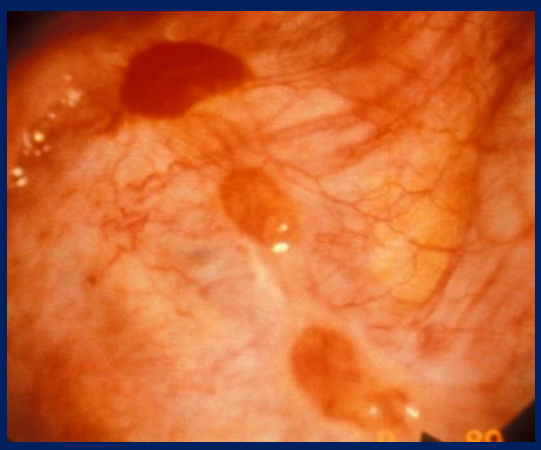
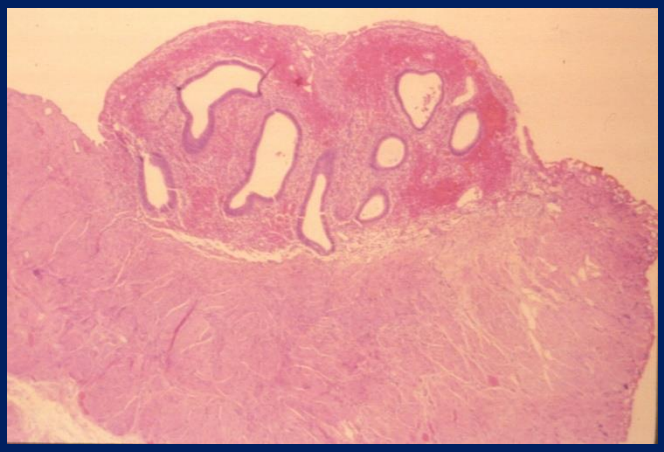
Subtle Appearance of Endometriosis





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Subtle Appearance of Endometriosis

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An update may be available at
www.danmartinmd.com/files/lae1991.pdf

Subtle Appearance of Endometriosis was originally published as a set of text and image slides in 1991.

This web revision incorporates low resolution sides into the manuscript to link to higher resolution images in the cloud.. Click the image for the higher resolution image.

Additional Resources:
1988 Slide Set images at www.danmartinmd.com/files/lae1988.pdf
1990 Color Atlas at: www.danmartinmd.com/files/coloratlas1990.pdf
Downloads at: http://www.danmartinmd.com/sitemap.html

Notice: Our knowledge in clinical sciences is constantly changing. As new information becomes available, changes in treatment and surgery become necessary. The author and the publisher of this volume have taken care to make certain that the standards of diagnosis are correct and compatible with the standards generally accepted at the time of publication.

The reader is advised to carefully examine new information as it is available. The reader is also advised to consider that diagnosis, therapy and management of endometriosis are separate concepts. Techniques discussed in this publication may have been modified or abandoned by the time of publication.

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1. **Subtle Appearance of Endometriosis**

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This presentation on the subtle appearances of endometriosis is edited by Dr. Dan Martin from material covered in the "*Laparoscopic Appearances of Endometriosis*," 1988 and "*Laparoscopic Appearances of Endometriosis, Color Atlas*," 1990 at:
www.danmartinmd.com/files/lae1988.pdf
www.danmartinmd.com/files/coloratlas1990.pdf

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From Martin DC, Subtle Appearance of Endometriosis
The Resurge Press, Richmond

3. **Purpose**
   - **Demonstrate Diagnostic Difficulties**
   - **Emphasize Tissue Confirmation**
   - **Prepare for Board**

The purposes of this presentation include demonstrating that endometriosis can be difficult if not impossible to detect in all cases, to show how biopsy and excision of lesions aids in patient care, and to prepare for board examination.

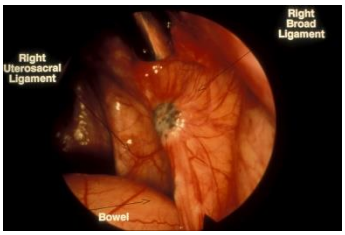
4. *The original slide set included a pretest and a posttest. Those are not available in this version.*

5. **Dark Scarred Lesions**
   - **Easy to See**
   - **Easy to Document**
   - **Common at Age 31**

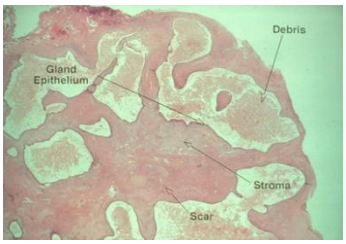
Dark scarred lesions are the easiest to see due to the dark color of degenerating red cells and phagocytic macrophages with red cell ingestion and residual hemosiderin. Necrotic debris is

surrounded by varying degrees of glands and stroma. Biopsies of the darker areas will frequently cut across the glands and stroma that surround them. This is contrasted to the white fibromuscular scar. The mean age of women with this type lesion only is 31.9 years (Redwine Fertil Steril 48:1062, 1987)

6. This scarred black lesion of 0.6 cm in diameter is seen in the right broad ligament near the right ureter. The dark color is from degenerating red cells and phagocytic macrophages with red cell ingestion and residual hemosiderin. The white matrix is fibrous scar with muscular metaplasia. Several white satellite lesions are throughout the broad ligament. The broad ligament was incised above the lesion and lateral to the ureter and then retroperitoneal dissection used to move the lesion away from the ureter and then resect it



7. This section demonstrates the histologic characteristics of the scarred black lesion. The dilated glands contain red cell debris and phagocytic macrophages with ingested red cells and hemosiderin. These are surrounded by glandular epithelium and endometrial stroma. Intermixed through this is a fibromuscular scar (myofibroblastic cicatrix).



8. **Appearance**
   - **Hemorrhagic Cyst**
   - **Chocolate Cyst**
   - **Adenomyomata**
   - **Adhesions**
   - **Pockets**
   - **Purple Raspberries**
   - **Red Raspberries**
   - **Blueberries**
   - **Blebs**
   - **Cancer**

   John Sampson: 1921, 1924, 1927

However, black and scarred lesions are not the only phenotypes. John Sampson published a series of articles between 1921 and 1927 which described a multitude of appearances associated with endometriosis. These included hemorrhagic cyst, chocolate cyst, adenomyomata, adhesions, pockets, purple raspberries, red raspberries, blueberries and blebs. Cancer was found associated with endometriosis.

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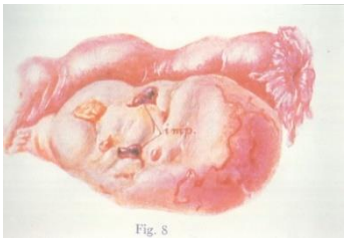
9. Sampson published many of his appearances in color. This plate from 1924 appears to have both dark lesions which have been labeled as endometriosis and more subtle lesions adjacent to them. (With permission Surgery, Gynecology and Obstetrics)



10. **Appearance**
    - **Colorless, Amenorrheic Lesion**
    - **Experience Creates Uncertainty**

    Fallon J, et al: Rhode Island Med J 18:15, 1950

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The difficulties associated with a diagnosis of subtle appearances of endometriosis were published in 1950 by John Fallon. He described the clear colorless implants as amenorrheic lesions. He did not feel it was reasonable to call any given lesion incidental or quiescent.

11. **Appearance**
    - **Water Blister**
    - **Scarred Blue-Domed Cyst**
    - **Ten Year Progression**

    Karnaky KJ: Arizona Med January:37, 1969

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Karl Karnaky described a progression of appearances from water blister appearing lesions to a scarred blue-domed cyst over 10 years. This change may be due to progression in all patients, to random observation in different patient groups or to factors to be discovered in future research. In any of these situations, different lesion types can be predicted at varying ages. However, other studies demonstrate there is significant overlap and age is not the only factor in the appearance.

12. *The original slide set included a test on recognition. That is not available in this version*

13. **Limits of Resolution**
    - **40 µ Carbon Particles**
    - **Red Blood Cells**

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Near-contact and contact endoscopy have greater resolution than the naked eye. Forty-micron carbon particles can be seen with a laparoscope and red blood cells circulating through the vascular fields have been seen using a near-contact hysteroscope.

14. **Limits of Detection**
    - **400 µ Red Endometriotic Lesion**
    - **180 µ Clear Endometriotic Lesion**
    - **120 µ Endometriotic Lesion Not Detected**

    Stripling MC, et al: J Reprod Med 33:879, 1988
    Martin DC, et al: Fertil Steril 51:63, 1989
    Redwine DB, et al: Fertil Steril 54:648, 1990

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However, the increased limits of resolution of tissue specimens of high contrast, such as carbon, does not mean that all

endometriosis can be recognized. At present, red lesions as small as 400-micron and clear lesions as small as 180-microns have been recognized and documented. On the other hand, 120-micron lesions have been found on histology in specimens which appeared to be normal using near-contact laparoscopy.

15. **Detection**
    - **History**
    - **Clinical Exam**
    - **Operative Visualization**
    - **Operative Palpation**

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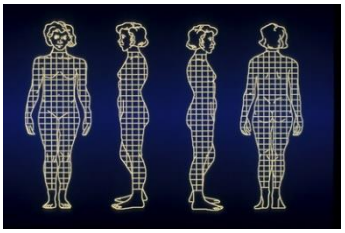
Detection of lesions requires a combination of history, examination, visualization and palpation. Patients' histories can frequently lead to areas of the pelvis where endometriosis can be anticipated. Focal tenderness on pelvic exam often represents scarred lesions of endometriosis or adhesions from infection or surgery. At laparoscopy or laparotomy, visualization is the first approach to finding the majority of endometriotic lesions. However, palpation may be needed for deep lesions, bowel lesions, mesenteric lesions and lesions at the mesenteric margin of the appendix.

16. Patients can use body mapping at home to help guide the clinical and operative examination. In addition, similar mapping can be used by the physician in the office. These office maps can be carried to surgery as a guide to these areas of focal tenderness. (From Arnold Kresch, MD)



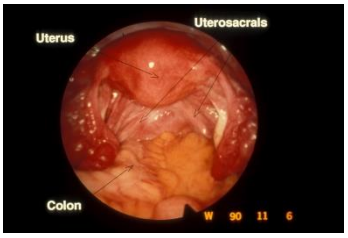
17. **Focal Tenderness**
    - **One Finger Gynecologist**
    - **Pelvic Adhesions**
    - **Fibrosis**
    - **Endometriosis**

Stovall TG, et al: J Reprod Med 34:345, 1989
Ripps BA, et al: J Reprod Med 36:470, 1991

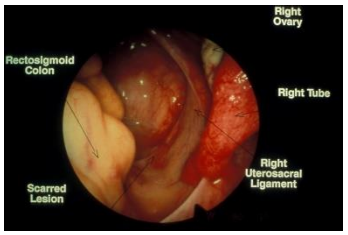
TEXT SLIDE IS USED HERE

Mapping the pelvis on clinical examination has aided in finding lesions at laparoscopy and at laparotomy. This adds to the standard bimanual and rectovaginal exam by using a preliminary exam with one finger only. This "one finger gynecologist" approach emphasizes charting of focal findings in exam of the bladder, round ligaments, adnexa, broad ligaments, uterosacrals, mid cul-de-sac, deep cul-de-sac, rectum, perirectal spaces, boney pelvis and pelvic floor.

18. This is a panoramic view of the pelvis in a patient who has deep right uterosacral tenderness near the sacrum. Although this view of the pelvis appears to be adequate for many purposes, it demonstrates only the upper halves of the uterosacral ligaments and the Pouch of Douglas (posterior cul-de-sac), but the sigmoid colon covers the rectum.



19. With the patient tilted to the left and using three punctures, the bowel has been pulled to the left so that the sacral margin of the uterosacral ligament is seen. The 1 cm lesion that had been palpated in the office is seen between the uterosacral ligament and rectum anterior to the sacrum.



20. **Laparoscopic Techniques**
    - **Near Contact Laparoscopy**
    - **Double Puncture**
    - **Videoendoscopy**
    - **Direct Visualization**
    - **Palpation**

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Near contact laparoscopy has a better chance of seeing small lesions than distant viewing. Double puncture techniques may be needed to lift the ovaries to visualize the broad ligament, to move the sigmoid colon away from the posterior pelvic brim above the sacrum and to move the bowel off the appendix. Videoendoscopy appears to be best at viewing the upper abdomen and the anterior peritoneal compartments. In addition, videoendoscopy makes difficult mobilization easier on the operator. Although some newer camera systems have resolution and detection that may approach or exceed direct visualization, this may not be true for older camera systems. Furthermore, palpation is still needed for certain lesions. Large lesions in the bowel, bowel mesenteric lesions and many appendiceal lesions have been missed at laparoscopy but found at laparotomy by palpation.

21. **Tissue Confirmation**
    - **Small Biopsy**
    - **Excision**

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For the pathologist to confirm a small polypoid or vesicular lesion, a small biopsy must be taken. Sending a 1 mm lesion on a 1 cm specimen decreases the chance of confirmation. The 200-micron lesion which is demonstrated in this slide set was sent on a 1.2 mm specimen. However, large scarred lesions may require excision as these are often predominantly scar with few intermixed areas of endometriosis. Random biopsy through the

scar has a significant chance of missing the glands and stroma. Tissue documentation is used to exclude other pathology more than to confirm endometriosis. When the tissue is nondiagnostic, the clinical diagnosis is used. The advantages of documentation are weighed against the risks. This is particularly true near the tube, ureter and colon.

22. **Tissue Confirmation**

Black	**94%**	**Polypoid Red**	**75%**
White	**80%**	**Flat Red**	**33%**
Clear	**65%**	**Adhesions**	**26%**

Martin DC, et al: Fertil Steril 51:63, 1989

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With a tissue confirmation of 98%, there were no lesions that were always endometriosis and no lesions that were never endometriosis. Endometriosis was documented in 94% of black lesions, 80% of white lesions and 26% of adhesions when no specific lesions had been noted. In addition, when red lesions were broken into different types, polypoid lesions were commonly endometriosis while vascular and flat lesions were less commonly endometriosis. Twenty different descriptive types, including 13 phenotypes of endometriosis, were noted during this study. Grain-like lesions (psammoma bodies) and carbon were found adjacent to associated endometriosis at 20% and 16%.

23. **Clear Lesions**
    - **Endometriosis**
    - **Psammoma Bodies**
    - **Endosalpingosis**
    - **Inflammatory Inclusions**
    - **Walthard Rests**

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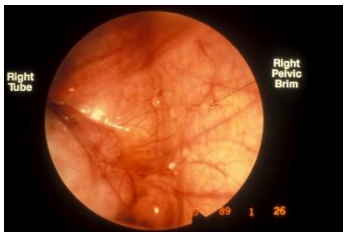
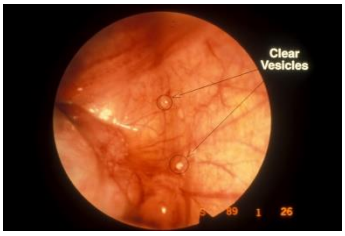
In addition to endometriosis, other clear and white vesicular lesions include psammoma bodies, endosalpingosis, inflammatory inclusions and Walthard rests.

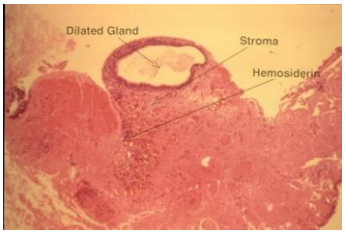


24. This picture is of the right pelvic brim lateral to the right tube and near the iliac crest. Clear, vesicular lesions are lateral to the right tube with red coloration at the 1:00 margin of the uppermost vesicle. She also had superficial, dark, scarred lesions on the uterosacral ligaments.

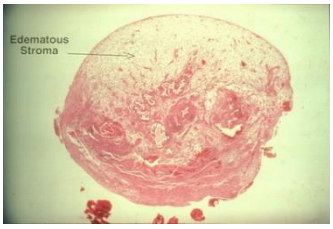


25. The 2-mm and 4-mm clear vesicles are circled for identification. The lower lesion could also be classified as white or opaque..

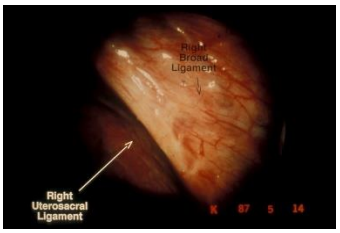
26. The histology of the upper clear vesicle shows a dilated endometrial gland associated with endometrial stroma, fibrosis, and hemosiderin at the base. Trichrome stains were not used to determine if muscular metaplasia was present. Trichrome example with a polypoid lesion is number 52.



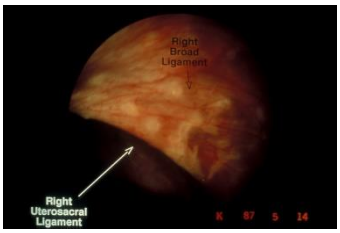
27. An alternate histologic finding with a clear, vesicular-appearing lesion is a polypoid area of endometriosis with stromal edema rather than the dilated glands seen in the previous pictures..



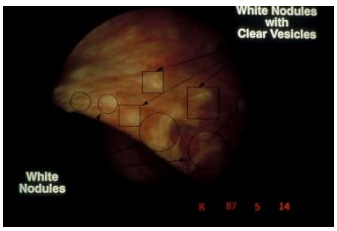
28. A light reflection obscures the lesions in this picture is of the right uterosacral ligament and broad ligament. However, changing the angle of light changes the appearance as seen in the next slide.



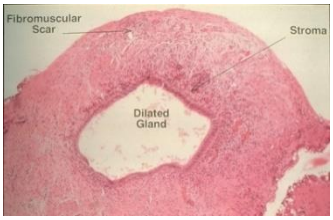
29. The second view increases the ability to see the tissue. In addition to the angle of illumination, the intensity of light can also hide lesions. This view of the right uterosacral shows several white nodules; some have blister-like surface lesions.



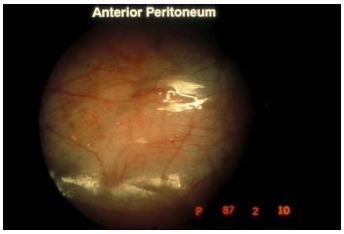
30. The white nodules of 3 to 5-mm, some and clear vesicles of 1 to 2-mm on the surface, are marked in this picture.



31. Dilated glands and stroma are contained within a fibromuscular scar in the white nodules.

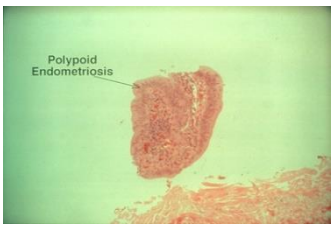


32. This picture is of the anterior peritoneum in a 19-year-old patient with diffuse pelvic pain.

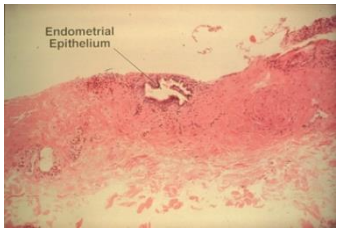


33. The red polyp is 400 microns wide and the clear vesicles appear as scattered areas of light reflection. These are 200 microns in diameter.

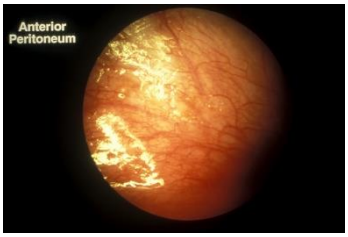
34. This is the 400-micron red polyp of endometriosis with both endometrial epithelium and stroma.



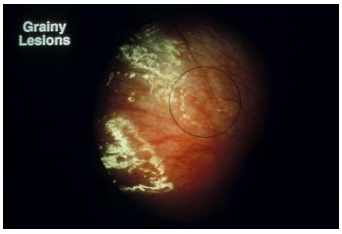
35. This is a 200-micron wide area of glands and is near other areas of the same epithelium associated with endometrial stroma.



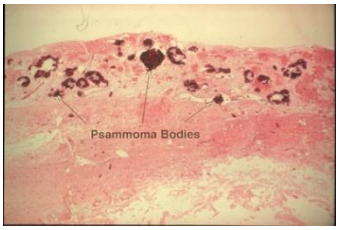
36. This picture is of the anterior peritoneum in a patient undergoing laparoscopy for Stein-Leventhal syndrome.



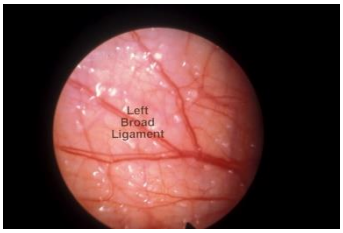
37. These discrete lesions are psammoma bodies. These are generally easier to see at high magnification and have the appearance of grains of salt. They are usually 0.5 to 1 mm in size. Although these are frequently associated with high chlamydia titers, this patient had a negative chlamydia titer.



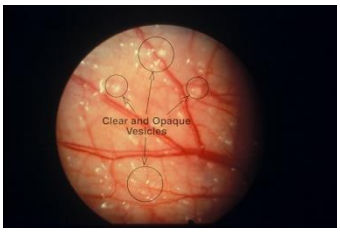
38. Psammoma bodies are the areas of calcium shown on the surface of this peritoneum. Psammoma bodies have been associated with endosalpingosis, chlamydia, adhesions and pelvic cancer. Peritoneal washings, close observation of the ovaries and biopsy of any suspicious lesions appear reasonable when psammoma bodies are seen.



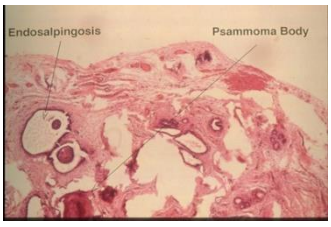
39. This picture is of multiple clear and opaque vesicles in the left broad ligament of a patient with a chlamydia titer of 1:256.



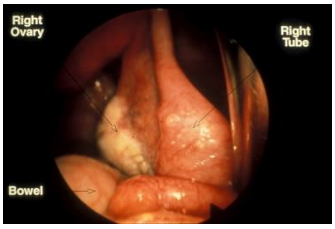
40. These 1 to 3-mm, clear and opaque vesicles are psammoma bodies and endosalpingosis. Several are circled.



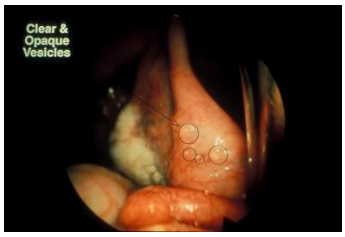
41. The histology demonstrates scattered endosalpingiosis and psammoma bodies.



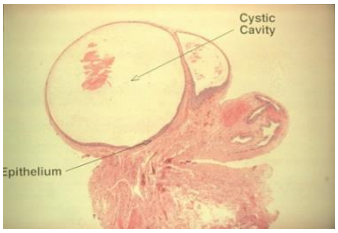
42. The right tube has several clear and opaque vesicles that are 1 to 3-mm in diameter.



43. The clear and opaque vesicles on the tube are circled.



44. Walthard rests are dilated cystic structures often containing nests of squamous epithelium and lined by a mesothelium or any upper genital canal epithelium such as tubal. These lesions are not commonly biopsied as the risk of tubal damage appears greater than the benefit to the patient since these tubal lesions have not been endometriosis in any of the cases studied.



45. **Red Lesions**
    - **Endometriosis**
    - **Granulation Tissue**
    - **Hemangioma**
    - **Ectopic Gestation**

    Red lesions have included endometriosis, granulation tissue, hemangiomas, and ectopic gestations.

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46. **Red Lesions**
    Associated with increased synthesis of prostaglandin F.
    Vernon MW, et al: Fertil Steril 46:801, 1986

    Polypoid red lesions appear to have active stroma and have been associated with an increased synthesis of prostaglandin F.

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47. **Peritoneal Relationship**
    - **Surface Lesion**
    - **Superficial Retroperitoneal**
    - **Deep Retroperitoneal**

    The location of a lesion with respect to a peritonealized or scarred surface may theoretically predict the clinical symptoms. Surface lesions can bleed, secrete and exfoliate directly into the peritoneal cavity. Surface lesions are commonly clear or red. Superficial retroperitoneal lesions can rupture and act as surface lesions. Deep retroperitoneal lesions appear predisposed to focal expansion, nerve entrapment, focal tenderness, and deep pressure. These deep lesions are dark and/or scarred. Systemic metastasis and immunologic effect may be related to any of these.

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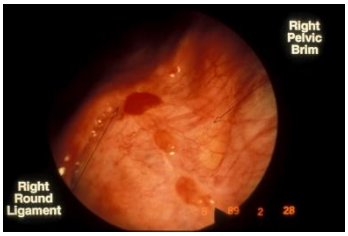
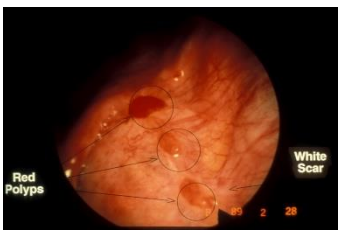
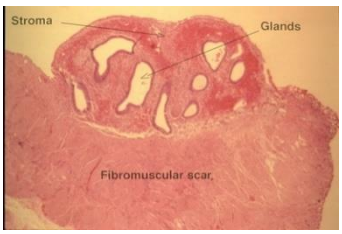
48. This picture is of the right pelvic brim lateral to the tube. The right round ligament is seen in front of the red polypoid lesions. The lesion in the lower right has white, fibromuscular scar noted behind the red polypoid endometriosis.



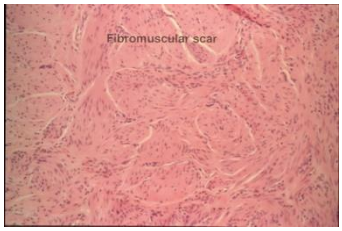
49. Red polypoid lesions look like normal endometrium and are easy to document by biopsy or excision. Superficial biopsy of these 7 to 12 mm lesions will contain only glands and stroma and, if the pathologist is not accustomed to seeing these type biopsies, may be interpreted as floaters from a D&C. However, when excised, there is frequently an associated deep scarring which is seen clinically as a white scarred rim beneath the lesion.



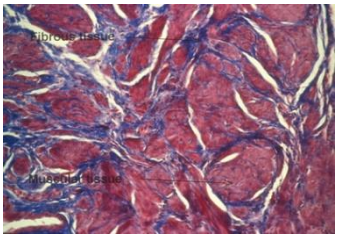
50. With the lesion excised in its entirety, the red area has glands and stroma and the white scarred area beneath it is fibromuscular scar (myofibroblastic cicatrix) which is larger than the lesion itself.



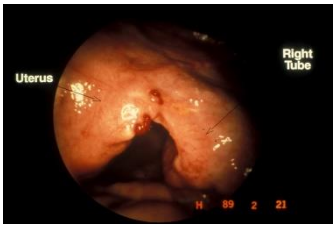
51. With H&E stain, the scar appears to be muscular. Other cases have shown varying degrees of collagen and muscular component.



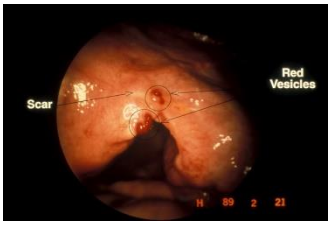
52. Trichrome strain demonstrate that this lesion is predominantly muscular metaplasia with intermittent collagen component.



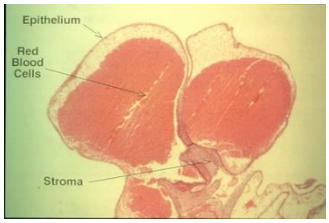
53. The right uterine cornua and tube have red blebs and distortion form deep scar..



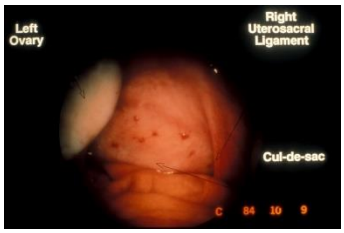
54. These 3 mm red lesions at the cornua of the tube are associated with deep fibrotic scar in the tube and cornua.



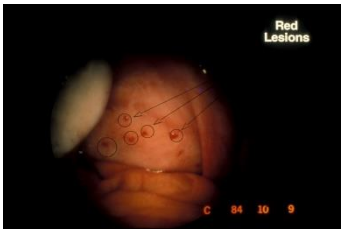
55. These areas have trapped blood within the endometrial glands and have endometrial stroma at the base. This can be contrasted with the hemangiomas in slide 56-58.



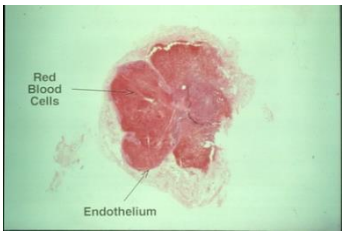
56. These red lesions are seen in the cul-de-sac. The left ovary and right uterosacral ligament are landmarks in this picture.



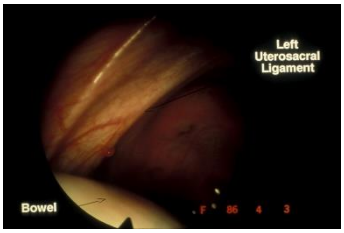
57. These 5 mm lesions are red but have no associated fibrosis at the base.



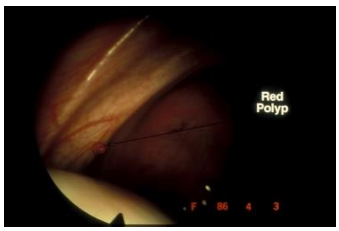
58. These lesions are peritoneal hemangiomas. Blood-filled lesions are lined by mesothelium. This can be contrasted with red blood cells in vesicular endometriosis in slides 53-55.



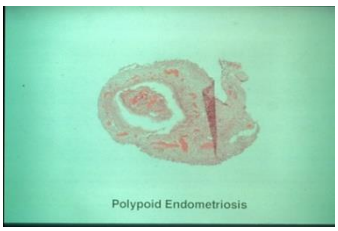
59. This is the left side of the cul-de-sac in a 14-year-old patient with pelvic pain.



60. One pink 4 mm lesion is seen on the left uterosacral ligament.



61. Histology demonstrates the glands and stroma of endometriosis.



62. **Progressive Disease**
    - **Placebo 47%**
    - **Gestrinone 0%**

    Thomas EJ, et al: Brit Med J 294:272, 1987

TEXT SLIDE
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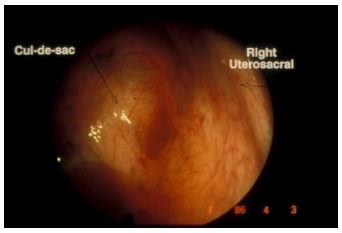
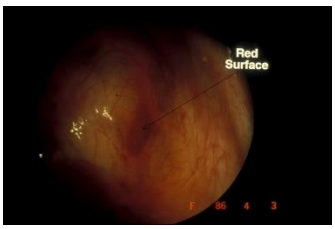
Patients like this 14-year-old were followed by Thomas in a randomized prospective study. In that study, 47% of patients on placebo had a progression of their disease while none of those on gestrinone (a progestational agent) therapy progressed. Theory suggests that this progression may be from retrograde menstruation or from growth of lesions too small to be seen at the first surgery. Plans must consider both possibilities.

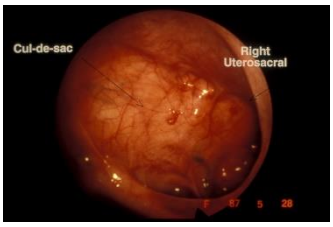
63. This is the right cul-de-sac in the same 14-year-old patient.



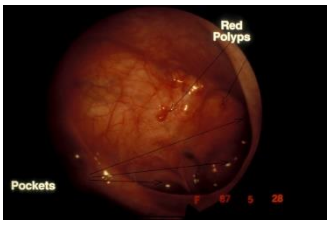
64. There is an area of diffuse red in the right cul-de-sac medial to the uterosacral. However, no specific lesions were noted. Histology demonstrated endometrial stroma. An initial attempt at oral contraceptive suppression resulted in significant side effects and she discontinued them.



65. This is the right cul-de-sac of the same 14-year-old above at age 15 one year following the initial laparoscopy. She has been off birth control pills for six months and her pain has recurred.



66. At this time, multiple pockets and red endometriotic polyps of up to 6 mm are noted. The area in the right lower quadrant of the picture is a vein, not a black lesion. There were no scarred or black lesions present.



67. **Adolescents with Pain**
    - **53% Had Endometriosis**
    - **20% Had Only Red Lesions**

    Goldstein DP, et al: J Adol Health Care 1:37, 1980

TEXT SLIDE
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In a study by Goldstein in adolescents with pelvic pain, 53% had endometriosis noted at laparoscopy. Of these, 20% had only red lesions.

68. **Appearance and Age**

Endometriosis changes appearance with age.

Sampson JA: Surg Gynecol Obstet 38:287, 1924
Karnaky KJ: Arizona Med January:37, 1969
Redwine DB: Fertil Steril 48:1062, 1987
Koninckx PR, et al: Fertil Steril 55:763, 1991

TEXT SLIDE
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Several studies have shown that endometriosis changes appearance with age. Sampson noted the change from a red raspberry appearance to a blueberry appearance as lesions aged. Karnaky stated that it required 4 to 10 years for water blister lesions to progress to scarred blue-domed cysts. Redwine quantitated these changes and demonstrated a change from red to scarred black lesions over 7 to 10 years. Koninckx showed 40% increase in the occurrence of scarred black lesions over a 20-year age change. Koninckx also documented a decreasing occurrence of red lesions and an increasing occurrence of deep infiltrating lesions. These changes may be due to progression in all patients, to random observation in different patient groups or to factors to be discovered in future research. In any of these situations, different lesion types can be predicted at varying ages. However, other studies demonstrate there is significant overlap and age is not the only factor in the appearance. Further research is needed to determine what this means for individual patients.

69. **Appearance and Age**

Appearance	Mean Age	Age Range
Clear Papules Only	21.5	17-26
Red Lesions Only	26.3	16-38
White Lesions Only	29.5	20-39
Black Lesions Only	31.9	20-52

Redwine DB: Fertil Steril 48:1062, 1987

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This summary from Redwine's article demonstrates both the mean age and age range in patients in whom isolated lesion of a uniform appearance were seen. Although the 10-year change between the mean age of patients with clear papules and those with black lesions may have research implications, the range overlap suggests this is not useful for all patients. This finding may be more helpful in research than in the care of one patient as lesion appearance is related to other factors such as growth rate.

70. **Appearance and Age**

Appearance	Age Range
Any Clear Papules	17-31
Any Red Lesions	16-43
Any White Lesions	17-43
Any Black Lesions	17-52

Redwine DB: Fertil Steril 48:1062, 1987

TEXT SLIDE IS USED HERE

When Redwine studied the appearances by occurrence with or without other lesion types, the age range expands and there is more overlap. Despite this expansion, clear lesions still appear to be a disease of younger women.

71. **Appearance and Age**

Appearance	20-25	31-35	41-45
Red Lesions	27%	19%	0%
"Typical " Lesions	57%	61%	75%
>6mm Infiltration	15%	21%	42%

Koninckx PR, et al: Fertil Steril 55:763, 1991

TEXT SLIDE IS USED HERE

Koninckx studied several characteristics. Over a 20-year age span, red lesions decreased by 27%, "typical" lesions increased by 18% and deep infiltrating lesions increased by 27%.

72. **Appearance and Experience**

	1982-84	1986	1987-88
Endometriosis	42%	47%	71%
"Typical" Lesions	?	43%	60%
"Subtle" Lesions	?	15%	65%

Martin DC: J Reprod Med 31:1089, 1986
Stripling MC, et al: Fertil Steril 49:427, 1988
Martin DC, et al: Fertil Steril 51: 63, 1989

TEXT SLIDE IS USED HERE

Martin, Stripling and others in a series of studies from Memphis noted an increasing documentation of the various appearances of endometriosis. Subtle lesions were not an issue in 1984. However, second look laparoscopies were being used to evaluate the residual tissue following laser laparoscopy. A search for malignant and premalignant changes related to previous laser surgery showed only foreign body giant cell reaction to carbon. This was like reaction to suture remnants. However, many abnormal areas which were resected looking for these changes were diagnosed as endometriosis on histologic exam. This was at the time of Jansen's publication of nonpigmented lesions. By 1988, "subtle" lesions were the most common and "typical" lesions appeared to be least representative of the two.

73. **Appearance and Experience**

We hesitate longer at our 400th case
than we did at our 200th
to call a given lesion
incidental or quiescent.

Fallon J, et al: Rhode Island Med J 18:15, 1950

In 1950, John Fallon noted that experience increased uncertainty and concern regarding the exact nature of a lesion.

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74. **Appearance and Documentation**

14% to 59% of endometriosis
was diagnosed by the pathologist and
not documented by the gynecologist.

Martin DC, et al.: J Gynecol Surg 6:275, 1990

In agreement with Fallon, a study of 55 gynecologists and 492 patients demonstrated that 14% to 59% of endometriotic lesions which were histologically diagnosed by pathologists were not documented by the operating gynecologist. This supports the concept that endometriosis can be hard to recognize.

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75. **Appearance**

There is no appearance
which is never endometriosis.

Endometriosis has been histologically confirmed in lesions of up to 24 different descriptive types. In addition, endometriosis has been found unseen in the specimens of adhesions, fibrosis, hemorrhagic corpus luteum cysts, myomata, tubal ligation reversals and bowel resections for bowel cancer.

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76. **Appearance**

There is no appearance
which is always endometriosis.

Furthermore, there is no appearance which is always endometriosis. ~~*Thus far, the only exception to this has been scarred black lesions in patients who have had no previous surgery.*~~ *(Note: A dark, scarred, hemorrhagic inclusion associated with high chlamydia IgG titers has been seen.*) When patients have had previous surgery, these lesions have frequently represented foreign body within scar.

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77. **Recognition**

It is difficult if not impossible to recognize all endometriosis.

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Small lesions of 120 µ have been missed using near contact laparoscopy and deep lesions of the uterosacrals and bowel may be more palpable than visual. Thus, it is difficult, if not impossible, to recognize all endometriosis.

78. **Conclusion**

Biopsy is needed to exclude pathology which is not endometriosis.

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Tissue confirmation is needed to exclude other pathology more than to confirm endometriosis. When a biopsy demonstrates pathology other than endometriosis, this will often change the long-term management of the patient. If a specific abnormality other than endometriosis is not demonstrated, then the laparoscopic diagnosis of endometriosis is used for management.

79. **Conclusion**

Long-term management includes the anticipation that endometriosis can be persistent or recurrent.

TEXT SLIDE IS USED HERE

Long-term management of endometriosis may be for persistent as well as recurrent disease. Patient who have a rapid return of tenderness may have lesions which were smaller or deeper than seen. In addition, there may be pathology other than endometriosis. Data is not adequate to determine if lesions seen at second operation were too small to be seen at the first operation or if these are new lesions. At present, therapy must be oriented towards both possibilities. Planning for management needs to consider the possibilities of both persistent and recurrent disease.