inflammation was the interpretation by most participants.
- Only two proposed other diagnoses.
- Additional examinations were not necessary
- Some recommended stains for micro-organisms e.g. to rule out tuberculosis, fungus or amoeba.

Case 6: LQ778114016

- **Case history:**
- 70 years, male.
- Atypical cells in urinary cytology.
- Specimen from left ureter.

Case 6. Histological findings

- Ureteral epithelium shows severe atypia
- No invasion.
- Also fibrosis and chronic inflammation is seen.

Case 6. Results

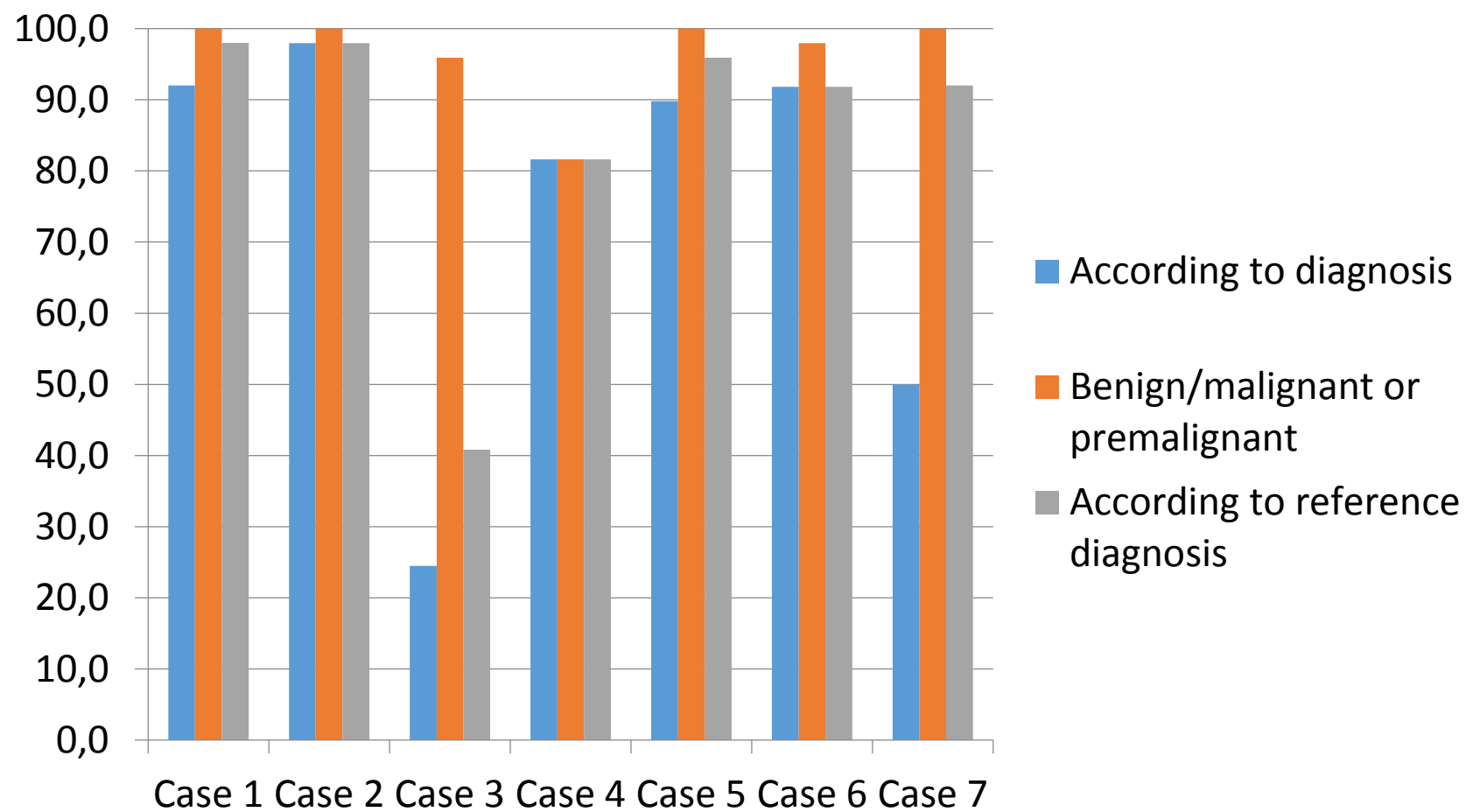
Diagnosis	Case 6
Urothelial carcinoma in situ	45
Dysplasia	2
Urothelial carcinoma high grade	1
Reactive change	1

Case 6. Diagnosis.

- **Diagnosis:**
- Urothelial in situ carcinoma.

Diagnostic agreement %

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Case 6. Discussion.

- There was also invasive high grade urothelial carcinoma in prostatic urethra and deep in prostatic gland.
- This easy case was recognized as urothelial carcinoma in situ by most of the participants.
- One suggested also minor microinvasion.
- Only one regarded the changes as reactive.
- Most considered additional examinations unnecessary but some recommended immunohistochemistry for cytokeratin 20, cytokeratin 5/6, p53, Ki-67 or CD44.
- Acceptable diagnosis is urothelial carcinoma in situ.

Case 7: LQ778114017

- **Case history:**

- 31 years, female.
- Previously various changes in pap-smears.
- Conization for abnormal cervical changes in cytology.

Case 7. Histological findings

- Severely atypical epithelium covers endocervix and penetrates also into dilated glands.
- Invasion, however, was not considered to be present and therefore diagnosis of squamous cell carcinoma in situ (CIS) was made.

Case 7. Results

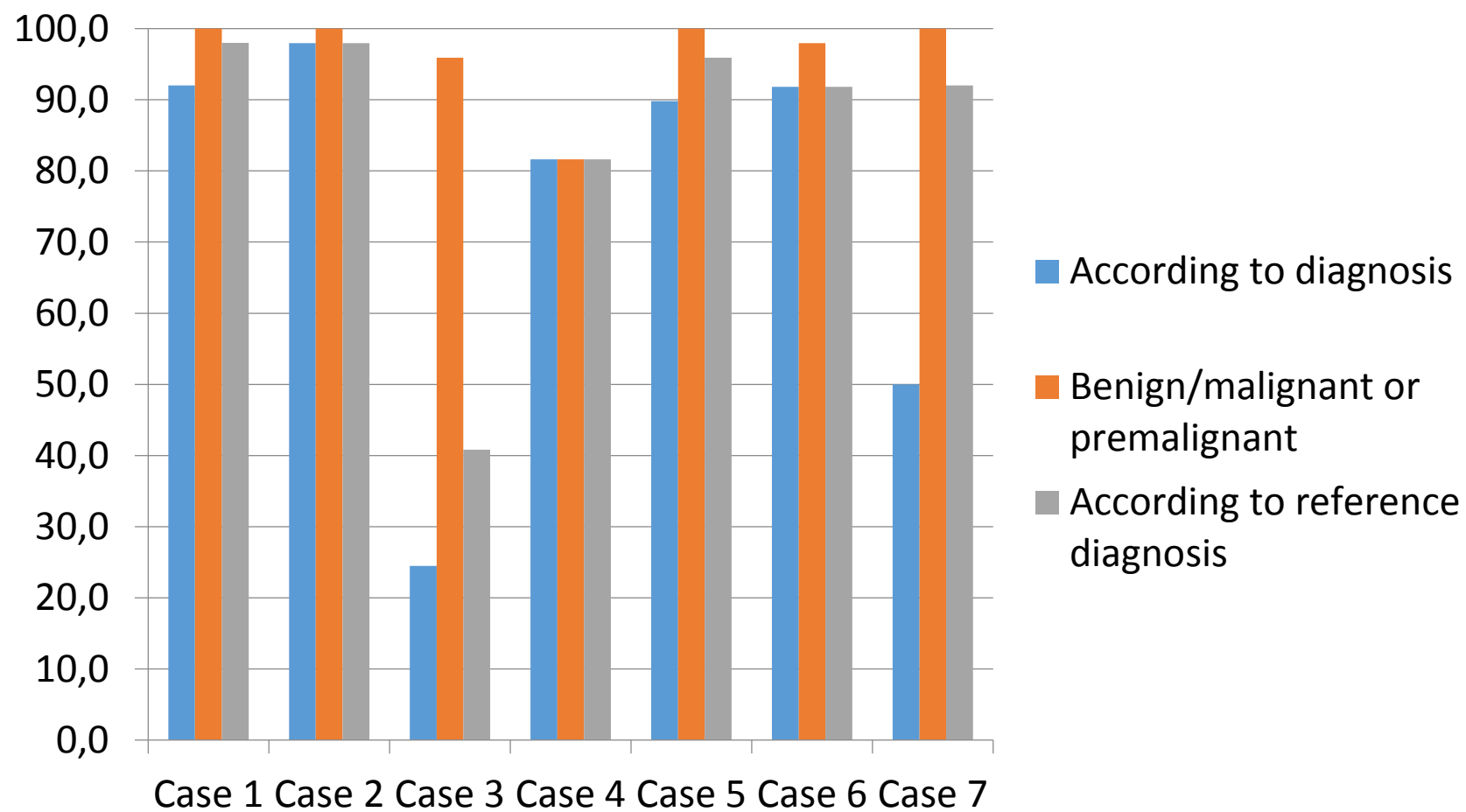
Diagnosis	Case 7
Squamous cell carcinoma	2
Reactive change	
CIN3	25
CIN3 + microinvasion	21
Glandular dysplasia	1
CIN3 + microinvasion + AIS	1
Sum	50

Case 7. Diagnosis.

- **CIN3**
- Squamous cell carcinoma in situ

Diagnostic agreement %

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Case 7. Discussion.

- **Cervical intraepithelial neoplasia CIN3**, i.e. severe dysplasia or squamous cell carcinoma in situ, was reported by almost all participants.
- However, agreement for the presence of microinvasion was not achieved: 22 found it but 25 not.
- Two frank invasive squamous cell carcinomas reported are not justified diagnoses.
- Some participants recommended additional sections from the block or immunohistochemistry for basement membranes (laminin, collagen IV). Although indisputable microinvasion was not seen, acceptable reference diagnoses are both CIN3 and CIN3 + microinvasion.