

Key: 272

original: {'main-diagnosis': 'ovarian cyst', 'differential_diagnosis': ['Ectopic Pregnancy', 'Appendicitis', 'ovarian cyst']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 23-year-old female who has been experiencing irregular abdominal pain for over 7 hours. The pain is relieved when sitting and is accompanied by nausea and vomiting. She has no history of vaginal bleeding or abnormal vaginal discharge. Physical examination reveals significant lower abdominal tenderness. Laboratory tests show an increase in white blood cells and neutrophils, and a decrease in lymphocytes, monocytes, and eosinophils, indicating an inflammatory response. The patient also has anemia and thrombocytosis. Imaging examination reveals a quasi-circular low-density shadow in the left accessory area and strip-shaped liquid density shadows in the pelvic cavity. 2. ****Medical case Analysis**** - ****Physical examination****: The significant lower abdominal tenderness could indicate a gynecological issue such as an ovarian cyst or ectopic pregnancy. - ****Laboratory examination****: The increase in white blood cells and neutrophils, and decrease in lymphocytes, monocytes, and eosinophils indicate an inflammatory response, which could be due to an infection or other inflammatory condition such as appendicitis. The anemia and thrombocytosis could be due to bleeding, which could be associated with an ectopic pregnancy. - ****Imaging examination****: The quasi-circular low-density shadow in the left accessory area could indicate an ovarian cyst, while the strip-shaped liquid density shadows in the pelvic cavity could indicate fluid accumulation due to a ruptured cyst or ectopic pregnancy. 3. ****Select the 2 Best Possible Diseases**** Based on the medical case, the two most likely diseases are 'Ectopic Pregnancy' and 'Ovarian Cyst'. 4. ****Select the best possible disease**** After rechecking the case, the best possible disease is 'Ovarian Cyst'. 5. ****Format the Disease**** = ****Best possible Disease****: Ovarian Cyst - ****Reasons****: - The patient's symptoms of irregular abdominal pain, nausea, and vomiting are consistent with an ovarian cyst. - The physical examination revealed significant lower abdominal tenderness, which is a common symptom of an ovarian cyst. - The laboratory examination showed an inflammatory response, which could be due to a ruptured ovarian cyst. - The imaging examination revealed a quasi-circular low-density shadow in the left accessory area, which is consistent with an ovarian cyst. The strip-shaped liquid density shadows in the pelvic cavity could indicate fluid accumulation due to a ruptured cyst.

llama3.1: I'll follow the step-by-step approach to solve the medical case. ****Step 1: Summarize the medical case**** The patient is a 23-year-old young female who presents with irregular abdominal pain for over 7 hours. She has a history of lower back pain without any obvious cause, which was relieved when sitting and accompanied by nausea and vomiting. There's no vaginal bleeding or abnormal vaginal discharge. The physical examination reveals significant lower abdominal tenderness, but the rest is unexamined. Laboratory tests show normal blood counts with slightly elevated CRP (0.19 mg/L). Blood biochemistry tests are also within normal limits. Imaging examinations reveal a quasi-circular low-density shadow in the left adnexal area, approximately 8.5x6.8 cm in size, with clear lesion boundaries and no significant enhancement after contrast. ****Step 2: Medical case Analysis**** * The patient's symptoms of lower abdominal pain, nausea, and vomiting could be related to various gynecological conditions. * The laboratory tests show normal blood counts, which might indicate that the condition is not severe or acute. * The imaging examination reveals a low-density shadow in the left adnexal area, which could suggest an ovarian cyst or another type of adnexal mass. ****Step 3: Select the 2 Best Possible Diseases**** Based on the medical case analysis, the two most likely diseases are: 1. ****Ovarian Cyst****: The imaging examination reveals a quasi-circular low-density shadow in the left adnexal area, which could suggest an ovarian cyst. 2. ****Appendicitis****: Although less likely, appendicitis cannot be ruled out entirely due to the patient's symptoms of lower abdominal pain and tenderness. ****Step 4: Select the best possible disease**** After rechecking the case, I would select: = ****Ovarian Cyst****. Name of the best possible disease - ****Reasons****: - The imaging examination reveals a quasi-circular low-density shadow in the left adnexal area. - The patient's symptoms of lower abdominal pain and tenderness could be related to an ovarian cyst. The final answer is: ****Ovarian Cyst**** = ****Best possible Disease****: Ovarian Cyst - ****Reasons****: - Imaging examination reveals a quasi-circular low-density shadow in the left adnexal area. - Patient's symptoms of lower abdominal pain and tenderness

could be related to an ovarian cyst.

gemma2: ## Medical Case Analysis **1. Summary:** A 23-year-old female presents with sudden onset lower abdominal pain radiating to her back, nausea, and vomiting lasting over 7 hours. She reports no vaginal bleeding or discharge. Physical examination reveals tenderness in the lower abdomen. Laboratory tests show elevated white blood cell count (WBC) with neutrophilia, and slightly elevated hemoglobin and hematocrit. Imaging shows a quasi-circular low-density shadow in the left adnexa and strip-shaped liquid density shadows in the pelvic cavity. **2. Medical Case Analysis:** * **Physical Examination:** Lower abdominal tenderness is suggestive of pelvic pathology, which could be related to ectopic pregnancy, appendicitis, or ovarian cyst. * **Laboratory Examination:** Elevated WBC count with neutrophilia indicates an inflammatory response, common in both appendicitis and ectopic pregnancy. Elevated hemoglobin and hematocrit can be seen in conditions like dehydration associated with vomiting. * **Imaging Examination:** The presence of a low-density shadow in the left adnexa strongly suggests an ovarian cyst or ectopic pregnancy. The strip-shaped liquid density shadows in the pelvic cavity could indicate free fluid accumulation, which is more common in ruptured ectopic pregnancies or ovarian cysts. **3. Two Most Likely Diseases:** * **Ectopic Pregnancy:** The combination of abdominal pain radiating to the back, nausea, vomiting, and the imaging findings (low-density shadow in the left adnexa and pelvic fluid) strongly suggest an ectopic pregnancy. * **Ovarian Cyst:** The presence of a low-density shadow in the left adnexa is consistent with an ovarian cyst. However, the absence of vaginal bleeding or discharge makes it less likely compared to ectopic pregnancy. **4. Best Possible Disease:** = **Best possible Disease:** Ectopic Pregnancy - **Reasons:** - The patient's symptoms (abdominal pain radiating to the back, nausea, vomiting) are classic for an ectopic pregnancy. - The imaging findings of a low-density shadow in the left adnexa and pelvic fluid accumulation strongly support this diagnosis. - While ovarian cysts can cause similar symptoms, the absence of vaginal bleeding or discharge makes ectopic pregnancy more likely. **Important Note:** This analysis is based solely on the provided information. A definitive diagnosis can only be made by a qualified medical professional after a thorough physical examination, additional tests (e.g., ultrasound, blood hCG levels), and patient history review.

Key: 277

original: {'main-diagnosis': 'ovarian cyst', 'differential_diagnosis': ['Functional Dysfunctional Uterine Bleeding', 'Submucosal Uterine Fibroids', 'ovarian cyst']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 45-year-old female who has been experiencing vaginal irregular bleeding for the past 20 days. The bleeding is heavy, twice as much as her usual menstrual flow, with large blood clots and a dark purple color. She also experiences occasional abdominal pain. She has tried treatment with Chinese medicine, but it has not been effective. Her physical examination revealed a large amount of blood flowing out from the cervix. Her laboratory examination showed a decrease in hemoglobin and hematocrit, indicating anemia, and an increase in mean platelet volume. Her tumor marker test was normal. The MRI scan showed an unevenly thickened endometrium and multiple small round long T2 signal shadows in the cervix. A cystic lesion was seen in the left adnexal area. 2. ****Medical case Analysis**** - ****Physical examination****: The large amount of blood seen flowing out from the cervix indicates a gynecological issue, possibly related to the uterus or cervix. - ****Laboratory examination****: The decrease in hemoglobin and hematocrit indicates anemia, likely due to the heavy bleeding. The increase in mean platelet volume could be a response to the bleeding. - ****Tumor marker test****: The normal results rule out certain types of cancer, such as ovarian cancer. - ****MRI scan****: The unevenly thickened endometrium could indicate a condition like dysfunctional uterine bleeding or uterine fibroids. The small round long T2 signal shadows in the cervix could be related to the bleeding. The cystic lesion in the left adnexal area could indicate an ovarian cyst. 3. ****Select the 2 Best Possible Diseases**** Based on the patient's symptoms, physical examination, laboratory examination, and MRI scan, the two most likely diseases are Functional Dysfunctional Uterine Bleeding and Submucosal Uterine Fibroids. 4. ****Select the best possible disease**** After rechecking the case, the best possible disease is Functional Dysfunctional Uterine Bleeding. 5. ****Format the Disease**** = ****Best possible Disease****: Functional Dysfunctional Uterine Bleeding - ****Reasons****: - The patient's main symptom is heavy, irregular vaginal bleeding, which is a key symptom of Functional Dysfunctional Uterine Bleeding. - The MRI scan showed an unevenly thickened endometrium, which can occur in Functional Dysfunctional Uterine Bleeding. - The laboratory examination showed anemia, which can result from heavy bleeding. - The patient's age (45 years old) is within the typical age range for Functional Dysfunctional Uterine Bleeding.

llama3.1: Here are the step-by-step solutions to the medical case: ****1. Summarize the medical case:**** A 45-year-old middle-aged female patient presents with vaginal irregular bleeding for 20 days, which is heavy and accompanied by large blood clots and occasional abdominal pain. She has a history of similar symptoms in the past without an obvious cause. Physical examination reveals unobstructed vagina with a large amount of blood flowing out from the cervix. Laboratory tests show normal blood counts but slightly elevated liver enzymes. Imaging studies reveal a uniformly thickened endometrium, multiple small round shadows in the cervix, and a cystic lesion in the left adnexal area. ****2. Medical case Analysis:**** * Physical examination: + Unobstructed vagina with heavy bleeding suggests a gynecological issue. + Large amount of blood flowing out from the cervix indicates possible endometrial or cervical pathology. * Laboratory examination: + Normal blood counts suggest no acute infection or anemia. + Slightly elevated liver enzymes may indicate mild liver dysfunction, but this is not directly related to the primary complaint. * Imaging examination: + Uniformly thickened endometrium (8.2mm) suggests possible endometrial hyperplasia or polyps. + Multiple small round shadows in the cervix could be indicative of cervical lesions or metastasis from an ovarian source. + Cystic lesion in the left adnexal area is suggestive of an ovarian cyst. ****3. Select the 2 Best Possible Diseases:**** Based on the analysis, the two most likely diseases are: 1. ****Functional Dysfunctional Uterine Bleeding (FDUB)****: Heavy and irregular vaginal bleeding without an obvious cause, accompanied by occasional abdominal pain. 2. ****Ovarian Cyst****: Presence of a cystic lesion in the left adnexal area on imaging studies. ****4. Select the best possible disease:**** After rechecking the case, I would select: 1. ****Functional Dysfunctional Uterine Bleeding (FDUB)**** The reasons for this selection are: * Heavy and irregular vaginal bleeding is a primary complaint. * The patient has a history of similar symptoms without an obvious cause. * Physical examination reveals unobstructed vagina with heavy bleeding flowing out from the cervix. * Imaging studies show uniformly thickened endometrium, which could be indicative of

endometrial hyperplasia or polyps. **5. Format the Disease:** = **Best possible Disease**: Functional Dysfunctional Uterine Bleeding (FDUB) - **Reasons**: + Heavy and irregular vaginal bleeding is a primary complaint. + The patient has a history of similar symptoms without an obvious cause. + Physical examination reveals unobstructed vagina with heavy bleeding flowing out from the cervix. + Imaging studies show uniformly thickened endometrium, which could be indicative of endometrial hyperplasia or polyps.

gemma2: ## Medical Case Analysis **1. Summary:** A 45-year-old female presents with persistent vaginal bleeding lasting 20 days, characterized as heavy flow with large clots and a dark purple color. She reports occasional tolerable abdominal pain but denies fatigue, dizziness, or other discomforts. Previous treatment with Chinese medicine was ineffective. Physical examination reveals abundant blood flow from the cervix. Laboratory tests show elevated red blood cells, hemoglobin, and hematocrit, suggesting anemia. Imaging reveals endometrial thickening, linear low T2 signals in the uterine cavity, and a cystic lesion in the left adnexal area. **2. Medical Case Analysis:** * **Physical Examination:** The heavy vaginal bleeding with clots points towards an issue within the uterus or cervix. * **Laboratory Examination:** Elevated red blood cells, hemoglobin, and hematocrit indicate anemia, likely caused by the prolonged bleeding. * **Imaging Examination:** The MRI findings are crucial: * **Endometrial thickening (8.2mm):** Suggests a potential hormonal imbalance or underlying pathology affecting the uterine lining. * **Linear low T2 signals in the uterine cavity:** Could indicate polyps, fibroids, or other lesions within the endometrium. * **Cystic lesion in the left adnexal area:** This could be an ovarian cyst, which can sometimes cause bleeding. **3. Two Most Likely Diseases:** 1. **Functional Dysfunctional Uterine Bleeding:** This is a common condition characterized by irregular and heavy menstrual bleeding due to hormonal imbalances or other underlying factors. The patient's symptoms align well with this diagnosis. 2. **Ovarian Cyst:** The presence of a cystic lesion in the left adnexal area on MRI strongly suggests an ovarian cyst. These cysts can sometimes rupture or bleed, causing abnormal vaginal bleeding. **4. Best Possible Disease:** Based on the combination of symptoms, physical examination findings, and imaging results, **Functional Dysfunctional Uterine Bleeding** is the most likely diagnosis. **5. Formatted Disease:** = **Best possible Disease**: Functional Dysfunctional Uterine Bleeding - **Reasons**: - Persistent vaginal bleeding for 20 days with heavy flow and clots aligns with the typical presentation of dysfunctional uterine bleeding. - The patient's age (45 years old) places her within a period where hormonal fluctuations are more common, contributing to this condition. - While an ovarian cyst is possible, the MRI findings don't definitively point towards it as the primary cause of the bleeding. **Important Note:** This analysis is based solely on the provided information and should not be considered a definitive diagnosis. A thorough clinical evaluation by a qualified medical professional is essential for accurate diagnosis and treatment.

Key: 282

original: {'main-diagnosis': 'endometrial polyp', 'differential_diagnosis': ['Functional Dysfunctional Uterine Bleeding', 'Submucosal uterine fibroids', 'Endogenous cervical cancer', 'Uterine Sarcoma', 'Endometrial cancer', 'endometrial polyp']}

gpt-4: 1. **Summarize the medical case.** The patient is a 36-year-old female who has been experiencing irregular vaginal bleeding for 15 days. She has a history of regular menstrual cycles with occasional blood clots, but her last menstruation was slightly less and dark red. She also experienced vaginal bleeding during urination without any obvious cause. She was given vaginal medication which eased the bleeding, but she still experiences bleeding during sexual intercourse. Physical examination revealed a polyp-like neoplasm at the external orifice of the cervix. Laboratory tests and imaging examinations were generally normal. 2. **Medical case Analysis** The patient's symptoms of irregular vaginal bleeding, bleeding during urination and sexual intercourse, and the presence of a polyp-like neoplasm at the external orifice of the cervix are indicative of a gynecological condition. The laboratory tests do not show any significant abnormalities, suggesting that the condition is localized and not systemic. The imaging examination also does not show any significant abnormalities, further suggesting that the condition is localized to the cervix. 3. **Select the 2 Best Possible Diseases** Based on the patient's symptoms and examination results, the two most likely diseases are 'Endometrial polyp' and 'Endometrial cancer'. 4. **Select the best possible disease** After rechecking the case, the best possible disease is 'Endometrial polyp'. 5. **Format the Disease** = **Best possible Disease**: Endometrial polyp - **Reasons**: 1. The patient's symptoms of irregular vaginal bleeding and bleeding during urination and sexual intercourse are consistent with an endometrial polyp. 2. The physical examination revealed a polyp-like neoplasm at the external orifice of the cervix, which is a common finding in endometrial polyps. 3. The laboratory tests and imaging examinations do not show any significant abnormalities, suggesting that the condition is localized and not systemic. This is consistent with an endometrial polyp, which is a localized growth.

llama3.1: I'll follow the step-by-step approach to solve the medical case. **1. Summarize the medical case.** A 36-year-old middle-aged female presents with irregular vaginal bleeding for 15 days. Her past menstrual cycles were regular, but her last menstruation was slightly less and lasted for 6 days. She experienced a small amount of vaginal bleeding during urination without an obvious cause. Physical examination revealed an unobstructed vagina with brown secretions and blood stains, a normal-sized cervix with contact bleeding, and a polyp-like neoplasm at the external orifice. Laboratory examinations showed normal blood test results, while tumor marker tests were within normal limits. Imaging examination via color Doppler ultrasound revealed a normal uterus shape and size, but an uneven endometrial echo. **2. Medical case Analysis.** **Physical examination:** + The presence of a polyp-like neoplasm at the external orifice of the cervix suggests a possible cervical lesion. + Vaginal bleeding during urination could be related to a cervical or uterine issue. **Laboratory examinations:** + Normal blood test results suggest no acute infection or inflammation. + Tumor marker tests were within normal limits, making it less likely for endometrial cancer or other malignancies. **Imaging examination:** + The uneven endometrial echo could indicate an endometrial polyp or hyperplasia. **3. Select the 2 Best Possible Diseases.** Based on the analysis, the top 2 possible diseases are: 1. **Endometrial polyp**: The presence of a polyp-like neoplasm at the external orifice of the cervix and the uneven endometrial echo in the imaging examination make this a likely diagnosis. 2. **Functional Dysfunctional Uterine Bleeding (FDUB)**: The irregular vaginal bleeding, normal blood test results, and lack of other symptoms suggest FDUB as another possible cause. **4. Select the best possible disease.** After rechecking the case, I would choose: 1. **Endometrial polyp**: This is because the physical examination revealed a clear polyp-like neoplasm at the external orifice of the cervix, which is a strong indicator for this condition. **5. Format the Disease** = **Best possible Disease**: Endometrial polyp - **Reasons**: **Presence of a polyp-like neoplasm at the external orifice of the cervix.** **Uneven endometrial echo in imaging examination.** **No other symptoms or laboratory findings that would suggest FDUB or malignancies.**

gemma2: **Medical Case Analysis** **1. Summary:** A 36-year-old female presents with irregular vaginal bleeding lasting 15 days. Her past menstrual cycles were regular (5-6/30 days), moderate in

amount, with occasional blood clots and no dysmenorrhea. The current bleeding is described as slightly less, dark red, accompanied by bleeding during urination and sexual intercourse. Physical examination reveals a polyp-like neoplasm at the external cervical orifice. Laboratory tests are mostly within normal limits, except for an elevated CA125 level. Ultrasound shows an uneven endometrium (0.9cm thick) but no other abnormalities in the uterus or adnexa. **2. Medical Case Analysis:** * **Physical Examination:** * **Vaginal bleeding and discharge:** Suggestive of various conditions, including infections, hormonal imbalances, or structural abnormalities like polyps or fibroids. * **Cervical polyp:** A benign growth on the cervix that can cause bleeding, particularly during intercourse or menstruation. * **Laboratory Examination:** * **Elevated CA125:** This tumor marker is often elevated in endometrial and ovarian cancers, but it can also be elevated in benign conditions like endometriosis or pelvic inflammatory disease. * **Imaging Examination:** * **Ultrasound:** The uneven endometrium suggests potential thickening due to inflammation, hormonal changes, or a pathological process like polyps or cancer. **3. Select the 2 Best Possible Diseases:** Based on the information provided, the two most likely diseases are: 1. **Endometrial polyp:** The patient's history of irregular bleeding, coupled with the physical finding of a polyp-like neoplasm at the cervical orifice, strongly suggests an endometrial polyp. 2. **Functional Dysfunctional Uterine Bleeding (FDUB):** This diagnosis encompasses various conditions causing abnormal uterine bleeding without an identifiable structural cause. The patient's history of regular cycles followed by irregular bleeding could point towards FDUB. **4. Select the Best Possible Disease:** Considering the physical examination findings and the elevated CA125 level, **Endometrial polyp** is the most likely diagnosis. **= Best possible Disease:** Endometrial Polyp - **Reasons:** - A polyp-like neoplasm was observed at the external cervical orifice during the physical examination. - The patient presents with irregular vaginal bleeding, a common symptom associated with endometrial polyps. - While CA125 can be elevated in other conditions, it adds weight to the possibility of an endometrial polyp. **Important Note:** This analysis is based solely on the provided information and should not be considered a definitive diagnosis. Further investigations, such as biopsy or hysteroscopy, are necessary to confirm the diagnosis and rule out other potential conditions.

Key: 287

original: {'main-diagnosis': 'endometrial polyp', 'differential_diagnosis': ['Functional Dysfunctional Uterine Bleeding', 'Endometrial Cancer', 'endometrial polyp']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 55-year-old female who has been experiencing irregular vaginal bleeding for over a month. She was previously treated with oral medication, which was effective in stopping the bleeding. Her physical examination shows normal development and no obvious abnormalities. Her laboratory examination shows slightly elevated levels of Alanine Aminotransferase (ALT), Aspartate Aminotransferase (AST), Lactate Dehydrogenase (LDH), Uric Acid (UA), and Calcium (Ca). Her imaging examination reveals two hypoechoic areas on the anterior wall of the uterus and multiple anechoic areas in the cervix. The endometrium is irregular with local slight thickening. 2. ****Medical case Analysis**** The patient's symptoms of irregular vaginal bleeding could be indicative of several gynecological conditions. The laboratory results show slightly elevated levels of liver enzymes (ALT and AST), which could be indicative of liver disease but are not directly related to gynecological conditions. The elevated levels of LDH, UA, and Ca are also not specific to any of the diseases in the differential diagnosis. The imaging results, however, are more indicative. The presence of hypoechoic areas in the uterus and anechoic areas in the cervix, along with an irregular endometrium, could suggest the presence of endometrial polyps or endometrial cancer. 3. ****Select the 2 Best Possible Diseases**** Based on the patient's symptoms and imaging results, the two most likely diseases are 'Endometrial Cancer' and 'endometrial polyp'. 4. ****Select the best possible disease**** The best possible disease in this case is 'endometrial polyp'. 5. ****Format the Disease**** = ****Best possible Disease****: Endometrial Polyp - ****Reasons****: - The patient's chief complaint is irregular vaginal bleeding, which is a common symptom of endometrial polyps. - The imaging examination reveals two hypoechoic areas on the anterior wall of the uterus and multiple anechoic areas in the cervix, which are characteristic of endometrial polyps. - The endometrium is irregular with local slight thickening, which is also indicative of endometrial polyps. - The patient's age (55 years old) is within the typical age range for the development of endometrial polyps.

llama3.1: I'll follow the step-by-step approach to solve the medical case. ****1. Summarize the medical case:**** A 55-year-old middle-aged female patient presents with irregular vaginal bleeding for over a month. She has a history of similar episodes in the past, which were effectively managed with oral medication. Physical examination reveals an atrophic cervix and uterus, but no obvious abnormalities in the vulva or adnexa. Laboratory tests show normal blood counts and biochemistry results, except for slightly elevated liver enzymes (ALT 107 U/L). Imaging studies using color Doppler ultrasound reveal two hypoechoic areas on the anterior wall of the uterus, with clear boundaries and sizes approximately 1.2x1.0 cm and 1.6x1.7 cm respectively. ****2. Medical case Analysis:**** * Physical examination: + Atrophic cervix and uterus suggest postmenopausal status or hormonal changes. + No obvious abnormalities in the vulva or adnexa, which reduces the likelihood of external genital tract issues. * Laboratory tests: + Normal blood counts indicate no acute infection or anemia. + Slightly elevated liver enzymes (ALT 107 U/L) could suggest liver dysfunction or metabolic disorders. * Imaging studies: + Two hypoechoic areas on the anterior wall of the uterus, with clear boundaries and sizes approximately 1.2x1.0 cm and 1.6x1.7 cm respectively, are suspicious for endometrial lesions (e.g., polyps or cancer). ****3. Select the 2 Best Possible Diseases:**** Based on the analysis, the two most likely diseases are: 1. ****Endometrial Cancer****: The presence of hypoechoic areas on the anterior wall of the uterus, with clear boundaries and sizes approximately 1.2x1.0 cm and 1.6x1.7 cm respectively, is suspicious for endometrial cancer. 2. ****Endometrial Polyp****: The imaging findings could also be consistent with endometrial polyps, which are benign growths on the uterine lining. ****4. Select the best possible disease:**** After rechecking the case, I would choose: * ****Endometrial Cancer****: The patient's age (55 years), irregular vaginal bleeding for over a month, and imaging findings of hypoechoic areas on the anterior wall of the uterus make endometrial cancer more likely. ****5. Format the Disease:**** = ****Best possible Disease****: Endometrial Cancer - ****Reasons****: + Age (55 years): Increased risk for endometrial cancer. + Irregular vaginal bleeding for over a month: Unusual bleeding pattern, which is a common symptom of endometrial cancer. + Imaging findings: Hypoechoic areas on the anterior wall of the uterus, with clear boundaries and sizes approximately 1.2x1.0 cm and 1.6x1.7 cm

respectively, are suspicious for endometrial cancer. Note that endometrial polyps are still a possible diagnosis, but based on the analysis, endometrial cancer is more likely.

gemma2: ## Medical Case Analysis **1. Summarize the medical case:** A 55-year-old female presents with a history of irregular vaginal bleeding lasting over a month. Initial oral medication treatment was effective in stopping the bleeding. Physical examination reveals an atrophic cervix and uterus, with no active bleeding or tenderness. Laboratory tests show elevated ALT and AST, as well as high uric acid levels. Ultrasound imaging shows two hypoechoic areas on the anterior uterine wall, irregular endometrium thickening, and multiple anechoic areas in the cervix. **2. Medical Case Analysis:** * **Physical Examination:** Atrophic changes in the uterus and cervix are common with age and menopause. However, the presence of irregular vaginal bleeding warrants further investigation. * **Laboratory Examination:** Elevated ALT and AST suggest possible liver dysfunction or inflammation. High uric acid levels could indicate gout or other metabolic disorders. * **Imaging Examination:** The ultrasound findings are crucial: * Two hypoechoic areas on the uterine wall raise suspicion for endometrial polyps or fibroids. * Irregular endometrium thickening points towards potential hormonal imbalances or underlying pathology. * Multiple anechoic areas in the cervix could be cysts or other benign lesions, but further evaluation is needed. **3. Select the 2 Best Possible Diseases:** Based on the information provided, the two most likely diseases are: * **Functional Dysfunctional Uterine Bleeding:** This condition involves irregular bleeding due to hormonal imbalances common during perimenopause and menopause. The patient's age and history of vaginal bleeding align with this possibility. * **Endometrial Polyp:** These benign growths in the uterine lining can cause irregular bleeding. The ultrasound findings of hypoechoic areas on the uterine wall and irregular endometrium thickening support this diagnosis. **4. Select the best possible disease:** Considering the patient's age, history of vaginal bleeding, and the ultrasound findings, **Endometrial Polyp** is the most likely diagnosis. **5. Format the Disease:** = **Best Possible Disease:** Endometrial Polyp - **Reasons:** - Irregular vaginal bleeding lasting over a month is a common symptom of endometrial polyps. - Ultrasound imaging reveals two hypoechoic areas on the uterine wall, consistent with endometrial polyps. - The patient's age (55 years old) places her in the age range where endometrial polyps are more common. **Important Note:** This analysis is based solely on the provided information and should not be considered a definitive diagnosis. Further investigations, such as a biopsy, may be necessary to confirm the diagnosis and rule out other conditions.

Key: 292

original: {'main-diagnosis': 'endometrial cancer', 'differential_diagnosis': ['Submucosal uterine fibroids', 'Endocervical carcinoma', 'Uterine sarcoma', 'endometrial cancer']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 62-year-old female who has been experiencing irregular vaginal bleeding for over two months. She had leukemia 10 years ago and stopped menstruating after chemotherapy. A recent cervical biopsy indicated cervical adenocarcinoma. Postoperative pathology after fractional curettage indicated cervical and endometrial adenocarcinoma, with a tendency towards clear cell carcinoma. The patient also has chronic heart failure, diabetes, and a history of cerebral infarction and bilateral hemianopia. 2. ****Medical case Analysis**** The patient's chief complaint of irregular vaginal bleeding, along with the cervical biopsy indicating cervical adenocarcinoma and postoperative pathology indicating cervical and endometrial adenocarcinoma, strongly suggest a gynecological malignancy. The tumor marker test shows elevated levels of Carcinoembryonic antigen (CEA), Carbohydrate antigen 125 (CA125), Carbohydrate antigen 72-4 (CA72-4), Cytokeratin 19 fragment (CYFRA21-1), Neuron-specific enolase (NSE), and Human epididymis protein 4 (HE4), which are often associated with gynecological cancers. The contrast computed tomography scan shows an enlarged uterus with irregular endometrium and localized endometrial thickening, further supporting the diagnosis of a gynecological malignancy. 3. ****Select the 2 Best Possible Diseases**** Based on the patient's symptoms, medical history, and test results, the two most likely diseases are 'Endocervical carcinoma' and 'endometrial cancer'. 4. ****Select the best possible disease**** After rechecking the case, the best possible disease is 'endometrial cancer'. 5. ****Format the Disease**** = ****Best possible Disease****: Endometrial cancer - ****Reasons****: - The patient's chief complaint is irregular vaginal bleeding, which is a common symptom of endometrial cancer. - The postoperative pathology after fractional curettage indicated endometrial adenocarcinoma. - The tumor marker test shows elevated levels of CA125 and HE4, which are often associated with endometrial cancer. - The contrast computed tomography scan shows an enlarged uterus with irregular endometrium and localized endometrial thickening, which are typical findings in endometrial cancer.

llama3.1: Here are the step-by-step solutions to the medical case: ****1. Summarize the medical case:**** The patient is a 62-year-old elderly female who presents with irregular vaginal bleeding for over 2 months. She has a history of leukemia treated with chemotherapy 10 years ago, which led to cessation of menstruation. Recently, cervical adenocarcinoma was diagnosed, and subsequent fractional curettage revealed cervical and endometrial adenocarcinoma with a tendency towards clear cell carcinoma. The patient also has multiple comorbidities, including chronic heart failure, diabetes, and cerebral infarction. ****2. Medical case Analysis:**** * Physical examination: No obvious abnormalities were found. * Laboratory examination: + Blood biochemistry test: Elevated glucose levels (3.16 mmol/L), urea (4.69 mmol/L), creatinine (47 µmol/L), and uric acid (285 µmol/L) suggest impaired renal function. + Tumor marker test: Elevated CA125 (507.0 U/mL) and HE4 (1092.0 pmol/L) levels, which are associated with ovarian cancer, but also elevated in endometrial cancer. * Imaging examination: + Contrast computed tomography scan: Shows an enlarged uterus with irregular endometrial thickening and uneven enhancement at the cervix, suggesting endometrial cancer. ****3. Select the 2 Best Possible Diseases:**** Based on the medical case analysis, the two most likely diseases are: 1. ****Endocervical carcinoma****: The patient has a history of cervical adenocarcinoma, and the imaging examination shows irregular endometrial thickening and uneven enhancement at the cervix. 2. ****endometrial cancer****: The patient presents with irregular vaginal bleeding, and the imaging examination shows an enlarged uterus with irregular endometrial thickening. ****4. Select the best possible disease:**** After rechecking the case, I would select: 1. ****Endocervical carcinoma****: The patient's history of cervical adenocarcinoma and the imaging findings suggest a more likely diagnosis of endocervical carcinoma rather than endometrial cancer. ****5. Format the Disease:**** = ****Best possible Disease****: Endocervical carcinoma - ****Reasons****: * History of cervical adenocarcinoma * Imaging findings showing irregular endometrial thickening and uneven enhancement at the cervix

gemma2: **## Medical Case Analysis** ****1. Summary:**** A 62-year-old woman with a history of leukemia, cerebral infarction, diabetes, and chronic heart failure presents with irregular vaginal bleeding for over two months. A cervical biopsy revealed adenocarcinoma, confirmed by

postoperative pathology showing cervical and endometrial adenocarcinoma with clear cell carcinoma features. Imaging reveals uterine enlargement with irregular endometrial enhancement and localized thickening, suggestive of malignancy. **2. Medical Case Analysis:** * **Physical Examination:** While the physical examination notes no obvious abnormalities, this is not uncommon in advanced stages of these diseases. * **Laboratory Examination:** * Elevated CA125 (507 U/mL) and HE4 (1092 pmol/L) are highly suggestive of endometrial or ovarian cancer. * Other tumor markers like CEA, CYFRA21-1, and NSE are also elevated, further supporting malignancy. * **Imaging Examination:** The CT scan shows uterine enlargement with irregular endometrial enhancement and localized thickening, consistent with endometrial cancer. The presence of a solitary nodule in the right upper lung (IM89) could be unrelated or indicative of metastasis. **3. Two Most Likely Diseases:** Based on the information provided, the two most likely diseases are: * **Endometrial Cancer:** This is strongly supported by the patient's history of irregular vaginal bleeding, cervical and endometrial adenocarcinoma pathology, elevated CA125 and HE4 levels, and imaging findings of uterine enlargement with irregular endometrial enhancement. * **Cervical Adenocarcinoma:** While the initial biopsy indicated this, it's important to consider that the pathology also revealed endometrial involvement, suggesting a possible combined diagnosis or progression from cervical to endometrial cancer. **4. Best Possible Disease:** Considering the strong evidence pointing towards endometrial cancer (pathology, imaging, and tumor markers), **Endometrial Cancer** is the most likely diagnosis in this case. **5. Formatted Disease:** = **Best possible Disease:** Endometrial Cancer - **Reasons:** - Confirmed by postoperative pathology showing cervical and endometrial adenocarcinoma with clear cell carcinoma features. - Elevated CA125 (507 U/mL) and HE4 (1092 pmol/L) are highly suggestive of endometrial or ovarian cancer. - Imaging reveals uterine enlargement with irregular endometrial enhancement and localized thickening, consistent with endometrial cancer.

Key: 297

original: {'main-diagnosis': 'endometrial cancer', 'differential_diagnosis': ['Vaginal Wall Mass', 'Urethral and Bladder Tumors', 'endometrial cancer']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 71-year-old woman who has been menopausal for 23 years. She has been experiencing postmenopausal vaginal bleeding for over a month and a uterine cavity occupation was found 20 days ago. She underwent a hysteroscopic resection of the uterine mass. Her physical examination is largely normal, with no abnormalities in the vulva, vagina, cervix, uterus, or bilateral appendages. Her blood biochemistry test shows slightly elevated glucose levels and slightly decreased creatinine, albumin/globulin ratio, and ammonia levels. Her tumor marker test is within normal limits. The MRI scan shows masses and patches of uneven short T1 and long T2 signal shadows within the uterine cavity. 2. ****Medical case Analysis**** The patient's chief complaint of postmenopausal vaginal bleeding is a common symptom of endometrial cancer. The presence of a uterine cavity occupation found 20 days ago also supports this. The MRI findings of masses and patches of uneven short T1 and long T2 signal shadows within the uterine cavity further support the possibility of endometrial cancer. The normal tumor marker test results do not rule out the possibility of endometrial cancer, as these markers can be normal in early-stage disease. The patient's age and menopausal status also increase her risk for endometrial cancer. 3. ****Select the 2 Best Possible Diseases**** Based on the patient's symptoms, medical history, and examination results, the two most likely diseases are endometrial cancer and vaginal wall mass. 4. ****Select the best possible disease**** The best possible disease in this case is endometrial cancer. 5. ****Format the Disease**** = ****Best possible Disease****: Endometrial Cancer - ****Reasons****: 1. The patient's chief complaint of postmenopausal vaginal bleeding is a common symptom of endometrial cancer. 2. The presence of a uterine cavity occupation found 20 days ago also supports the diagnosis of endometrial cancer. 3. The MRI findings of masses and patches of uneven short T1 and long T2 signal shadows within the uterine cavity further support the possibility of endometrial cancer. 4. The patient's age and menopausal status also increase her risk for endometrial cancer.

llama3.1: I'll follow the step-by-step approach to solve the medical case. ****1. Summarize the medical case.**** A 71-year-old postmenopausal female presents with vaginal bleeding for over a month. She underwent hysteroscopic resection of uterine mass 20 days ago. The physical examination is unremarkable, and laboratory examinations show normal liver and kidney function. Imaging studies reveal masses and patches within the uterine cavity. ****2. Medical case Analysis:**** * Physical Examination: + Vulva, vagina, and cervix are normal. + Uterus is in a retroverted position with masses and patches within the uterine cavity. * Laboratory Examination: + Normal liver and kidney function. + Tumor marker tests show elevated CA125 (15.5 U/mL) and HE4 (92.0 pmol/L). * Imaging Examination: + Masses and patches within the uterine cavity with unclear edges. + No obvious enhancement or enlarged lymph nodes. ****3. Select the 2 Best Possible Diseases:**** Based on the medical case analysis, the two most likely diseases are: 1. ****Endometrial Cancer****: The patient's age, postmenopausal status, and vaginal bleeding for over a month suggest endometrial cancer. The imaging studies show masses and patches within the uterine cavity, which is consistent with endometrial cancer. 2. ****Vaginal Wall Mass****: Although less likely than endometrial cancer, vaginal wall mass cannot be ruled out entirely. However, the physical examination does not mention any abnormalities in the vulva or vagina. ****4. Select the best possible disease:**** After rechecking the case, I would select: ****Endometrial Cancer**** The reasons for this selection are: * The patient's age and postmenopausal status increase the risk of endometrial cancer. * Vaginal bleeding for over a month is a common symptom of endometrial cancer. * Imaging studies show masses and patches within the uterine cavity, which is consistent with endometrial cancer. ****5. Format the Disease:**** = ****Best possible Disease****: Endometrial Cancer - ****Reasons****: 1. The patient's age and postmenopausal status increase the risk of endometrial cancer. 2. Vaginal bleeding for over a month is a common symptom of endometrial cancer. 3. Imaging studies show masses and patches within the uterine cavity, which is consistent with endometrial cancer. Note: The other possible disease, Vaginal Wall Mass, is less likely based on the provided medical case.

gemma2: ## Medical Case Analysis ****1. Summary:**** A 71-year-old postmenopausal woman presents with vaginal bleeding lasting over a month. She underwent hysteroscopic resection of a

uterine mass 20 days ago. Her symptoms include dizziness, headache, and fatigue. Physical examination reveals no abnormalities except for the uterus being in a retroverted position. Laboratory tests show elevated creatinine and ammonia levels. Imaging reveals masses and patches within the uterine cavity with uneven signal shadows on MRI. Tumor markers are slightly elevated (CA125).

2. Medical Case Analysis:

- Physical Examination:** The normal vulva, vagina, and cervix suggest no immediate infection or inflammation. The retroverted uterus is a finding that could be associated with various conditions but doesn't directly point to a specific disease.
- Laboratory Examination:** Elevated creatinine and ammonia levels raise concerns about potential kidney dysfunction or liver issues. However, these findings are not specific to any of the listed diseases. The slightly elevated tumor markers (CA125) are suggestive of possible malignancy.
- Imaging Examination:** The MRI findings are crucial: masses and patches within the uterine cavity with uneven signal shadows strongly suggest a uterine pathology. The high signal strip on DWI further supports this possibility.

3. Select the 2 Best Possible Diseases: Based on the information provided, the two most likely diseases are:

- Endometrial Cancer:** The MRI findings of masses and patches within the uterine cavity, coupled with the elevated CA125 tumor marker, strongly suggest endometrial cancer.
- Vaginal Wall Mass:** While less likely than endometrial cancer, a vaginal wall mass could also explain the bleeding and require further investigation.

4. Select the Best Possible Disease: Considering the MRI findings and elevated CA125, **Endometrial Cancer** is the most likely diagnosis.

5. Format the Disease: = **Best possible Disease:** Endometrial Cancer - **Reasons:**

- MRI reveals masses and patches within the uterine cavity with uneven signal shadows, highly suggestive of endometrial cancer.
- Elevated CA125 tumor marker further supports the possibility of malignancy.

Let me know if you have any other questions or need further clarification!

Key: 302

original: {'main-diagnosis': 'uterine fibroid', 'differential_diagnosis': ['Uterine Sarcoma', 'Adenomyosis', 'Endometrial Cancer', 'uterine fibroid']}

gpt-4: 1. **Summarize the medical case.** The patient is a 48-year-old female who has been experiencing intermittent discomfort in her lower left abdomen for over 20 days. She has a history of a pelvic mass discovered 8 years ago, which was not taken seriously. She has regular menstruation with a large amount of menstruation and no obvious dysmenorrhea. She also experiences frequent and urgent urination at night. Physical examination reveals an enlarged uterus with a larger myoma nodule on the right wall and multiple nodules on the left wall. Laboratory tests show normal white blood cell count, slightly low hemoglobin and hematocrit, and slightly high red cell distribution width and mean platelet volume. Tumor marker tests are within normal range. 2. **Medical case Analysis** The physical examination reveals an enlarged uterus with a larger myoma nodule on the right wall and multiple nodules on the left wall. This could indicate the presence of a uterine fibroid, which is a benign tumor that originates from the smooth muscle layer of the uterus. The laboratory tests show slightly low hemoglobin and hematocrit, which could be due to heavy menstrual bleeding, a common symptom of uterine fibroids. The slightly high red cell distribution width and mean platelet volume could also be related to the heavy menstrual bleeding. The normal tumor marker tests suggest that the patient does not have a malignant tumor. 3. **Select the 2 Best Possible Diseases** Based on the medical case, the two most likely diseases are 'Uterine Fibroid' and 'Adenomyosis'. 4. **Select the best possible disease** The best possible disease for this patient is 'Uterine Fibroid'. 5. **Format the Disease** = **Best possible Disease**: Uterine Fibroid - **Reasons**: 1. The patient's physical examination reveals an enlarged uterus with a larger myoma nodule on the right wall and multiple nodules on the left wall, which are characteristic of uterine fibroids. 2. The patient's symptoms of heavy menstruation and frequent and urgent urination at night are common in women with uterine fibroids. 3. The patient's laboratory tests show slightly low hemoglobin and hematocrit, and slightly high red cell distribution width and mean platelet volume, which could be due to heavy menstrual bleeding, a common symptom of uterine fibroids. 4. The patient's tumor marker tests are within normal range, suggesting that the patient does not have a malignant tumor.

llama3.1: I'll follow the step-by-step approach to solve the medical case. **Step 1: Summarize the medical case** A middle-aged female patient, 48 years old, presents with a pelvic mass discovered 8 years ago and intermittent discomfort in her lower left abdomen for over 20 days. She has regular menstruation but experiences heavy bleeding. Physical examination reveals an enlarged uterus (40+ days of pregnancy size) with multiple nodules on the right and left walls, one of which is hard and tender. Laboratory examinations show normal blood counts and biochemistry results, except for a slightly elevated LDH level. Tumor marker tests are within normal limits. **Step 2: Medical case Analysis** Physical examination findings suggest uterine pathology, with the enlarged uterus and nodules on both walls being particularly concerning. The laboratory examinations do not reveal any significant abnormalities that would point to a specific disease. However, the presence of multiple nodules on the left wall, one of which is hard and tender, raises suspicion for a malignant process. **Step 3: Select the 2 Best Possible Diseases** Based on the medical case analysis, the two most likely diseases are: 1. **Uterine Sarcoma**: The presence of multiple nodules on the uterus, including one that is hard and tender, suggests a possible malignancy. Uterine sarcomas are rare tumors that can arise from the muscle or connective tissue of the uterus. 2. **Endometrial Cancer**: Although less likely than uterine sarcoma, endometrial cancer cannot be ruled out entirely. The patient's age, heavy menstrual bleeding, and enlarged uterus could be consistent with this diagnosis. **Step 4: Select the best possible disease** After rechecking the case, I would select **Uterine Sarcoma** as the best possible disease. **Reasons**: * The presence of multiple nodules on the uterus, including one that is hard and tender, suggests a possible malignancy. * The patient's age (48 years) is consistent with uterine sarcoma, which typically affects women in their 40s to 60s. * The laboratory examinations do not reveal any significant abnormalities that would point to endometrial cancer. **Format the Disease** = **Best possible Disease**: Uterine Sarcoma - **Reasons**: + Presence of multiple nodules on the uterus, including one that is hard and tender. + Patient's age (48 years) consistent with uterine sarcoma. + Laboratory examinations do not reveal

any significant abnormalities pointing to endometrial cancer.

gemma2: ## Medical Case Analysis **1. Summarize the medical case:** A 48-year-old female presents with a previously discovered pelvic mass from 8 years ago. She now reports intermittent lower left abdominal discomfort for over 20 days, accompanied by frequent and urgent urination at night. Her menstrual history is regular but heavy. Physical examination reveals an enlarged uterus with multiple nodules on both walls, particularly a larger one on the right wall protruding towards the broad ligament. Laboratory tests show mild anemia (low hemoglobin and hematocrit) and elevated GGT levels. **2. Medical Case Analysis:** * **Physical Examination:** * **Uterine enlargement and nodules:** This strongly suggests uterine fibroids or adenomyosis, as both conditions can cause uterine growth and the presence of palpable nodules. * **Location and texture of nodules:** The description of a larger nodule on the right wall protruding towards the broad ligament is more suggestive of a fibroid. * **Laboratory Examination:** * **Mild anemia:** Can be associated with heavy menstrual bleeding, common in both uterine fibroids and adenomyosis. * **Elevated GGT:** While not specific to any gynecological condition, elevated GGT can sometimes indicate liver dysfunction or biliary tract issues, which may need further investigation. * **Imaging Examination:** * Not available in this case, but an ultrasound would be crucial for visualizing the uterine structure and confirming the presence and characteristics of fibroids or adenomyosis. **3. Select the 2 Best Possible Diseases:** Based on the information provided, the two most likely diseases are: 1. **Uterine Fibroid:** The physical examination findings, particularly the enlarged uterus with multiple nodules, strongly suggest uterine fibroids. 2. **Adenomyosis:** While less specific than fibroids, adenomyosis can also cause uterine enlargement and nodules. **4. Select the best possible disease:** Considering the detailed description of a larger nodule on the right wall protruding towards the broad ligament, **uterine fibroid** is the most likely diagnosis. **5. Format the Disease:** = **Best Possible Disease:** Uterine Fibroid - **Reasons:** - Enlarged uterus with multiple nodules palpable during physical examination. - A larger nodule on the right wall protruding towards the broad ligament, consistent with fibroid growth pattern. - Mild anemia potentially attributed to heavy menstrual bleeding common in fibroids.

Key: 307

original: {'main-diagnosis': 'uterine fibroid', 'differential_diagnosis': ['Vestibular Neuronitis', 'Meniere's Disease', 'uterine fibroid']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 66-year-old female who has been experiencing dizziness for the past year. The dizziness is persistent, worsens with activity, and is relieved by rest. She also experiences palpitations, chest tightness, irritability, poor mood, and poor sleep. Her physical examination is largely normal, with no abnormalities in the heart, lung, and abdominal examination. Her neurological system is also normal. Laboratory examinations, including routine blood tests, blood biochemistry tests, and tumor marker tests, are all within normal ranges. However, a plain magnetic resonance imaging scan shows an enlarged uterus with a round mass shadow on the anterior wall. 2. ****Medical case Analysis**** The patient's symptoms of dizziness, palpitations, and chest tightness could be indicative of a variety of conditions, including neurological or cardiovascular diseases. However, her physical examination and laboratory tests do not show any abnormalities in these areas. The only significant finding is the presence of a mass in the uterus, as revealed by the imaging examination. This could potentially be a uterine fibroid, which is a common benign tumor in women. 3. ****Select the 2 Best Possible Diseases**** Based on the patient's symptoms and examination results, the two most likely diseases are Vestibular Neuronitis and uterine fibroid. 4. ****Select the best possible disease**** After reevaluating the case, the most likely disease is a uterine fibroid. 5. ****Format the Disease**** = ****Best possible Disease****: Uterine Fibroid - ****Reasons****: 1. The patient's MRI scan shows an enlarged uterus with a round mass shadow on the anterior wall, which is a typical finding in uterine fibroids. 2. The patient's age is also a factor, as uterine fibroids are most common in women in their 40s and 50s, but can occur at any age. 3. The patient's symptoms of dizziness, palpitations, and chest tightness could potentially be related to the fibroid, especially if it is large and causing pressure on surrounding structures.

llama3.1: I'll follow the step-by-step approach to solve the medical case. ****1. Summarize the medical case:**** The patient is a 66-year-old elderly female who has been experiencing dizziness for 1 year. The symptoms include a heavy-headed feeling without object rotation, persistent and unrelated to body position changes, aggravated after activity, relieved after rest, accompanied by palpitations, chest tightness, irritability, poor mood, and poor sleep. Physical examination is normal, but laboratory examinations show slightly elevated ESR (13.00 mm/H) and CRP (0.87 mg/L). Imaging examination reveals an enlarged uterus with a round mass shadow on the anterior wall. ****2. Medical case Analysis:**** * The patient's symptoms of dizziness, palpitations, chest tightness, irritability, poor mood, and poor sleep could be related to various conditions, including vestibular neuronitis or Meniere's disease. * However, the presence of a round mass shadow on the anterior wall of the uterus in the imaging examination suggests a possible gynecological issue. * The laboratory examinations show slightly elevated ESR and CRP, which could indicate an inflammatory process. ****3. Select the 2 Best Possible Diseases:**** Based on the medical case analysis, the two most likely diseases are: 1. ****Vestibular Neuronitis****: This condition is characterized by dizziness, vertigo, and balance problems, which align with the patient's symptoms. 2. ****Uterine Fibroid****: The imaging examination reveals an enlarged uterus with a round mass shadow on the anterior wall, suggesting a possible uterine fibroid. ****4. Select the best possible disease:**** After rechecking the case, I would select: 1. ****Vestibular Neuronitis**** 2. ****Uterine Fibroid**** However, considering the patient's symptoms and laboratory examinations, I would prioritize ****Uterine Fibroid**** as the most likely diagnosis. ****5. Format the Disease:**** = ****Best possible Disease****: Uterine Fibroid - ****Reasons****: - The imaging examination reveals an enlarged uterus with a round mass shadow on the anterior wall. - The patient's symptoms of dizziness and palpitations could be related to the uterine fibroid, possibly causing compression or irritation of nearby structures.

gemma2: **## Medical Case Analysis** ****1. Summary:**** A 66-year-old female presents with persistent dizziness lasting one year. The dizziness is described as a heavy-headed feeling without object rotation, aggravated by activity and relieved by rest. She also experiences palpitations, chest tightness, irritability, poor mood, and sleep disturbances. Physical examination reveals no abnormalities in the heart, lungs, or abdomen. Neurological examination is normal. Laboratory tests show slightly elevated erythrocyte sedimentation rate (ESR) and homocysteine levels. Imaging

reveals a large mass on the anterior wall of the uterus with characteristics suggestive of a fibroid.

2. Medical Case Analysis:

- Physical Examination:** The absence of neurological deficits or focal findings in the physical examination rules out conditions like stroke or brain tumor, which can cause dizziness.
- Laboratory Examination:** Elevated ESR and homocysteine levels could indicate inflammation or underlying cardiovascular issues, but they are not specific to any particular diagnosis.
- Imaging Examination:** The MRI clearly shows a large mass on the uterine wall consistent with a fibroid. This finding strongly supports uterine fibroids as a primary cause of her symptoms.

3. Two Most Likely Diseases: Based on the information provided, the two most likely diseases are:

- Uterine Fibroid:** The MRI findings directly point to this diagnosis.
- Vestibular Neuronitis:** This condition can cause dizziness and vertigo, but it typically presents with nausea, vomiting, and positional changes in symptoms. The patient's description of dizziness as a "heavy-headed feeling" without object rotation and the lack of other vestibular symptoms make this less likely.

4. Best Possible Disease: = Best possible Disease: Uterine Fibroid

Reasons:

- The MRI clearly shows a large mass on the uterine wall consistent with a fibroid.
- The patient's age and the absence of other neurological or systemic symptoms are also consistent with this diagnosis.

Note: While vestibular neuronitis is still possible, the strong evidence from the imaging examination strongly favors uterine fibroids as the primary cause of her dizziness.

Key: 312

original: {'main-diagnosis': 'adenomyosis', 'differential_diagnosis': ['Functional Dysfunctional Uterine Bleeding', 'Endometrial Cancer', 'Uterine Leiomyoma', 'adenomyosis']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 44-year-old female who has been experiencing irregular vaginal bleeding for 40 days. The bleeding increased 12 days ago, accompanied by abdominal pain and dizziness. She has a history of hypertension, which is currently well controlled with medication. Physical examination revealed an enlarged cervix with polypoid hyperplasia and an enlarged uterus. Laboratory tests showed decreased hemoglobin and hematocrit, indicating anemia, and increased platelet count. Imaging examination showed an enlarged uterus with a mixed high and low signal shadow on the posterior wall and a low signal shadow on the left side of the uterine base. 2. ****Medical case Analysis**** - ****Physical examination****: The enlarged cervix with polypoid hyperplasia and an enlarged uterus could indicate a growth or tumor, such as uterine leiomyoma or endometrial cancer. - ****Laboratory examination****: The decreased hemoglobin and hematocrit indicate anemia, likely due to the prolonged vaginal bleeding. The increased platelet count could be a response to inflammation, infection, or cancer. - ****Imaging examination****: The mixed high and low signal shadow on the posterior wall of the uterus and the low signal shadow on the left side of the uterine base could indicate a growth or tumor, such as uterine leiomyoma or endometrial cancer. 3. ****Select the 2 Best Possible Diseases**** Based on the patient's symptoms, physical examination, laboratory tests, and imaging examination, the two most likely diseases are 'Uterine Leiomyoma' and 'Endometrial Cancer'. 4. ****Select the best possible disease**** The best possible disease for this patient is 'Uterine Leiomyoma'. 5. ****Format the Disease**** = ****Best possible Disease****: Uterine Leiomyoma - ****Reasons****: - The patient's symptoms of irregular vaginal bleeding, abdominal pain, and an enlarged uterus are consistent with uterine leiomyoma. - The imaging examination showed a mixed high and low signal shadow on the posterior wall of the uterus and a low signal shadow on the left side of the uterine base, which could indicate a leiomyoma. - The patient's laboratory tests showed anemia and increased platelet count, which could be due to the prolonged vaginal bleeding caused by the leiomyoma. - The patient's age (44 years old) is within the typical age range for uterine leiomyoma.

llama3.1: I'll follow the step-by-step approach to solve the medical case. ****1. Summarize the medical case.**** A 44-year-old middle-aged female patient presents with irregular vaginal bleeding for 40 days, accompanied by abdominal pain and dizziness. She has a history of hypertension and is taking Amlodipine Besylate and Metoprolol Tartrate. Physical examination reveals an enlarged cervix with Nabothian cysts, columnar epithelium ectropion, and polypoid hyperplasia. Laboratory tests show normal blood counts and biochemistry results. Imaging studies reveal an enlarged uterus with a mixed high and low signal shadow on the posterior wall, suggesting a possible tumor or growth. ****2. Medical case Analysis:**** * Physical examination: + Enlarged cervix with Nabothian cysts, columnar epithelium ectropion, and polypoid hyperplasia can be seen at the cervix. + Uterus is enlarged, but no tenderness or active bleeding is noted. * Laboratory examination: + Normal blood counts and biochemistry results. * Imaging examination: + Enlarged uterus with a mixed high and low signal shadow on the posterior wall, suggesting a possible tumor or growth. ****3. Select the 2 Best Possible Diseases:**** Based on the medical case analysis, the two most likely diseases are: 1. ****Endometrial Cancer****: The imaging studies reveal an enlarged uterus with a mixed high and low signal shadow on the posterior wall, which is suggestive of a tumor or growth. Additionally, the patient's age and symptoms (irregular vaginal bleeding) are consistent with endometrial cancer. 2. ****Uterine Leiomyoma****: The physical examination reveals an enlarged cervix with Nabothian cysts, columnar epithelium ectropion, and polypoid hyperplasia, which can be associated with uterine leiomyomas. Furthermore, the imaging studies show an enlarged uterus, which is consistent with a uterine leiomyoma. ****4. Select the best possible disease.**** After rechecking the case, I would select ****Endometrial Cancer**** as the best possible disease. ****5. Format the Disease:**** = ****Best possible Disease****: Endometrial Cancer - ****Reasons****: 1. Imaging studies reveal an enlarged uterus with a mixed high and low signal shadow on the posterior wall, suggestive of a tumor or growth. 2. Patient's age (44 years) and symptoms (irregular vaginal bleeding) are consistent with endometrial cancer. 3. No significant reduction in vaginal bleeding after oral administration of hemostatic drugs, which is unusual for functional dysfunctional uterine bleeding. Note: Uterine

leiomyoma is still a possible diagnosis, but based on the analysis, Endometrial Cancer seems to be a more likely disease.

gemma2: ## Medical Case Analysis **1. Summarize the medical case:** A 44-year-old female presents with a chief complaint of irregular vaginal bleeding lasting 40 days. The bleeding initially started as a small amount but increased 12 days ago, accompanied by abdominal pain and dizziness. Hemostatic medication provided minimal relief. She has a history of hypertension well-controlled with Amlodipine Besylate and Metoprolol Tartrate. **2. Medical Case Analysis:**
Physical Examination: Moderate amount of dark red blood and clots in the vagina suggest heavy bleeding. * Enlarged cervix with Nabothian cysts, columnar epithelium ectropion, and polypoid hyperplasia indicate potential cervical pathology. * Uterus enlarged to the size of 3 months pregnancy suggests a possible uterine mass or fibroid. **Laboratory Examination:** Hemoglobin (HGB) and Hematocrit (HCT) are low, consistent with anemia due to blood loss. * Elevated Mean Platelet Volume (MPV) and Platelet Count (PLT-I) could indicate platelet activation related to inflammation or bleeding. **Imaging Examination:** MRI reveals a mixed high and low signal shadow on the posterior wall of the uterus, suggestive of a uterine mass. * The size and location of this mass are consistent with a leiomyoma or endometrial cancer. * A separate low signal shadow on the left side of the uterine base could be a fibroid or other benign lesion. **3. Select the 2 Best Possible Diseases:** Based on the information provided, the two most likely diseases are: *
Endometrial Cancer: The prolonged and heavy bleeding, coupled with the MRI findings of a mixed high and low signal shadow in the uterus, raise suspicion for endometrial cancer. *
Uterine Leiomyoma: The enlarged uterus, presence of polypoid hyperplasia on the cervix, and the MRI finding of a mass consistent with fibroids strongly suggest uterine leiomyomas. **4. Select the best possible disease:** While both diseases are possibilities, **Endometrial Cancer** is more likely given the patient's age (44), prolonged and heavy bleeding, and the mixed signal shadow on the MRI which can be indicative of malignancy. **5. Format the Disease:** = **Best Possible Disease**:
Endometrial Cancer - **Reasons:** - Age: The patient is 44 years old, placing her within the age range where endometrial cancer risk increases significantly. - Prolonged and heavy bleeding: This is a classic symptom of endometrial cancer. - Mixed signal shadow on MRI: The presence of a mixed high and low signal shadow in the uterus on MRI suggests potential malignancy.

Key: 317

original: {'main-diagnosis': 'adenomyosis', 'differential_diagnosis': ['Functional Dysfunctional Uterine Bleeding', 'Endometrial Cancer', 'adenomyosis']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 41-year-old female who had breast cancer surgery 6 years ago. She has been experiencing unprovoked vaginal bleeding for over 4 months, which has worsened in the past 2 days. The bleeding is heavy and accompanied by abdominal discomfort, lumbar soreness, fatigue, and dizziness. She has been treated with hysteroscopy and curettage, with postoperative pathology suggesting a blood clot and proliferative endometrium. Despite treatment, the bleeding has not significantly improved. Physical examination shows hypertrophic cervix and blood flowing out from it. Laboratory tests are mostly within normal ranges, and imaging shows an irregularly enlarged uterus with no significant enhancement observed in the abnormal signal enhancement scans within the uterine cavity and cervix. 2. ****Medical case Analysis**** - ****Physical examination****: The hypertrophic cervix and blood flowing out from it suggest a problem with the uterus or cervix. - ****Laboratory examination****: The laboratory tests are mostly within normal ranges, which does not provide a clear indication of the disease. However, the normal tumor marker test results suggest that the patient may not have a malignant tumor. - ****Imaging examination****: The irregularly enlarged uterus could be a sign of a uterine disorder such as adenomyosis or endometrial cancer. 3. ****Select the 2 Best Possible Diseases**** Based on the medical case, the two most likely diseases are Functional Dysfunctional Uterine Bleeding and adenomyosis. 4. ****Select the best possible disease**** After rechecking the case, the best possible disease is Functional Dysfunctional Uterine Bleeding. 5. ****Format the Disease**** = ****Best possible Disease****: Functional Dysfunctional Uterine Bleeding - ****Reasons****: - The patient's main complaint is unprovoked, heavy vaginal bleeding, which is a key symptom of Functional Dysfunctional Uterine Bleeding. - The patient's physical examination shows a hypertrophic cervix and blood flowing out from it, which is consistent with Functional Dysfunctional Uterine Bleeding. - The patient's imaging examination shows an irregularly enlarged uterus, which can be seen in Functional Dysfunctional Uterine Bleeding. - The patient's laboratory tests are mostly within normal ranges, including the tumor marker test, suggesting that the patient may not have a malignant tumor such as endometrial cancer.

llama3.1: I'll follow the step-by-step approach to solve the medical case. ****1. Summarize the medical case:**** A 41-year-old female patient presents with unprovoked vaginal bleeding for over 4 months, worsening in the past 2 days. She had a regular menstrual cycle until after breast cancer surgery 6 years ago, when her cycle changed to 1-5 months. The patient was treated with hysteroscopy + curettage and infusion treatment but experienced poor effect. Physical examination reveals unobstructed vagina with large amounts of blood stains, hypertrophic cervix, and no contact bleeding or lift pain. Laboratory examinations show normal blood cell counts, slightly elevated hemoglobin, and normal biochemistry tests. Imaging examination shows an irregularly enlarged uterus with no significant enhancement in the uterine cavity and cervix. ****2. Medical case Analysis:**** * Physical examination: + Unobstructed vagina with large amounts of blood stains suggests heavy vaginal bleeding. + Hypertrophic cervix may indicate cervical pathology or endometrial cancer. * Laboratory examinations: + Normal blood cell counts, slightly elevated hemoglobin suggest no significant anemia or infection. + Normal biochemistry tests rule out metabolic disorders. * Imaging examination: + Irregularly enlarged uterus with no significant enhancement in the uterine cavity and cervix may indicate endometrial cancer or adenomyosis. ****3. Select the 2 Best Possible Diseases:**** Based on the medical case analysis, the two most likely diseases are: 1. ****Endometrial Cancer****: The patient's history of unprovoked vaginal bleeding for over 4 months, worsening in the past 2 days, and imaging examination showing an irregularly enlarged uterus with no significant enhancement in the uterine cavity and cervix suggest endometrial cancer. 2. ****Adenomyosis****: The patient's symptoms of heavy vaginal bleeding and imaging examination showing an irregularly enlarged uterus may also indicate adenomyosis. ****4. Select the best possible disease:**** After rechecking the case, I would choose: 1. ****Endometrial Cancer****: The patient's age (41 years), history of unprovoked vaginal bleeding for over 4 months, and imaging examination showing an irregularly enlarged uterus with no significant enhancement in the uterine cavity and cervix are more suggestive of endometrial cancer. ****5. Format the Disease:****

= **Best possible Disease**: Endometrial Cancer - **Reasons**: + Unprovoked vaginal bleeding for over 4 months, worsening in the past 2 days. + Imaging examination showing an irregularly enlarged uterus with no significant enhancement in the uterine cavity and cervix.

gemma2: ## Medical Case Analysis **1. Summary:** A 41-year-old female presents with recurrent vaginal bleeding (over 4 months) following a previous breast cancer surgery six years ago. She experienced similar bleeding episodes previously treated with hysteroscopy, curettage, and medication. The current episode is characterized by heavy flow, blood clots, abdominal discomfort, and fatigue. Her medical history includes hypothyroidism, which was addressed with treatment. **2. Medical Case Analysis:** * **Physical Examination:** * Large amounts of blood stains in the vagina suggest significant bleeding. * Hypertrophic cervix without contact bleeding or lift pain is not specific to any particular disease but could indicate inflammation or changes due to previous procedures. * **Laboratory Examination:** * Elevated white blood cell count and RDW-CV might indicate an inflammatory response or ongoing bleeding. * Elevated MPV suggests platelet activation, potentially related to the bleeding. * High uric acid levels may be unrelated to the current presentation but require further investigation. * **Imaging Examination:** * Irregularly enlarged uterus with no significant enhancement in scans suggests potential pathology within the uterine lining or structure. * Non-enhanced low signal shadows at the cervix and right adnexal region could represent fibroids, polyps, or other masses. * Small lymph node shadows near the iliac vessels warrant further evaluation for potential metastasis. **3. Select the 2 Best Possible Diseases:** Based on the information provided, the two most likely diseases are: * **Functional Dysfunctional Uterine Bleeding (FDUB):** This is a common condition characterized by irregular and heavy menstrual bleeding without an identifiable underlying cause. The patient's history of previous episodes of unprovoked vaginal bleeding, particularly after breast cancer surgery, aligns with FDUB. * **Endometrial Cancer:** While less likely than FDUB, the persistent abnormal uterine bleeding, especially after treatment, raises concern for endometrial cancer. The imaging findings of an irregularly enlarged uterus and non-enhanced shadows require further investigation to rule out malignancy. **4. Select the Best Possible Disease:** Considering the patient's history of previous episodes of heavy vaginal bleeding treated with hysteroscopy and curettage, along with the lack of specific imaging findings suggestive of endometrial cancer, **Functional Dysfunctional Uterine Bleeding (FDUB)** is the most likely diagnosis. **5. Format the Disease: = **Best possible Disease**: Functional Dysfunctional Uterine Bleeding - **Reasons**: - History of recurrent unprovoked vaginal bleeding episodes lasting over 4 months. - Previous treatment with hysteroscopy and curettage for similar symptoms. - No specific imaging findings strongly suggestive of endometrial cancer. **Important Note:** This analysis is based solely on the provided information. A definitive diagnosis can only be made by a qualified medical professional after a thorough physical examination, review of the patient's complete medical history, and potentially additional diagnostic tests.

Key: 322

original: {'main-diagnosis': 'cervical polyp', 'differential_diagnosis': ['Functional Dysfunctional Uterine Bleeding', 'Submucosal Uterine Fibroids', 'Endometrial Cancer', 'cervical polyp']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 34-year-old female who has been experiencing irregular vaginal bleeding for over a month. The bleeding is light pink in color and occasionally accompanied by lower back pain. There are no symptoms such as lower abdominal distension, bleeding after intercourse, prolonged menstruation, or increased menstrual flow. Physical examination reveals an enlarged cervix with a visible polyp of about 2.0x1.5cm. Laboratory and imaging examinations do not show any significant abnormalities. 2. ****Medical case Analysis**** The patient's symptoms of irregular vaginal bleeding and lower back pain, along with the physical examination findings of an enlarged cervix and a visible polyp, are indicative of a gynecological condition. The laboratory examinations, including routine blood test, blood biochemistry test, and tumor marker test, do not show any significant abnormalities, suggesting that the condition is likely non-malignant. The imaging examination also does not show any abnormal findings. 3. ****Select the 2 Best Possible Diseases**** Based on the patient's symptoms and examination findings, the two most likely diseases are 'Functional Dysfunctional Uterine Bleeding' and 'cervical polyp'. 4. ****Select the best possible disease**** The best possible disease for this patient is 'cervical polyp'. 5. ****Format the Disease**** = ****Best possible Disease****: Cervical Polyp - ****Reasons****: 1. The patient's main symptom is irregular vaginal bleeding, which is a common symptom of cervical polyps. 2. The physical examination revealed a visible polyp on the cervix, which is a definitive sign of a cervical polyp. 3. The laboratory and imaging examinations do not show any significant abnormalities, suggesting that the condition is likely non-malignant, which is consistent with a diagnosis of a cervical polyp.

llama3.1: I'll follow the step-by-step approach to solve the medical case. ****1. Summarize the medical case:**** A 34-year-old middle-aged female patient presents with irregular vaginal bleeding for over a month. Her past medical history reveals similar symptoms without any obvious cause about a month ago, accompanied by lower back pain. Physical examination reveals an enlarged cervix with a visible polyp (2.0x1.5cm) and no active bleeding observed. Laboratory examinations show normal blood test results, while tumor marker tests are within normal limits. Imaging examination via color Doppler ultrasound shows the uterus in a posterior position with reduced volume, uniform uterine muscular wall echo, and endometrial thickness of about 0.5cm. ****2. Medical case Analysis:**** ****Physical Examination:**** The enlarged cervix with a visible polyp is a significant finding. Polyps are growths on the surface of the cervix or uterus that can cause irregular bleeding. ****Laboratory Examinations:**** Normal blood test results and tumor marker tests within normal limits suggest no systemic disease or cancer. ****Imaging Examination:**** The color Doppler ultrasound findings indicate a normal-sized uterus with reduced volume, which may be related to the polyp. ****3. Select the 2 Best Possible Diseases:**** Based on the analysis, the two most likely diseases are: 1. ****Cervical Polyp****: Given the physical examination finding of an enlarged cervix with a visible polyp. 2. ****Functional Dysfunctional Uterine Bleeding (FUDUB)****: Considering the patient's history of irregular vaginal bleeding without any obvious cause and normal laboratory examinations. ****4. Select the best possible disease:**** After rechecking the case, I would select: ****Cervical Polyp****: The physical examination finding of an enlarged cervix with a visible polyp is a strong indicator of this condition. ****5. Format the Disease:**** = ****Best possible Disease:**** Cervical Polyp - ****Reasons:**** - Visible polyp on physical examination. - No systemic disease or cancer indicated by normal laboratory examinations and tumor marker tests. - Imaging examination findings are consistent with a cervical polyp. ****Best Possible Disease****: Cervical Polyp - ****Reasons:**** 1. Visible polyp on physical examination. 2. No systemic disease or cancer indicated by normal laboratory examinations and tumor marker tests. 3. Imaging examination findings are consistent with a cervical polyp.

gemma2: **## Medical Case Analysis** ****1. Summary:**** A 34-year-old female presents with irregular vaginal bleeding lasting over a month, described as light pink in color and occasionally accompanied by lower back pain. There are no other concerning symptoms like abdominal distension, post-coital bleeding, prolonged menstruation, or increased flow. Physical examination reveals an enlarged cervix with a polyp measuring 2.0x1.5cm, but no active bleeding or elevation

pain. Laboratory tests show slightly elevated monocyte count and platelet volume, while imaging (color Doppler ultrasound) demonstrates a reduced uterine volume and thin endometrium. **2. Medical Case Analysis:** * **Physical Examination:** The enlarged cervix with a polyp is suggestive of several conditions, including cervical polyps, endometrial hyperplasia, or even early-stage endometrial cancer. * **Laboratory Examination:** The slightly elevated monocyte count could indicate inflammation, which can be associated with various gynecological conditions. Elevated platelet volume (MPV) might suggest increased platelet activation, potentially linked to inflammatory processes or certain cancers. However, these findings are not specific enough to pinpoint a diagnosis. * **Imaging Examination:** The reduced uterine volume and thin endometrium observed on ultrasound could indicate hormonal imbalances, early stages of endometrial cancer, or other conditions affecting the uterus. **3. Two Most Likely Diseases:** Based on the presented information, the two most likely diseases are: * **Cervical Polyp:** This is a benign growth arising from the cervix, often presenting with irregular bleeding. The physical examination finding of a polyp aligns well with this diagnosis. * **Functional Dysfunctional Uterine Bleeding (FDUB):** This condition involves irregular menstrual bleeding due to hormonal imbalances or other factors affecting the uterine lining. The patient's age and history of irregular bleeding without other significant symptoms support this possibility. **4. Best Possible Disease:** Considering the physical examination finding of a polyp, **Cervical Polyp** appears to be the most likely diagnosis. **5. Formatted Disease:** = **Best possible Disease:** Cervical Polyp - **Reasons:** - Physical examination revealed a polyp on the cervix, which is a characteristic feature of cervical polyps. - The patient's symptoms (irregular bleeding) are consistent with cervical polyps. - Other potential diagnoses like endometrial cancer or FDUB require further investigation and may not be as strongly supported by the current information. **Important Note:** This analysis is based solely on the provided information. A definitive diagnosis can only be made after a thorough clinical evaluation, potentially including additional tests (e.g., biopsy of the polyp) and patient history.

Key: 327

original: {'main-diagnosis': 'cervical polyp', 'differential_diagnosis': ['Endometrial lesion', 'Cervical lesion', 'cervical polyp']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 48-year-old female who has been experiencing irregular vaginal bleeding for the past 28 days. The bleeding is similar to her usual menstrual volume and is dark red in color. She has not experienced any other symptoms such as dizziness, chest tightness, nausea, or vomiting. Physical examination revealed a polyp-like protrusion at the external orifice of the cervix. Laboratory tests showed slightly decreased lymphocyte percentage and red blood cell count, and slightly increased red cell distribution width and mean platelet volume. Imaging examination revealed a hypoechoic area in the posterior wall of the uterus and multiple anechoic areas in the cervix. 2. ****Medical case Analysis**** The physical examination revealed a polyp-like protrusion at the external orifice of the cervix, which could indicate a cervical polyp. The laboratory tests showed slightly decreased lymphocyte percentage and red blood cell count, and slightly increased red cell distribution width and mean platelet volume, which could indicate anemia due to chronic blood loss. The imaging examination revealed a hypoechoic area in the posterior wall of the uterus, which could indicate an endometrial lesion, and multiple anechoic areas in the cervix, which could indicate cervical lesions. 3. ****Select the 2 Best Possible Diseases**** Based on the medical case, the two most likely diseases are 'Cervical polyp' and 'Endometrial lesion'. 4. ****Select the best possible disease**** After rechecking the case, the best possible disease is 'Cervical polyp'. 5. ****Format the Disease**** = ****Best possible Disease****: Cervical polyp - ****Reasons****: - The patient's main complaint is irregular vaginal bleeding, which is a common symptom of cervical polyps. - The physical examination revealed a polyp-like protrusion at the external orifice of the cervix, which is a characteristic finding in cervical polyps. - The imaging examination revealed multiple anechoic areas in the cervix, which could indicate the presence of cervical polyps. - The laboratory tests showed signs of anemia, which could be due to chronic blood loss from the cervical polyps.

llama3.1: I'll solve the medical case step by step. ****1. Summarize the medical case:**** A 48-year-old middle-aged female presents with irregular vaginal bleeding for 28 days. Her past medical history includes a previous episode of vaginal bleeding without any obvious cause, which was not treated. Physical examination reveals a normal vulva and vagina but a polyp-like protrusion (0.5x1.0 cm) at the external orifice of the cervix. The uterus is in an anterior position with normal shape and size. Laboratory examinations show normal blood test results, while tumor marker tests are within normal limits. Imaging examination via color Doppler ultrasound reveals a hypoechoic area in the posterior wall of the uterus (1.0x0.9x0.9 cm) compressing the endometrium. ****2. Medical case Analysis:**** * Physical examination: * The presence of a polyp-like protrusion at the external orifice of the cervix suggests a cervical lesion. * However, the normal development and distribution of vulva and vagina, as well as the smooth mucosa without congestion and edema, make endometrial lesions less likely. * Laboratory examinations: * The normal blood test results do not provide any specific clues for the diagnosis. * Tumor marker tests are within normal limits, which makes it less likely to be a malignant tumor. * Imaging examination: * The hypoechoic area in the posterior wall of the uterus compressing the endometrium could suggest an endometrial lesion or a cervical polyp. ****3. Select the 2 Best Possible Diseases:**** Based on the analysis, the two most likely diseases are: 1. ****Cervical lesion****: The presence of a polyp-like protrusion at the external orifice of the cervix and the normal development and distribution of vulva and vagina make this a strong possibility. 2. ****Endometrial lesion****: The hypoechoic area in the posterior wall of the uterus compressing the endometrium could suggest an endometrial lesion. ****4. Select the best possible disease:**** After rechecking the case, I would choose: * ****Cervical polyp****: This is because the physical examination revealed a polyp-like protrusion at the external orifice of the cervix, which is a classic sign of a cervical polyp. The imaging examination also showed multiple anechoic areas in the cervix, one of which was about 0.5x0.5 cm, which could be consistent with a cervical polyp. ****5. Format the Disease:**** = ****Cervical Polyp****: Name of the best possible disease - ****Reasons****: List associated reasons for the above selection. Each reason should be precise, brief, and based on true facts. * The presence of a polyp-like protrusion at the external orifice of the cervix in physical examination. * Multiple anechoic areas in the cervix shown in imaging examination.

gemma2: ## Medical Case Analysis **1. Summarize the medical case:** A 48-year-old female presents with a chief complaint of irregular vaginal bleeding lasting 28 days. The bleeding volume is similar to her usual menstrual flow and described as dark red. She reports no associated symptoms like dizziness, chest tightness, nausea, or vomiting. Physical examination reveals a polyp-like protrusion at the external orifice of the cervix. Laboratory tests show slightly elevated white blood cell count, lymphocyte percentage, red blood cells, hemoglobin, and hematocrit. Imaging (color Doppler ultrasound) shows a hypoechoic area in the posterior uterine wall and multiple anechoic areas in the cervix, one corresponding to the polyp observed during physical examination. **2. Medical Case Analysis:** * **Physical Examination:** The presence of a polyp-like protrusion at the external cervical orifice strongly suggests a **cervical lesion**. * **Laboratory Examination:** While not specific to any particular disease, slightly elevated white blood cells and red blood cell parameters could indicate inflammation or an underlying condition affecting the reproductive system. * **Imaging Examination:** The ultrasound findings of a hypoechoic area in the uterine wall and multiple anechoic areas in the cervix further support the possibility of both **endometrial lesion** and **cervical lesion**. **3. Select the 2 Best Possible Diseases:** Based on the available information, the two most likely diseases are: * **Endometrial lesion:** The hypoechoic area in the uterine wall observed on ultrasound raises suspicion for an endometrial lesion. * **Cervical lesion:** The presence of a polyp-like protrusion at the cervical orifice and multiple anechoic areas in the cervix strongly suggest a cervical lesion. **4. Select the best possible disease:** Considering the prominence of the cervical polyp and its direct visualization during physical examination, along with the ultrasound findings supporting both endometrial and cervical lesions, **cervical lesion** appears to be the most likely diagnosis. **5. Format the Disease:** = **Best Possible Disease**: Cervical Lesion - **Reasons**: - A polyp-like protrusion was observed at the external orifice of the cervix during physical examination. - Ultrasound imaging revealed multiple anechoic areas in the cervix, one corresponding to the visualized polyp.

Key: 332

original: {'main-diagnosis': 'cervical cancer', 'differential_diagnosis': ['Diagnosis is definitive, no differentiation required.', 'cervical cancer']}

gpt-4: 1. ****Summarize the medical case.**** The patient is a 28-year-old female who has been diagnosed with cervical cancer for 1 year and is undergoing consolidative treatment. She was hospitalized a year ago due to amenorrhea for 40+1 weeks and cervical lesions found 1 day. She underwent a secondary cesarean section and cervical biopsy. She has also undergone radiotherapy and chemotherapy. Her physical examination shows an anemic appearance, clear consciousness, no eyelid edema, no conjunctival pallor, congestion, edema, bleeding, subconjunctival hemorrhage, red lips, no sternal tenderness. Her laboratory examination shows increased white blood cells, decreased lymphocyte percentage, increased neutrophil percentage, decreased lymphocytes absolute count, decreased red blood cells, decreased hemoglobin, decreased hematocrit, increased red cell distribution width, increased C-reactive protein, increased alanine aminotransferase, increased aspartate aminotransferase, decreased total protein, decreased albumin, increased direct bilirubin, increased alkaline phosphatase, increased lactate dehydrogenase, increased γ -glutamyltransferase, decreased prealbumin, increased glucose, decreased calcium, decreased potassium, decreased sodium, decreased chloride, decreased osmotic pressure, increased ferritin, increased free thyroxine, increased cancer antigen 125, increased squamous cell carcinoma antigen. Her imaging examination shows the uterus in an anteverted and anteflexed position, the anterior lower wall is thinner, and the anterior lip of the cervix is thinner, showing discontinuous stroma with localized high signal areas. Enlarged lymph nodes are seen in the left inguinal region. 2. ****Medical case Analysis**** The patient's physical examination shows an anemic appearance, which could be due to the decreased red blood cells, decreased hemoglobin, and decreased hematocrit found in the laboratory examination. The increased white blood cells, decreased lymphocyte percentage, increased neutrophil percentage, and increased C-reactive protein indicate an ongoing inflammatory or infectious process. The increased alanine aminotransferase, increased aspartate aminotransferase, increased direct bilirubin, increased alkaline phosphatase, increased lactate dehydrogenase, and increased γ -glutamyltransferase suggest liver damage or disease. The decreased total protein, decreased albumin, and decreased prealbumin could be due to malnutrition or liver disease. The increased ferritin, increased free thyroxine, increased cancer antigen 125, and increased squamous cell carcinoma antigen are indicative of cancer, specifically cervical cancer. The imaging examination shows abnormalities in the uterus and cervix, which are consistent with cervical cancer. 3. ****Select the 2 Best Possible Diseases**** Based on the medical case, the two most likely diseases are: - Cervical cancer - Diagnosis is definitive, no differentiation required. 4. ****Select the best possible disease**** After rechecking the case, the best possible disease is cervical cancer. 5. ****Format the Disease**** = ****Best possible Disease****: Cervical cancer - ****Reasons****: The patient has a history of cervical cancer and is currently undergoing treatment. The laboratory examination shows increased cancer antigen 125 and increased squamous cell carcinoma antigen, which are indicative of cervical cancer. The imaging examination shows abnormalities in the uterus and cervix, which are consistent with cervical cancer.

llama3.1: I'll follow the step-by-step approach to solve the medical case. ****Step 1: Summarize the medical case**** The patient is a 28-year-old young female who was hospitalized 1 year ago due to amenorrhea for 40+1 weeks and cervical lesions. She underwent secondary cesarean section + cervical biopsy, followed by radiotherapy and chemotherapy. The patient has been consolidative treatment for cervical cancer for the past year. ****Step 2: Medical case Analysis**** Physical examination: * Clear consciousness, anemic appearance (suggesting possible anemia or malnutrition) * No significant abnormalities in lung, heart, abdomen, or lower limbs Laboratory examination: * Anemia (HGB 62 g/L, HCT 19.5%) * Elevated CRP (87.06 mg/L), indicating inflammation * Normal WBC count but slightly elevated neutrophil percentage * Abnormal liver function tests (ALT 50 U/L, AST 85 U/L) * Elevated LDH and GGT levels Imaging examination: * Plain MRI scan shows: + Thinner anterior lower wall of the uterus and anterior lip of the cervix with localized high signal areas + Free fluid in the pelvic cavity + Enlarged lymph nodes in the left inguinal region ****Step 3: Select the 2 Best Possible Diseases**** Based on the medical case

analysis, the two most likely diseases are: 1. **Cervical cancer**: The patient's history of cervical lesions and consolidative treatment for cervical cancer for the past year makes this a strong possibility. 2. **Anemia and malnutrition**: The patient's anemic appearance, low HGB and HCT levels, and elevated CRP suggest possible anemia or malnutrition. **Step 4: Select the best possible disease** After rechecking the case, I would select: 1. **Cervical cancer**: The patient's history of cervical lesions and consolidative treatment for cervical cancer for the past year makes this a strong possibility. 2. **Anemia and malnutrition**: While anemia and malnutrition are possible, they do not directly relate to the patient's primary complaint of cervical cancer. **Step 5: Format the Disease** = **Best possible Disease**: Cervical cancer - **Reasons**: + History of cervical lesions and consolidative treatment for cervical cancer. + Anemic appearance and low HGB/HCT levels, which could be related to the cancer or its treatment. + Elevated CRP indicating inflammation, possibly due to cancer or its treatment.

gemma2: **Medical Case Analysis** **1. Summary**: A 28-year-old female patient presents with a history of cervical cancer diagnosed one year ago. She underwent secondary cesarean section, cervical biopsy, radiotherapy, and chemotherapy. Her current presentation includes anemia, elevated inflammatory markers (CRP), and abnormal liver function tests (ALT, AST, ALP, GGT). Imaging reveals thinning of the uterine wall, discontinuous stroma, high signal areas in the cervix, free fluid in the pelvic cavity, and enlarged lymph nodes in the left inguinal region. Tumor markers like CA125 are elevated. **2. Medical Case Analysis**: **Physical Examination**: Anemic appearance suggests blood loss, potentially related to previous treatment or ongoing disease. **Laboratory Examination**: Elevated WBCs, neutrophils, and lymphocytes indicate an active inflammatory response. Anemia (low RBC, HGB, HCT) is consistent with blood loss or bone marrow suppression from chemotherapy. Elevated CRP confirms inflammation. Abnormal liver function tests (ALT, AST, ALP, GGT) could be due to chemotherapy toxicity or metastatic involvement of the liver. Elevated Ferritin suggests ongoing inflammation and/or iron overload. **Imaging Examination**: MRI findings show thinning of the uterine wall and cervix with high signal areas, suggestive of residual or recurrent tumor. Free fluid in the pelvic cavity indicates possible bleeding or rupture. Enlarged lymph nodes in the left inguinal region suggest potential metastasis. **Tumor Marker Test**: Elevated CA125 is a strong indicator of ovarian cancer but can also be elevated in other gynecological malignancies like endometriosis and uterine fibroids. **3. Select the 2 Best Possible Diseases**: 1. **Cervical Cancer Recurrence**: The patient's history, imaging findings (thinning of uterine wall, high signal areas), and elevated CA125 strongly suggest a recurrence of cervical cancer. 2. **Metastatic Gynecological Cancer**: The presence of free fluid in the pelvic cavity, enlarged lymph nodes, and abnormal liver function tests raise the possibility of metastatic gynecological cancer, potentially originating from the cervix or other sites like the ovaries. **4. Select the Best Possible Disease**: Based on the patient's history and the imaging findings, **Cervical Cancer Recurrence** is the most likely diagnosis. **= Best possible Disease**: Cervical Cancer Recurrence - **Reasons**: - The patient has a prior history of cervical cancer diagnosed one year ago. - Imaging reveals thinning of the uterine wall and cervix with high signal areas consistent with residual or recurrent tumor. - Elevated CA125, while not specific to cervical cancer, is suggestive of gynecological malignancy.

Key: 337

original: {'main-diagnosis': 'cervical cancer', 'differential_diagnosis': ['Lower limb arterial occlusion', 'Primary insufficiency of the lower limb deep vein valve', 'Deep vein thrombosis', 'cervical cancer']}

gpt-4: 1. **Summarize the medical case.** The patient is a 44-year-old female who has been experiencing swelling in her right lower limb for over 20 days. The swelling worsens after prolonged standing or walking and can be relieved by elevating the limb. There is no edema in the left lower limb and face, no movement disorder or pain, and the local skin is not thickened, with no surface ulcers. The patient was previously healthy. The physical examination of the vagina and pelvis is normal. The laboratory examination shows slightly elevated monocyte count and platelet count, and slightly decreased red blood cell count, hemoglobin, hematocrit, mean corpuscular volume, and mean corpuscular hemoglobin. The blood biochemistry test shows slightly elevated uric acid and high-density lipoprotein cholesterol, and slightly decreased iron. The tumor marker test shows slightly elevated squamous cell carcinoma antigen. The imaging examination shows a mass in the cervical region. 2. **Medical case Analysis** The swelling in the right lower limb could be due to a problem with the veins or arteries in the limb. The laboratory examination results do not show any significant abnormalities that could suggest a systemic disease. The slightly elevated monocyte count and platelet count could be due to an inflammatory response. The slightly decreased red blood cell count, hemoglobin, hematocrit, mean corpuscular volume, and mean corpuscular hemoglobin could suggest mild anemia. The slightly elevated uric acid could suggest a metabolic disorder. The slightly elevated squamous cell carcinoma antigen could suggest a malignancy. The mass in the cervical region could be a tumor. 3. **Select the 2 Best Possible Diseases** Based on the medical case, the two most likely diseases are 'Deep vein thrombosis' and 'cervical cancer'. 4. **Select the best possible disease** The best possible disease is 'Deep vein thrombosis'. 5. **Format the Disease** = **Best possible Disease**: Deep vein thrombosis - **Reasons**: - The patient's main complaint is swelling in the right lower limb, which is a common symptom of deep vein thrombosis. - The swelling worsens after prolonged standing or walking and can be relieved by elevating the limb, which is consistent with the symptoms of deep vein thrombosis. - The laboratory examination results do not show any significant abnormalities that could suggest a systemic disease, which makes deep vein thrombosis more likely than a systemic disease. - The imaging examination does not show any abnormalities in the lower limb, which could suggest that the swelling is due to a problem with the veins in the limb.

llama3.1: I'll follow the step-by-step approach to solve the medical case. **1. Summarize the medical case.** A 44-year-old middle-aged female patient presents with swelling in her right lower limb for over 20 days. The swelling worsens after prolonged standing or walking and can be completely relieved by elevating the affected limb. There is no edema in the left lower limb, face, or other areas. Physical examination reveals normal vaginal and pelvic findings. Laboratory tests show normal blood counts, biochemistry, and tumor markers. Imaging studies reveal a mass with unclear edges in the cervical region on MRI. **2. Medical case Analysis.** * The patient's symptoms of swelling in one lower limb that worsens after prolonged standing or walking suggest a possible venous issue. * The laboratory tests show normal blood counts, biochemistry, and tumor markers, which makes it less likely for conditions like cancer to be the primary cause. * The imaging study shows a mass in the cervical region, but its unclear edges and lack of lymph node enlargement make it difficult to diagnose as cancer. * The presence of a mass in the cervical region could also suggest other gynecological conditions. **3. Select the 2 Best Possible Diseases.** Based on the analysis, the two most likely diseases are: 1. **Primary insufficiency of the lower limb deep vein valve**: This condition is characterized by chronic venous insufficiency, which can cause swelling in one lower limb that worsens after prolonged standing or walking. 2. **Deep vein thrombosis (DVT)**: Although DVT typically presents with acute symptoms, it's possible for a patient to have a chronic DVT that doesn't show significant changes on imaging studies. **4. Select the best possible disease.** After rechecking the case, I think the best possible disease is: * **Primary insufficiency of the lower limb deep vein valve**: This condition is more likely given the patient's symptoms and laboratory results. The presence of a mass in the cervical region might be unrelated to the primary complaint. **5. Format the Disease.** = **Best possible Disease**: Primary insufficiency of the

lower limb deep vein valve - **Reasons**: - Swelling in one lower limb that worsens after prolonged standing or walking. - Normal laboratory results, making cancer less likely. - Presence of a mass in the cervical region might be unrelated to the primary complaint.

gemma2: ## Medical Case Analysis **1. Summary:** A 44-year-old female presents with a 20-day history of pitting edema in her right lower limb. The swelling worsens after prolonged standing or walking and partially resolves with elevation. There is no pain, redness, or ulceration. Physical examination reveals no abnormalities in the pelvis or vagina. Laboratory tests show mild anemia and elevated uric acid levels. Imaging shows a mass in the cervical region with unclear edges and early uneven enhancement. **2. Medical Case Analysis:** **Physical Examination:** **Lower Limb Swelling:** Suggestive of venous insufficiency, deep vein thrombosis (DVT), or arterial occlusion. **No Pain/Redness/Ulceration:** Less suggestive of DVT or arterial occlusion, but could be present in chronic venous insufficiency. **Laboratory Examination:** **Mild Anemia:** Could be related to various conditions, including iron deficiency (not ruled out by the provided data). **Elevated Uric Acid:** Suggests potential gout, but not directly related to the lower limb swelling. **Imaging Examination:** **Cervical Mass:** Strongly suggestive of cervical cancer. The mass's characteristics (uneven enhancement) are concerning. This finding significantly alters the differential diagnosis. **3. Two Most Likely Diseases:** 1. **Cervical Cancer:** The imaging findings strongly suggest this as a primary concern. 2. **Primary Insufficiency of the Lower Limb Deep Vein Valve:** The swelling in the lower limb, worsening with activity and improving with elevation, is consistent with venous insufficiency. **4. Best Possible Disease:** = **Cervical Cancer**: - The imaging findings clearly show a suspicious mass in the cervix with characteristics suggestive of malignancy. This takes precedence over the lower limb swelling which could be secondary to other factors or unrelated. Let me know if you have any further questions.

Key: 342

original: {'main-diagnosis': 'heterotopic pregnancy', 'differential_diagnosis': ['Miscarriage', 'Acute salpingitis', 'Acute appendicitis', 'Corpus luteum rupture', 'Ovarian cyst torsion', 'heterotopic pregnancy']}

gpt-4: 1. **Summarize the medical case.** The patient is a 20-year-old female with a history of irregular menstruation. She has been experiencing amenorrhea for 2 months and vaginal bleeding for 10 days. The bleeding has increased in the past 8 hours, and she has been experiencing right lower abdominal pain and distension, as well as frequent urination. Physical examination reveals tenderness in the right accessory area and active bleeding from the cervix. Laboratory tests show normal blood counts and biochemistry, but elevated levels of human chorionic gonadotropin (β -HCG). Ultrasound reveals a mixed echo in the right adnexal area. 2. **Medical case Analysis** The patient's symptoms of amenorrhea, vaginal bleeding, and abdominal pain, along with the elevated β -HCG levels, suggest a gynecological issue. The ultrasound findings of a mixed echo in the right adnexal area could indicate a mass or cyst. The tenderness in the right accessory area could be due to inflammation or rupture of a structure in this area. 3. **Select the 2 Best Possible Diseases** Based on the patient's symptoms, laboratory findings, and ultrasound results, the two most likely diseases are 'Corpus luteum rupture' and 'heterotopic pregnancy'. 4. **Select the best possible disease** After reevaluating the case, the best possible disease is 'heterotopic pregnancy'. 5. **Format the Disease** = **Best possible Disease**: Heterotopic Pregnancy - **Reasons**: 1. The patient's symptoms of amenorrhea and vaginal bleeding are consistent with a pregnancy-related issue. 2. The elevated β -HCG levels further suggest a pregnancy, but the levels are lower than expected for a normal pregnancy at this stage, which could indicate an abnormal pregnancy. 3. The ultrasound findings of a mixed echo in the right adnexal area could indicate an ectopic pregnancy, where the embryo implants outside the uterus. In a heterotopic pregnancy, there is a simultaneous intrauterine and ectopic pregnancy, which could explain the patient's symptoms and findings.

llama3.1: I'll follow the step-by-step approach to solve the medical case. **1. Summarize the medical case.** A 20-year-old young female patient presents with amenorrhea (absence of menstruation) for 2 months and vaginal bleeding for 10 days, accompanied by right lower abdominal pain and lumbar acid. The bleeding increased in intensity 8 hours prior to presentation, with a significant amount of blood loss. Physical examination reveals tenderness in the right adnexal area. Laboratory tests show normal blood counts and biochemistry results. Human chorionic gonadotropin (hCG) levels are elevated at 785.09 mIU/mL. Color Doppler ultrasound imaging shows a mixed echo in the right adnexal area with clear boundaries, but no obvious blood flow signal. **2. Medical case Analysis:** * Physical examination: + Tenderness in the right adnexal area suggests an issue related to the ovaries or fallopian tubes. + Vaginal bleeding and amenorrhea indicate a possible hormonal imbalance or pregnancy-related condition. * Laboratory tests: + Normal blood counts and biochemistry results suggest no acute infection or metabolic disorder. + Elevated hCG levels are consistent with pregnancy, but the ultrasound findings do not confirm a normal intrauterine pregnancy. * Imaging examination: + The mixed echo in the right adnexal area could indicate an ovarian cyst or other adnexal pathology. **3. Select the 2 Best Possible Diseases:** Based on the analysis, the two most likely diseases are: 1. **Heterotopic Pregnancy**: Elevated hCG levels and vaginal bleeding suggest a possible pregnancy-related condition. However, the ultrasound findings do not confirm a normal intrauterine pregnancy. 2. **Ovarian Cyst Torsion**: The mixed echo in the right adnexal area and tenderness in that region suggest an ovarian cyst or other adnexal pathology. **4. Select the best possible disease:** After rechecking the case, I would choose: * **Heterotopic Pregnancy**: This condition is more likely given the elevated hCG levels and vaginal bleeding. The ultrasound findings may not confirm a normal intrauterine pregnancy, but they do suggest an adnexal pathology that could be related to heterotopic pregnancy. **5. Format the Disease:** = **Best possible Disease**: Heterotopic Pregnancy - **Reasons**: + Elevated hCG levels (785.09 mIU/mL) are consistent with pregnancy. + Vaginal bleeding and amenorrhea suggest a possible hormonal imbalance or pregnancy-related condition. + Ultrasound findings do not confirm a normal intrauterine pregnancy, but they do indicate an adnexal pathology that could be related to heterotopic pregnancy.

gemma2: ## Medical Case Analysis **1. Summary:** A 20-year-old female presents with amenorrhea for 2 months followed by vaginal bleeding for 10 days, less than her usual volume, accompanied by right lower abdominal pain and lumbar acid. She reports an increase in bleeding 8 hours prior to examination, along with increased right lower abdominal distension, frequent urination, and urgency. Her physical exam reveals tenderness in the right adnexal area and active bleeding from the cervix. **2. Medical Case Analysis:** **Physical Examination:** **Vaginal Bleeding:** Suggests a possible menstrual disorder or gynecological issue. **Right Lower Abdominal Pain & Distension:** Points towards pelvic pathology, potentially affecting the ovaries or fallopian tubes. **Cervical Tenderness & Active Bleeding:** Indicates potential inflammation or irritation in the cervix, possibly due to infection or other conditions. **Laboratory Examination:** **Elevated WBCs:** Suggests an inflammatory response, consistent with infection or other acute conditions. **Normal Blood Chemistry:** No significant abnormalities that directly point towards a specific diagnosis. **hCG Test:** Elevated hCG levels are suggestive of pregnancy. **Imaging Examination:** **Color Doppler Ultrasound:** A mixed echo in the right adnexal area with no obvious blood flow suggests a possible ovarian cyst or other mass. **3. Two Most Likely Diseases:** 1. **Corpus Luteum Rupture:** This condition can cause sudden, sharp pain in the lower abdomen, vaginal bleeding, and elevated hCG levels. The ultrasound findings of a mixed echo in the right adnexal area could be consistent with a ruptured corpus luteum. 2. **Acute Salpingitis (Pelvic Inflammatory Disease):** This infection of the fallopian tubes can cause abdominal pain, fever, vaginal discharge, and cervical tenderness. Elevated WBCs support this possibility. **4. Best Possible Disease:** = **Corpus Luteum Rupture:** - The patient's history of irregular menstruation and recent vaginal bleeding aligns with a possible corpus luteum rupture. - The elevated hCG levels strongly suggest pregnancy, making corpus luteum rupture a more likely diagnosis than acute salpingitis. - While the ultrasound findings could be consistent with both conditions, the combination of symptoms and laboratory results points more towards a ruptured corpus luteum. **Important Note:** This analysis is based on the provided information and should not be considered a definitive diagnosis. A thorough clinical evaluation by a qualified healthcare professional is essential for accurate diagnosis and treatment.

Key: 347

original: {'main-diagnosis': 'heterotopic pregnancy', 'differential_diagnosis': ['Corpus Luteum Rupture', 'Appendicitis', 'Ovarian Tumor Torsion', 'heterotopic pregnancy']}

gpt-4: 1. **Summarize the medical case.** The patient is a 29-year-old female who has been experiencing amenorrhea for 62 days and intermittent abdominal pain for 7 days, which has worsened over the past day. She tested positive for a urinary pregnancy test 12 days ago. She has no history of vaginal bleeding, dizziness, headache, fatigue, nausea, vomiting, frequent urination, urgency, dysuria, or difficulty in urination. Physical examination reveals normal vulva, vagina, and cervix, but tenderness in the uterine body and bilateral adnexa. Laboratory tests show elevated white blood cells and neutrophils, indicating possible infection or inflammation. The human chorionic gonadotropin test is positive, confirming pregnancy. The ultrasound shows a heterogeneous mixed echo in the left adnexal area and free no echo in the abdominal cavity, indicating possible fluid or blood. 2. **Medical case Analysis** - **Physical examination**: The tenderness in the uterine body and bilateral adnexa suggests a gynecological issue, possibly related to the pregnancy. - **Laboratory examination**: The elevated white blood cells and neutrophils suggest an infection or inflammation. The positive human chorionic gonadotropin test confirms pregnancy. - **Imaging examination**: The ultrasound findings of a heterogeneous mixed echo in the left adnexal area and free no echo in the abdominal cavity suggest the presence of fluid or blood, which could be due to a ruptured structure or internal bleeding. 3. **Select the 2 Best Possible Diseases** Based on the medical case, the two most likely diseases are 'Corpus Luteum Rupture' and 'heterotopic pregnancy'. 4. **Select the best possible disease** The best possible disease in this case is 'Corpus Luteum Rupture'. 5. **Format the Disease** = **Best possible Disease**: Corpus Luteum Rupture - **Reasons**: - The patient's symptoms of severe abdominal pain and amenorrhea are consistent with a corpus luteum rupture. - The positive pregnancy test suggests that the corpus luteum was present and could have ruptured. - The elevated white blood cells and neutrophils in the blood test suggest an inflammatory response, which could be due to a ruptured corpus luteum. - The ultrasound findings of a heterogeneous mixed echo in the left adnexal area and free no echo in the abdominal cavity suggest the presence of fluid or blood, which could be due to a ruptured corpus luteum.

llama3.1: Here's the step-by-step solution to the medical case: **1. Summarize the medical case:** A 29-year-old female patient presents with amenorrhea (absence of menstruation) for 62 days, intermittent abdominal pain for 7 days that worsened over the past day. She had tested positive for a urinary pregnancy test 12 days ago. Physical examination revealed bilateral adnexal tenderness and a tender uterus. Laboratory tests showed normal blood counts but slightly elevated liver enzymes. Imaging studies (color Doppler ultrasound) revealed a heterogeneous mixed echo in the left adnexal area with no obvious abnormal echo in the right adnexa. **2. Medical case Analysis:** **Physical Examination:** The patient's physical examination is significant for bilateral adnexal tenderness and a tender uterus, which suggests an issue related to the ovaries or fallopian tubes. **Laboratory Examination:** The laboratory results are relatively normal, with no indication of infection or other systemic issues. However, the slightly elevated liver enzymes could be indicative of a stress response or mild liver involvement. **Imaging Examination:** The color Doppler ultrasound findings of a heterogeneous mixed echo in the left adnexal area suggest a possible ovarian issue, such as an ovarian tumor or torsion. **3. Select the 2 Best Possible Diseases:** Based on the analysis above, the two most likely diseases are: **Ovarian Tumor Torsion:** The patient's symptoms of abdominal pain and tenderness in the adnexal area, combined with the imaging findings of a heterogeneous mixed echo in the left adnexa, suggest an ovarian issue. Ovarian torsion is a possible diagnosis given the acute onset of pain. **Appendicitis:** Although less likely than ovarian torsion, appendicitis cannot be ruled out entirely due to the patient's abdominal pain and tenderness. **4. Select the best possible disease:** After rechecking the case, I would select: **Ovarian Tumor Torsion** The imaging findings of a heterogeneous mixed echo in the left adnexal area are more suggestive of an ovarian issue than appendicitis. The patient's symptoms and physical examination also support this diagnosis. **5. Format the Disease:** = **Best possible Disease:** Ovarian Tumor Torsion - **Reasons:** - Imaging findings of a heterogeneous mixed echo in the left adnexal area. - Patient's symptoms of

abdominal pain and tenderness in the adnexal area. - Physical examination revealed bilateral adnexal tenderness.

gemma2: ## Medical Case Analysis **1. Summary:** A 29-year-old female presents with amenorrhea for 62 days, intermittent abdominal pain for 7 days worsening over the past day. She experienced severe, unbearable pain lasting 3 hours accompanied by cold sweats. There was no vaginal bleeding, dizziness, headache, fatigue, nausea, vomiting, frequent urination, urgency, dysuria, or difficulty in urination. Symptoms eased after rest. Her pregnancy test was positive 12 days ago. Physical examination reveals tenderness on palpation of the uterus and adnexa. Laboratory tests show elevated white blood cell count with neutrophilia. Ultrasound shows a heterogeneous mixed echo in the left adnexal area and free fluid in the abdominal cavity. **2. Medical Case Analysis:** * **Physical Examination:** * **Amenorrhea & Abdominal Pain:** Suggestive of various gynecological conditions, including pregnancy complications or ovarian issues. * **Tenderness on Palpation:** Points towards inflammation or irritation within the pelvic organs, potentially ovaries or fallopian tubes. * **Laboratory Examination:** * **Elevated WBC with Neutrophilia:** Indicates an inflammatory response, which could be due to infection, rupture, or torsion of an ovarian structure. * **Imaging Examination (Ultrasound):** * **Heterogeneous Mixed Echo in Left Adnexa:** Highly suggestive of a complex ovarian cyst or tumor. * **Free Fluid in Abdominal Cavity:** Indicates potential rupture or bleeding within the pelvic cavity. **3. Two Most Likely Diseases:** 1. **Ovarian Tumor Torsion:** The combination of abdominal pain, adnexal tenderness, and ultrasound findings (heterogeneous mass with free fluid) strongly suggest ovarian torsion. This condition involves twisting of the ovary's blood supply, leading to severe pain and potential tissue death. 2. **Corpus Luteum Rupture:** While less likely than torsion due to the severity and duration of pain, a ruptured corpus luteum can cause significant abdominal pain and bleeding into the peritoneal cavity (free fluid). **4. Best Possible Disease:** = **Ovarian Tumor Torsion:** - The patient's history of intermittent abdominal pain worsening over several days, culminating in severe, unbearable pain with cold sweats, aligns more closely with the typical presentation of ovarian torsion. - The ultrasound findings of a heterogeneous mass in the left adnexa and free fluid further support this diagnosis. **5. Additional Considerations:** * A prompt surgical evaluation is crucial to assess the viability of the ovary and prevent long-term complications.