

The microscopical diagnosis of diseases of the blood and of pathological tissues / by O.C. Gruner.

Contributors

Gruner, O. Cameron 1877-1972.

Publication/Creation

London : Geo. Pulman, 1910.

Persistent URL

<https://wellcomecollection.org/works/nwkbp4k6>

License and attribution

The copyright of this item has not been evaluated. Please refer to the original publisher/creator of this item for more information. You are free to use this item in any way that is permitted by the copyright and related rights legislation that applies to your use.

See rightsstatements.org for more information.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

A

PHONOGRAPHIC MEDICAL LIBRARY.

(Issued by the Society of Medical Phonographers.)

VOL. V.

THE
MICROSCOPICAL DIAGNOSIS
OF DISEASES OF THE BLOOD
AND
OF PATHOLOGICAL TISSUES.

BY

O. C. GRUNER, M.D., LOND.

Lecturer in Pathology, McGill University, and Pathologist to the
Royal Victoria Hospital, Montreal, late Clinical Pathologist,
Leeds General Infirmary.

1910

London:

MESSRS. GEO. PULMAN & SONS, LTD., Thayer Street, W.

PRICE 2/6

(COPYRIGHT)

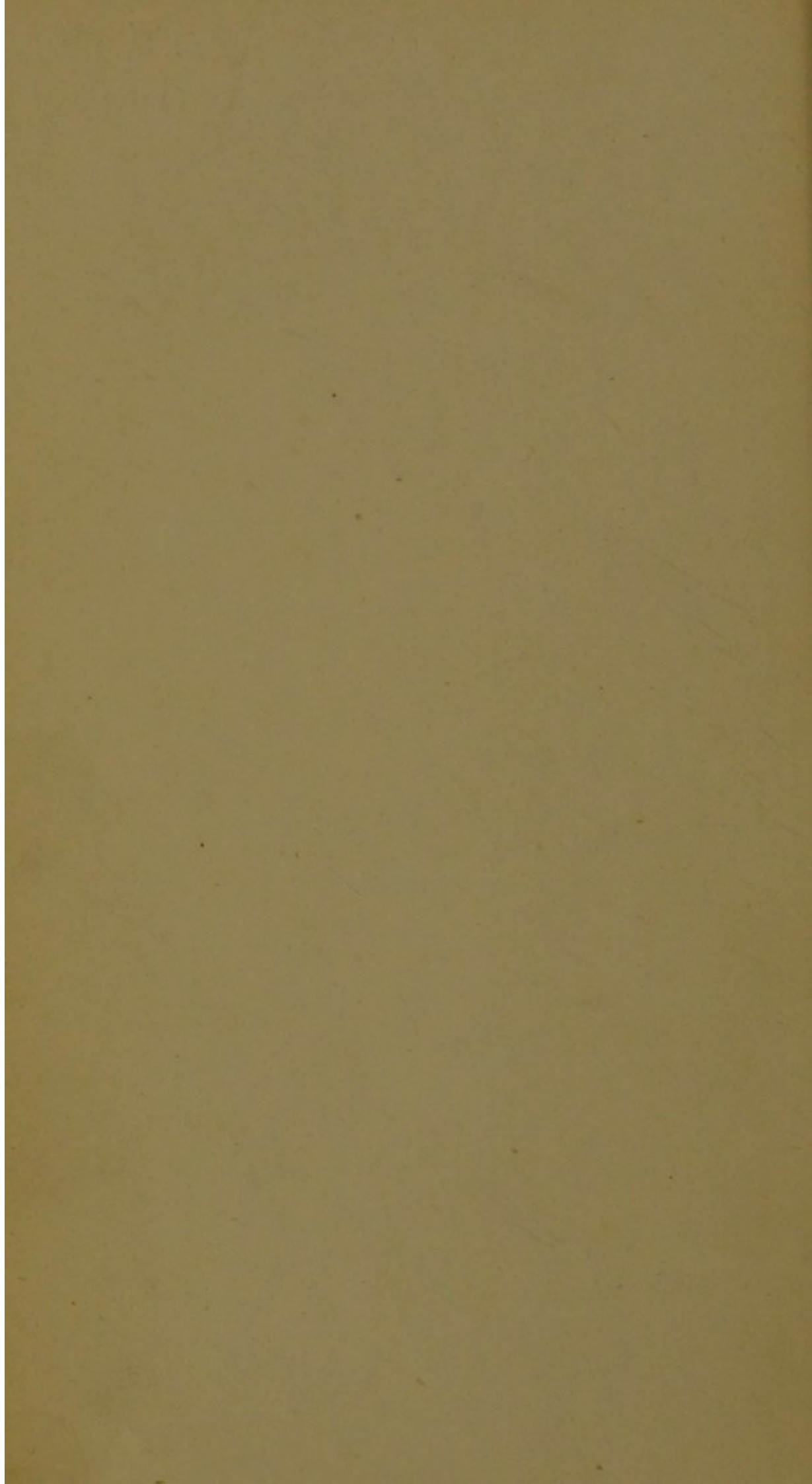
100



22102068506

Med
K17575





THE PHONOGRAPHIC MEDICAL LIBRARY.

(Issued by the Society of Medical Phonographers.)

VOL. V.

THE
MICROSCOPICAL DIAGNOSIS
OF DISEASES OF THE BLOOD
AND
OF PATHOLOGICAL TISSUES.

BY

O. C. GRUNER, M.D., LOND.

Lecturer in Pathology, McGill University, and Pathologist to the
Royal Victoria Hospital, Montreal, late Clinical Pathologist,
Leeds General Infirmary.

1910

London:

MESSRS. GEO. PULMAN & SONS, LTD., Thayer Street, W.

PRICE 2/6

(COPYRIGHT).

28 002 683

WELLCOME INSTITUTE LIBRARY	
Coll.	welMOmec
Call	
No.	QY

PREFACE.

THIS little book has been compiled primarily for the use of Members of the Society of Medical Phonographers. The first section may be more useful to the practitioner, while the second may interest the student.

Discussion of controversial points has necessarily been omitted, and the diagnostic indications which have been given are mainly based on one's own experience.

The limitation of scope of treatment in each of the two sections will be readily understood to be due to a desire to be compact, and make this volume in line with the size of the other volumes of the Phonographic Medical Library.

The Author has in view the publication of a longhand version, which may, however, be a little fuller, but will still enable the less experienced phonographers to follow the present text.

O. C. G.

CONTENTS.

SECTION I.

THE MICROSCOPICAL DIAGNOSIS OF DISEASES OF THE BLOOD.

Introduction ...	1
Collection of the Blood for Making a Count ...	3
Staining of the Films... ..	4
Method of Obtaining the Differential Count ...	6
Ideal Blood-counting Form	8
Identification of the Various Cells	9
(a) Red Cells	9
(b) Blood Plates	11
(c) White Cells	12
Diagnostic Table for Varieties of Mononuclear Cells	22
Genesis of the Cells of the Blood-stream ...	23
Clinical Diagnosis based on Abnormalities of the Red Cells	24
Clinical Diagnosis based on Abnormalities of the White Cells	27
Deductions to be made from Observations of Degenerative Changes in Leucocytes... ..	30
Glossary of Terms used in connection with Hæmatology	31

SECTION II.

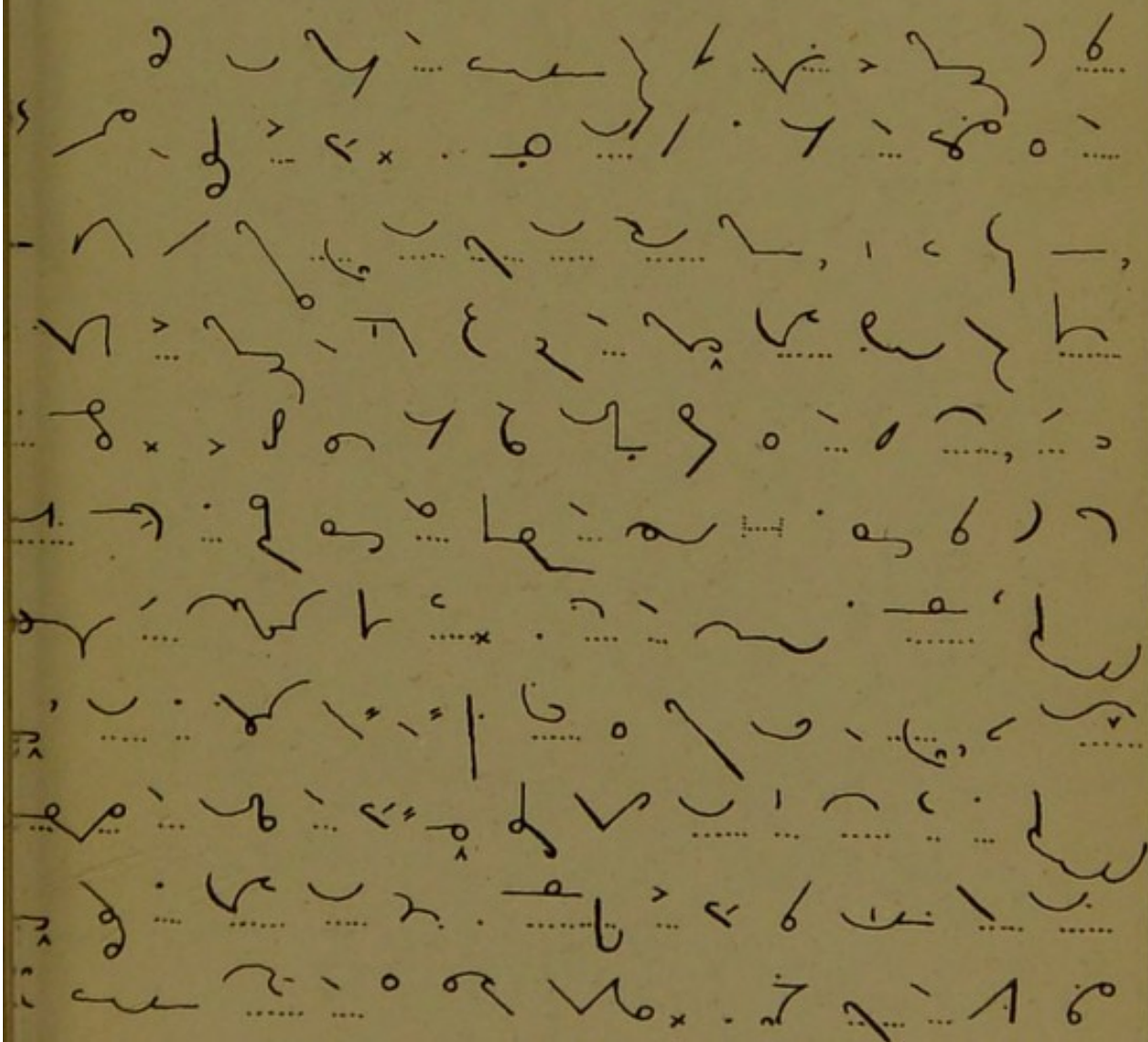
THE MICROSCOPICAL DIAGNOSIS OF DISEASED TISSUES.














Introduction... ..	38
Preparation of Tissues for Cutting Sections ...	38
Procedure for arriving at a Diagnosis	39
(A) Degenerations	40
(B) Inflammations	40
(c) Newgrowths	43
a. Spindle-shaped Cells	44
β . Round Cells	45
γ . Giant Cells	48
δ . Carcinoma Cells	52
Diagnosis of Various Tissues	55
Appendix	65
Description of Plate	66
Coloured Plate	69













THE MICROSCOPICAL DIAGNOSIS OF
DISEASES OF THE BLOOD AND
OF PATHOLOGICAL TISSUES.











SECTION I.














THE DIAGNOSIS OF DISEASES
OF THE BLOOD.





























2             













Wassermann          











            














            











            














Collection of the Blood for making a count.














           














Thoma-Leitz          














            

Lürck          

Leitz             

1:100             

1:10             

1:9             

1. ...
 2. Hayem's ... 0.5% ...
 3. ...
 4. ... Baird ... Tatlock x
 5. ...
 6. 20% ... 10% ...
 7. ...
 8. ... films ...
 9. ...
 10. 60-75% ...
 11. ...
 12. ...
 13. Staining of the films x Petri ...
 14. ...

7. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

Method of obtaining the Differential count.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

(metachromatophilia), 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

Blood-counting Form.

Name of patient

Age

Date

Time of day.

Clinical Notes

Red cells

number per cm.

mills

Hb %

Colour Index

anisocytosis *

anisochromia *

Poikilocytosis *

metachromatophilia *

nucleated red cells *

normo-
blastsnatural, with
pycnotic nuclei,
with free nuclei,
with mitotic
figures.

Blood-platelets

megalo-
blastsnatural, with
pycnotic nuclei,
with mitotic
figures.

White cells

number per cm

giganto blasts
thousand

Polynuclears 1

caryorrhctic

mast cells

Eosinophiles

myelocytes * pro-, micro-, meta-, ordinary myeloblasts

small lymphocyte 2

ditto, leucocytoid 2

ditto, reniform nucleus 2

Large mononuclear (aplenocyte)

ditto, lymphocytoid 2

ditto, transitional

mesolymphocytes *

Large lymphocytes *

Rieser's cell *

spongiocytes

bifid 1
trifid 1
plurifid 1

Total counted

Remarks

Result in percentages: in number per cm.

Percentages: Polynuclears up to 70% \ cm 5600

mast cells " 1 40

Eosinophiles " 1 80

Lymphocytes " 20 1600

Large mononuclears 8 600

Transitional cells 1 80

N.B. . 6 (1)
 (2) /

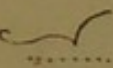
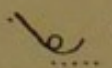
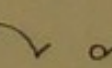
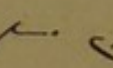
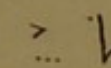
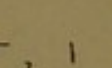

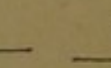
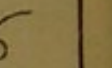
Identification of the Various cells.

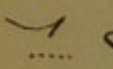
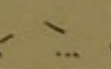
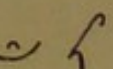
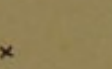



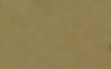
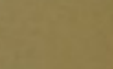
a. Red cells., aniso-cytosis /
, poikilocytosis /

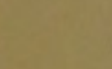
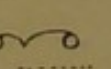
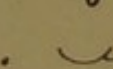
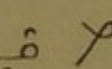
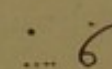
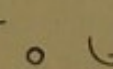
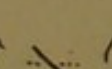
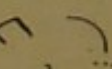
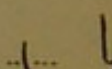
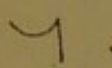

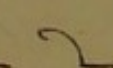
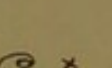
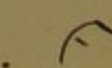
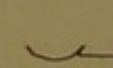
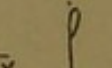
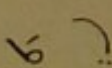

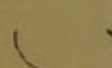
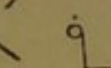
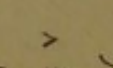
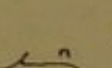
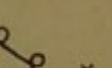
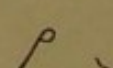
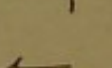

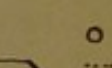
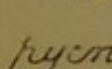
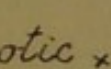
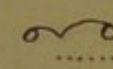
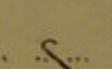
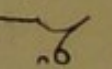
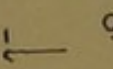
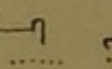
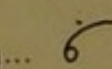
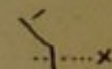
, anisochromia x

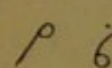

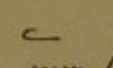
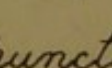
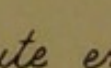
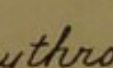
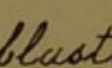
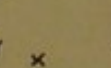
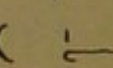
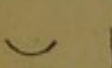
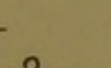
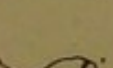
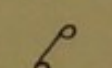
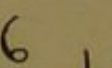
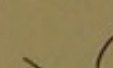
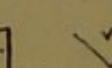
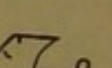
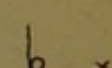
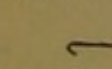
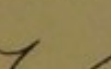
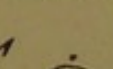
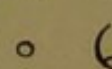
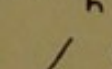
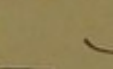
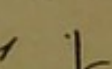
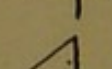
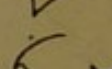

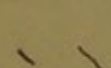
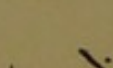
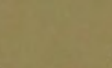
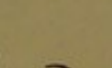
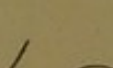
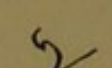
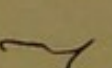
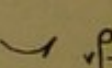
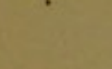
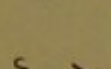
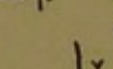
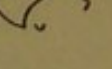
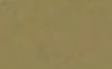
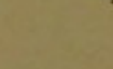
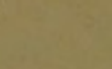
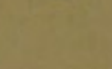


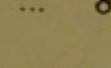
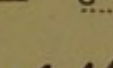
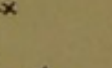
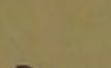

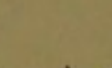
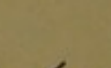
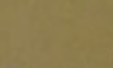
Erythroblasts.

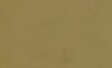
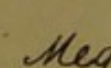
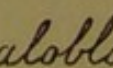
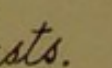
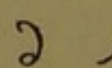
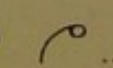
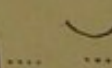
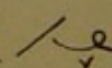
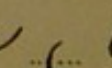
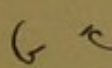
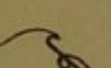
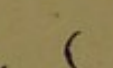
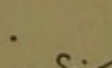
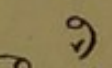

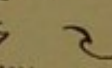
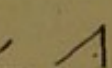
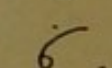
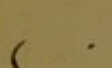
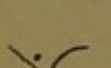
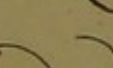

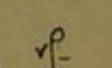

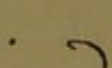

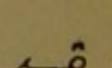


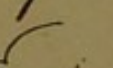

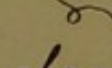
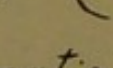
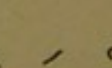
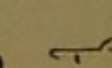
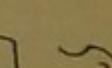
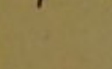
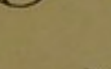
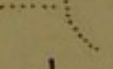
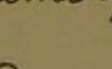

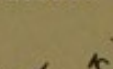
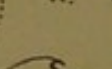
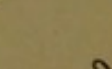
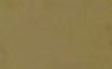
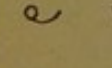
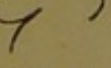
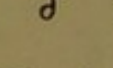
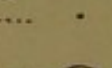
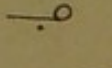
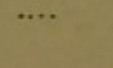
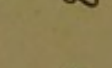
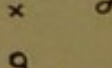
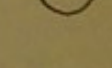
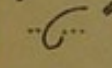
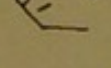
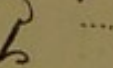
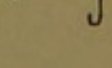
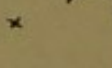
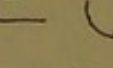
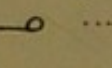
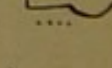
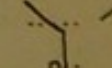
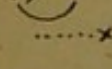
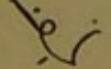
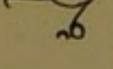
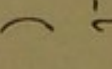
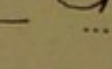
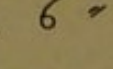
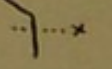
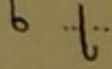
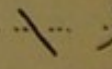
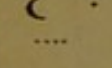
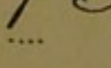
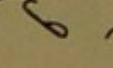
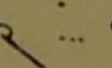
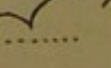
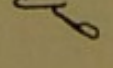
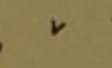
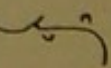
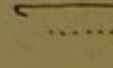
 (trachychromatic),

9         

        
        
        
pycnotic         

Megaloblasts.         
        
        
        
        
        
        
        
        

6 2 x 000 7 1 6 4 1 2 6 0

gigantoblasts x 0 0 0 0 0 x

0 0 0 0 0 0 x 0 0 0 0

0 0 0 0 0 0 0 0 0 x

Possible errors of diagnosis.

(1) 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0

0 x 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 x

(2) 0 0 large normoblasts 0 0 x

(3) Blood-platelets 0 0 0 0 x

0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 x


(4) 0 0 lymphocytes 0 0 0 0

0 0 0 0 x 0 0 0 0 0 0

0 0 0 0 0 0 0 0 x

b. Blood-plates. 0 0 0 0 x

() 0 0 0 x 0 0 0 0 0 0

v_* further subdivision 2 ... 

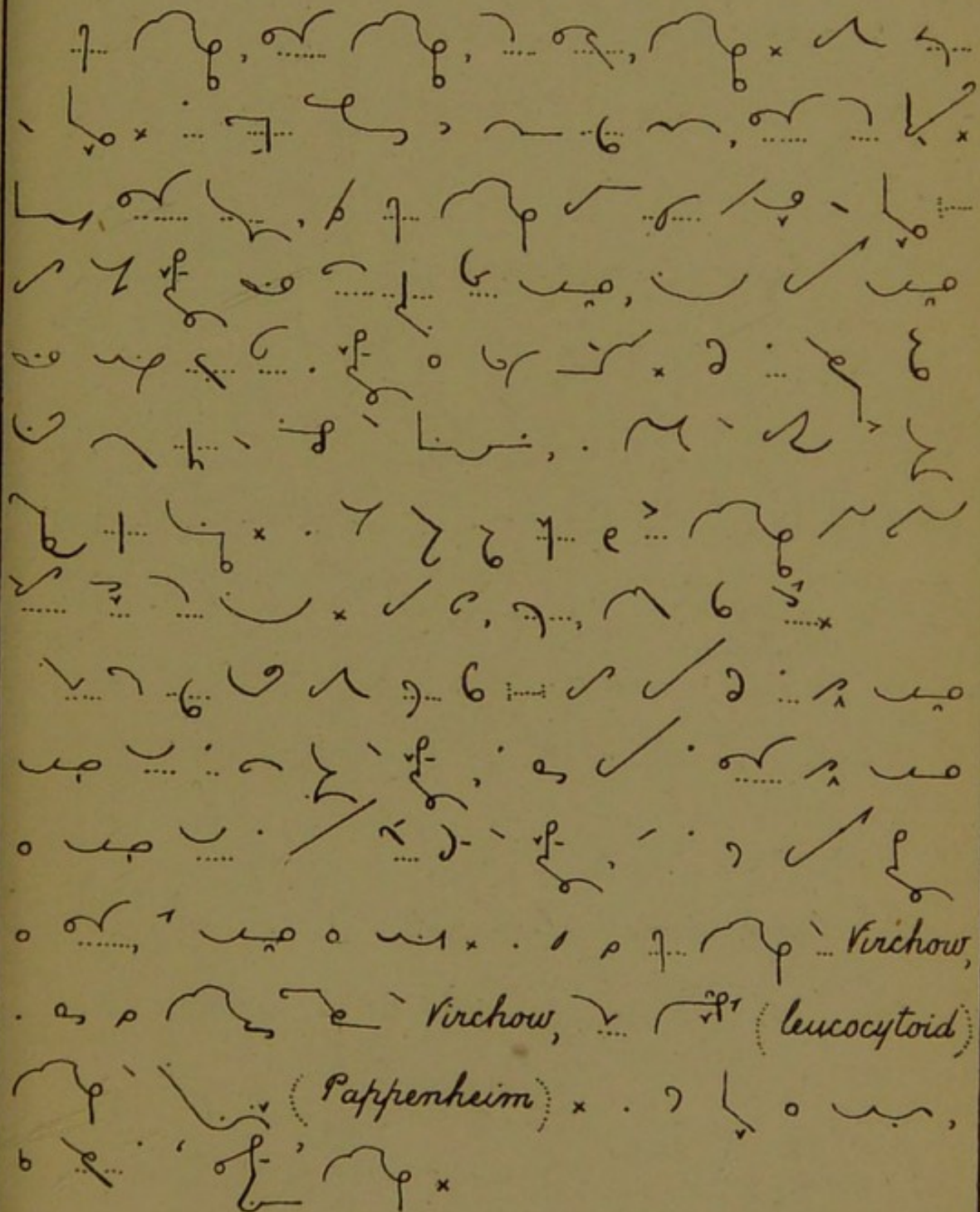
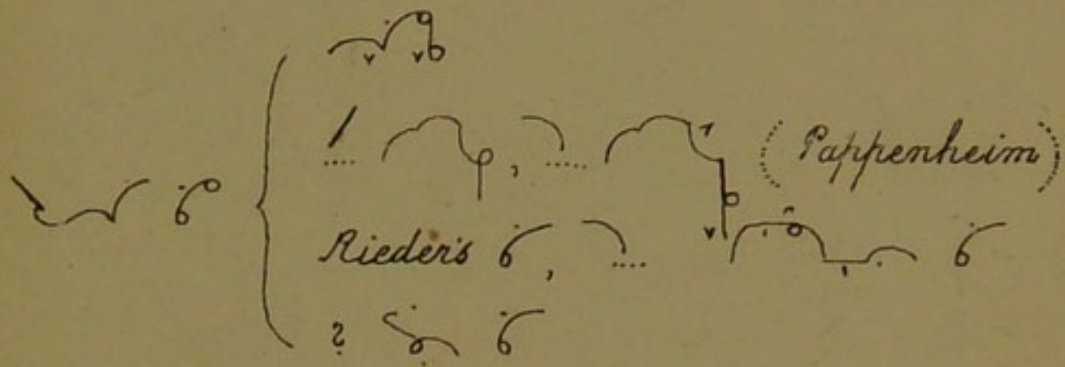
لا يَكُنْ لَكَ فِي هَذِهِ الْمَدِينَةِ مَسْجِدٌ
مِثْلُ الْمَسْجِدِ الَّذِي فِي الْمَدِينَةِ الْأُخْرَى
وَلَا يَكُنْ لَكَ فِي هَذِهِ الْمَدِينَةِ مَسْجِدٌ
مِثْلُ الْمَسْجِدِ الَّذِي فِي الْمَدِينَةِ الْأُخْرَى

(II) Mast cells. 6 / N 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

(III) Eosinophile cells. 6

26, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070, 1080, 1090, 1100, 1110, 1120, 1130, 1140, 1150, 1160, 1170, 1180, 1190, 1200, 1210, 1220, 1230, 1240, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1340, 1350, 1360, 1370, 1380, 1390, 1400, 1410, 1420, 1430, 1440, 1450, 1460, 1470, 1480, 1490, 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650, 1660, 1670, 1680, 1690, 1700, 1710, 1720, 1730, 1740, 1750, 1760, 1770, 1780, 1790, 1800, 1810, 1820, 1830, 1840, 1850, 1860, 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010, 2020, 2030, 2040, 2050, 2060, 2070, 2080, 2090, 2100, 2110, 2120, 2130, 2140, 2150, 2160, 2170, 2180, 2190, 2200, 2210, 2220, 2230, 2240, 2250, 2260, 2270, 2280, 2290, 2300, 2310, 2320, 2330, 2340, 2350, 2360, 2370, 2380, 2390, 2400, 2410, 2420, 2430, 2440, 2450, 2460, 2470, 2480, 2490, 2500, 2510, 2520, 2530, 2540, 2550, 2560, 2570, 2580, 2590, 2600, 2610, 2620, 2630, 2640, 2650, 2660, 2670, 2680, 2690, 2700, 2710, 2720, 2730, 2740, 2750, 2760, 2770, 2780, 2790, 2800, 2810, 2820, 2830, 2840, 2850, 2860, 2870, 2880, 2890, 2900, 2910, 2920, 2930, 2940, 2950, 2960, 2970, 2980, 2990, 3000, 3010, 3020, 3030, 3040, 3050, 3060, 3070, 3080, 3090, 3100, 3110, 3120, 3130, 3140, 3150, 3160, 3170, 3180, 3190, 3200, 3210, 3220, 3230, 3240, 3250, 3260, 3270, 3280, 3290, 3300, 3310, 3320, 3330, 3340, 3350, 3360, 3370, 3380, 3390, 3400, 3410, 3420, 3430, 3440, 3450, 3460, 3470, 3480, 3490, 3500, 3510, 3520, 3530, 3540, 3550, 3560, 3570, 3580, 3590, 3600, 3610, 3620, 3630, 3640, 3650, 3660, 3670, 3680, 3690, 3700, 3710, 3720, 3730, 3740, 3750, 3760, 3770, 3780, 3790, 3800, 3810, 3820, 3830, 3840, 3850, 3860, 3870, 3880, 3890, 3900, 3910, 3920, 3930, 3940, 3950, 3960, 3970, 3980, 3990, 4000, 4010, 4020, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4110, 4120, 4130, 4140, 4150, 4160, 4170, 4180, 4190, 4200, 4210, 4220, 4230, 4240, 4250, 4260, 4270, 4280, 4290, 4300, 4310, 4320, 4330, 4340, 4350, 4360, 4370, 4380, 4390, 4400, 4410, 4420, 4430, 4440, 4450, 4460, 4470, 4480, 4490, 4500, 4510, 4520, 4530, 4540, 4550, 4560, 4570, 4580, 4590, 4600, 4610, 4620, 4630, 4640, 4650, 4660, 4670, 4680, 4690, 4700, 4710, 4720, 4730, 4740, 4750, 4760, 4770, 4780, 4790, 4800, 4810, 4820, 4830, 4840, 4850, 4860, 4870, 4880, 4890, 4900, 4910, 4920, 4930, 4940, 4950, 4960, 4970, 4980, 4990, 5000, 5010, 5020, 5030, 5040, 5050, 5060, 5070, 5080, 5090, 5100, 5110, 5120, 5130, 5140, 5150, 5160, 5170, 5180, 5190, 5200, 5210, 5220, 5230, 5240, 5250, 5260, 5270, 5280, 5290, 5300, 5310, 5320, 5330, 5340, 5350, 5360, 5370, 5380, 5390, 5400, 5410, 5420, 5430, 5440, 5450, 5460, 5470, 5480, 5490, 5500, 5510, 5520, 5530, 5540, 5550, 5560, 5570, 5580, 5590, 5600, 5610, 5620, 5630, 5640, 5650, 5660, 5670, 5680, 5690, 5700, 5710, 5720, 5730, 5740, 5750, 5760, 5770, 5780, 5790, 5800, 5810, 5820, 5830, 5840, 5850, 5860, 5870, 5880, 5890, 5900, 5910, 5920, 5930, 5940, 5950, 5960, 5970, 5980, 5990, 6000, 6010, 6020, 6030, 6040, 6050, 6060, 6070, 6080, 6090, 6100, 6110, 6120, 6130, 6140, 6150, 6160, 6170, 6180, 6190, 6200, 6210, 6220, 6230, 6240, 6250, 6260, 6270, 6280, 6290, 6300, 6310, 6320, 6330, 6340, 6350, 6360, 6370, 6380, 6390, 6400, 6410, 6420, 6430, 6440, 6450, 6460, 6470, 6480, 6490, 6500, 6510, 6520, 6530, 6540, 6550, 6560, 6570, 6580, 6590, 6600, 6610, 6620, 6630, 6640, 6650, 6660, 6670, 6680, 6690, 6700, 6710, 6720, 6730, 6740, 6750, 6760, 6770, 6780, 6790, 6800, 6810, 6820, 6830, 6840, 6850, 6860, 6870, 6880, 6890, 6900, 6910, 6920, 6930, 6940, 6950, 6960, 6970, 6980, 6990, 7000, 7010, 7020, 7030, 7040, 7050, 7060, 7070, 7080, 7090, 7100, 7110, 7120, 7130, 7140, 7150, 7160, 7170, 7180, 7190, 7200, 7210, 7220, 7230, 7240, 7250, 7260, 7270, 7280, 7290, 7300, 7310, 7320, 7330, 7340, 7350, 7360, 7370, 7380, 7390, 7400, 7410, 7420, 7430, 7440, 7450, 7460, 7470, 7480, 7490, 7500, 7510, 7520, 7530, 7540, 7550, 7560, 7570, 7580, 7590, 7600, 7610, 7620, 7630, 7640, 7650, 7660, 7670, 7680, 7690, 7700, 7710, 7720, 7730, 7740, 7750, 7760, 7770, 7780, 7790, 7800, 7810, 7820, 7830, 7840, 7850, 7860, 7870, 7880, 7890, 7900, 7910, 7920, 7930, 7940, 7950, 7960, 7970, 7980, 7990, 8000, 8010, 8020, 8030, 8040, 8050, 8060, 8070, 8080, 8090, 8100, 8110, 8120, 8130, 8140, 8150, 8160, 8170, 8180, 8190, 8200, 8210, 8220, 8230, 8240, 8250, 8260, 8270, 8280, 8290, 8300, 8310, 8320, 8330, 8340, 8350, 8360, 8370, 8380, 8390, 8400, 8410, 8420, 8430, 8440, 8450, 8460, 8470, 8480, 8490, 8500, 8510, 8520, 8530, 8540, 8550, 8560, 8570, 8580, 8590, 8600, 8610, 8620, 8630, 8640, 8650, 8660, 8670, 8680, 8690, 8700, 8710, 8720, 8730, 8740, 8750, 8760, 8770, 8780, 8790, 8800, 8810, 8820, 8830, 8840, 8850, 8860, 8870, 8880, 8890, 8900, 8910, 8920, 8930, 8940, 8950, 8960, 8970, 8980, 8990, 9000, 9010, 9020, 9030, 9040, 9050, 9060, 9070, 9080, 9090, 9100, 9110, 9120, 9130, 9140, 9150, 9160, 9170, 9180, 9190, 9200, 9210, 9220, 9230, 9240, 9250, 9260, 9270, 9280, 9290, 9300, 9310, 9320, 9330, 9340, 9350, 9360, 9370, 9380, 9390, 9400, 9410, 9420, 9430, 9440, 9450, 9460, 9470, 9480, 9490, 9500, 9510, 9520, 9530, 9540, 9550, 9560, 9570, 9580, 9590, 9600, 9610, 9620, 9630, 9640, 9650, 9660, 9670, 9680, 9690, 9700, 9710, 9720, 9730, 9740, 9750, 9760, 9770, 9780, 9790, 9800, 9810, 9820, 9830, 9840, 9850, 9860, 9870, 9880, 9890, 9900, 9910, 9920, 9930, 9940, 9950, 9960, 9970, 9980, 9990, 10000.

Size of cell.



Small lymphocyte

(1) Small lymphocyte

Small lymphocyte

Small lymphocyte

Small lymphocyte

Small lymphocyte

(II) Leucocytoid lymphocyte

Leucocytoid lymphocyte

Leucocytoid lymphocyte

Leucocytoid lymphocyte

Leucocytoid lymphocyte

Leucocytoid lymphocyte

Leucocytoid lymphocyte

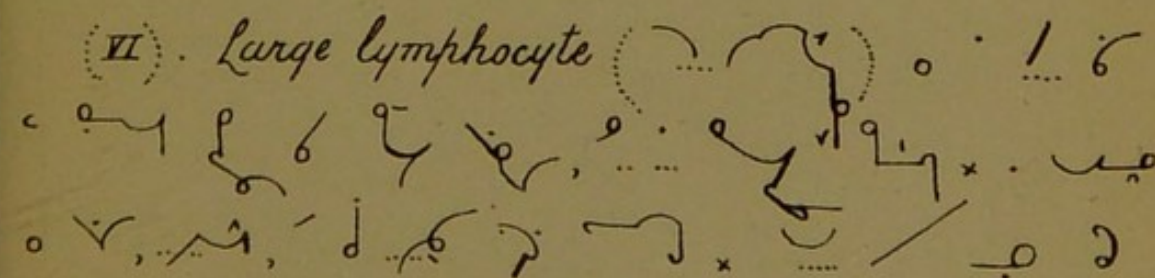
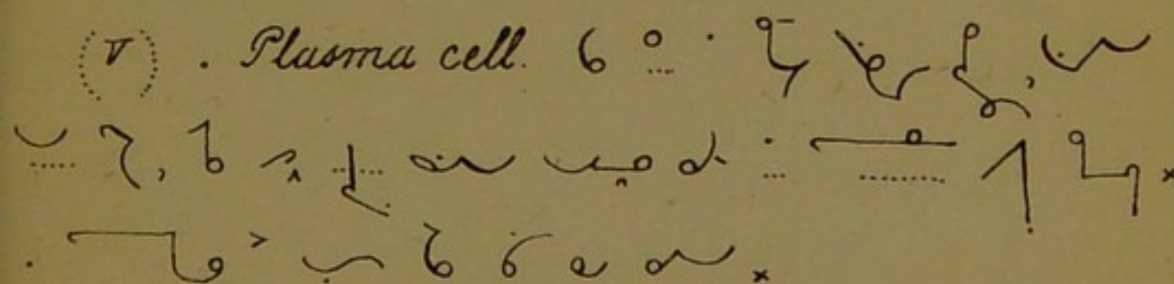
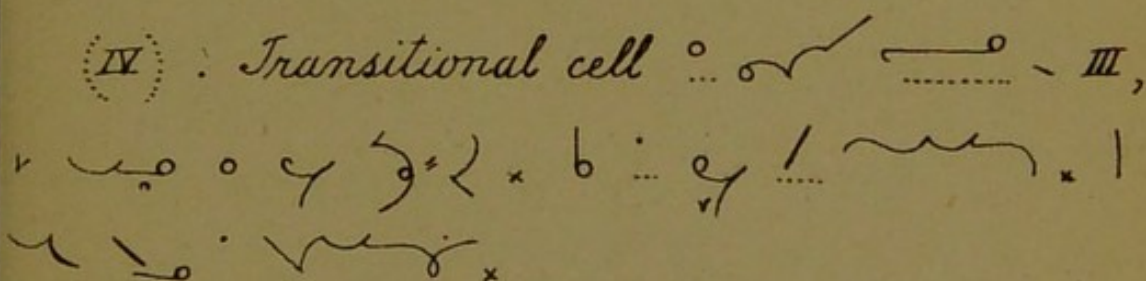
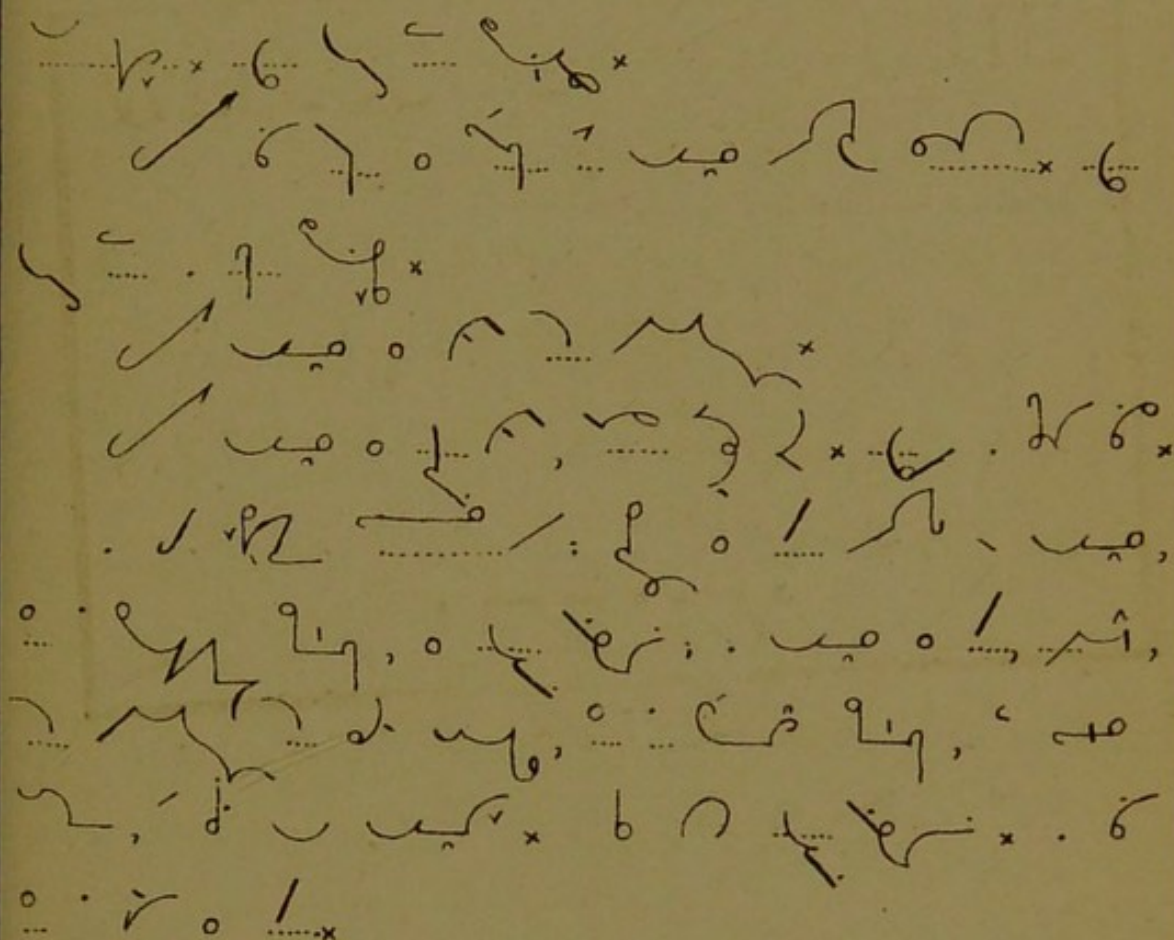
Leucocytoid lymphocyte

(III) Large mononuclear cell

Large mononuclear cell

Large mononuclear cell

Large mononuclear cell



19.

Pappenheim: b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Promyelocyte: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

True: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

metamyelocyte: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

Myeloblast: a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z.

[illegible]

Genesis of the cells of the Blood-stream.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

grade

rapidly

9000

rapidly

rapidly

rapidly

rapidly

rapidly

rapidly

rapidly

rapidly

rapidly

rapidly

rapidly

rapidly

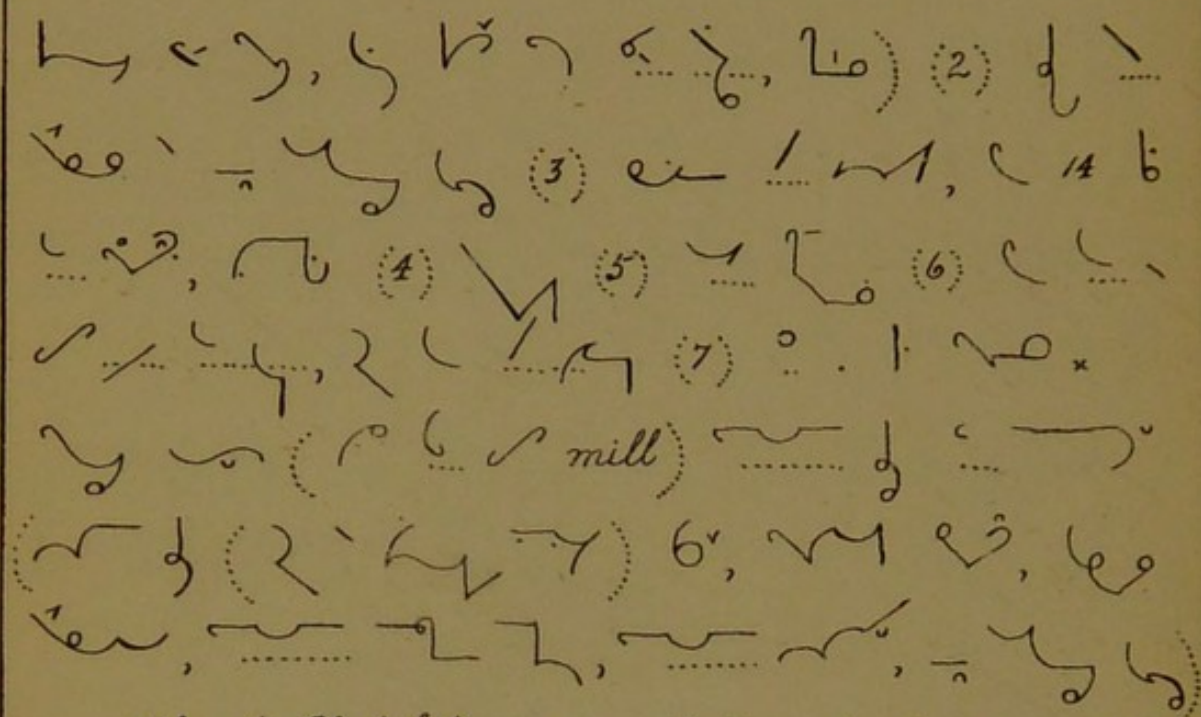
rapidly

rapidly

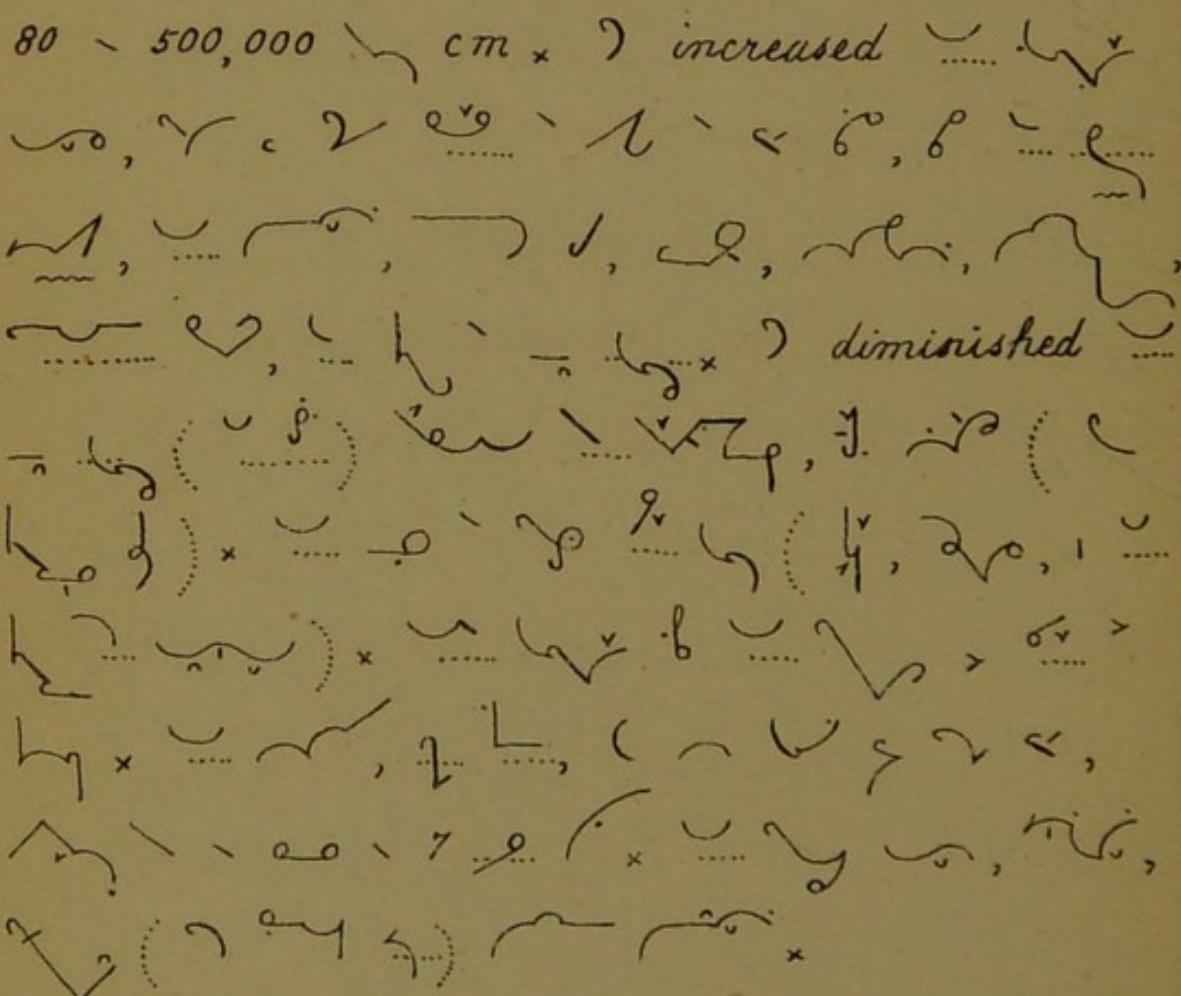
rapidly

rapidly

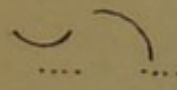








rapidly

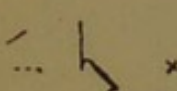







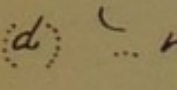








Blood-Platelets. 6 / 1 - 2 - 3 - 4 - 5 - 6 - 7

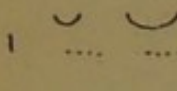










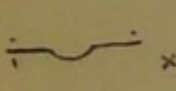








estimation of haemoglobin

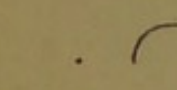


















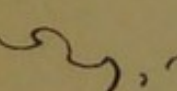












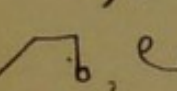


















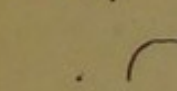


















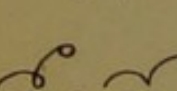


















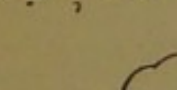


















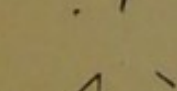












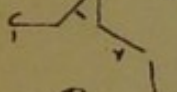


















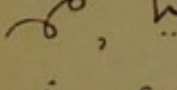


















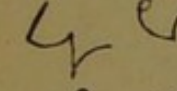


















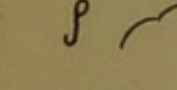















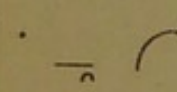















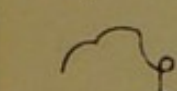


















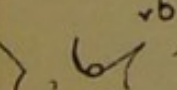















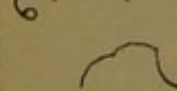


















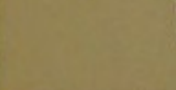















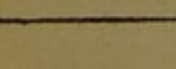















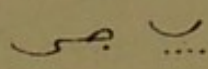










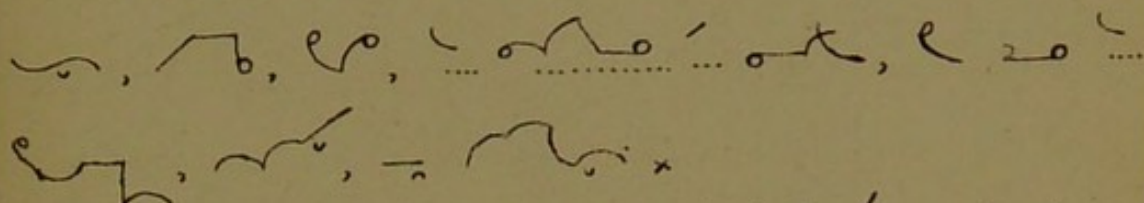







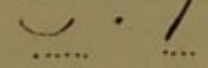










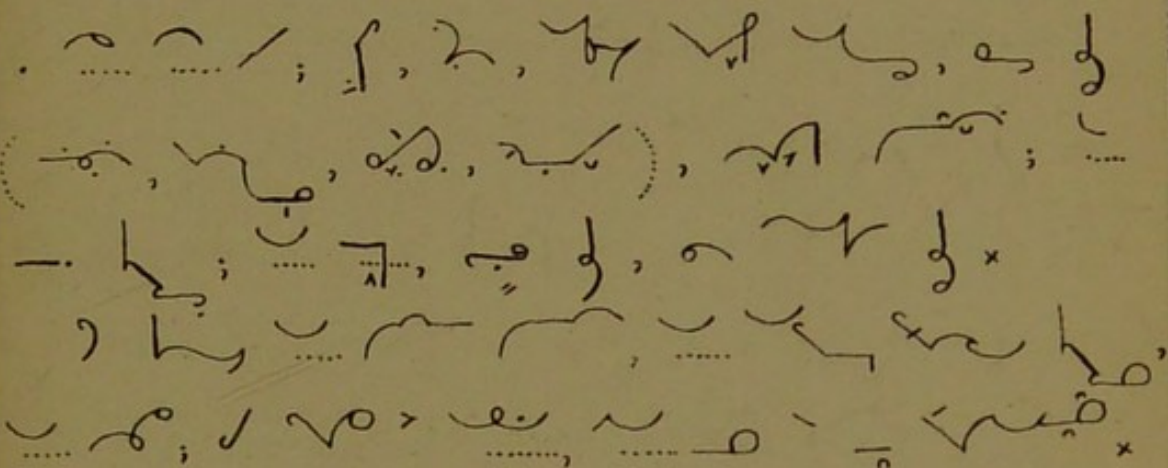










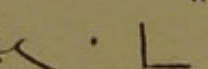







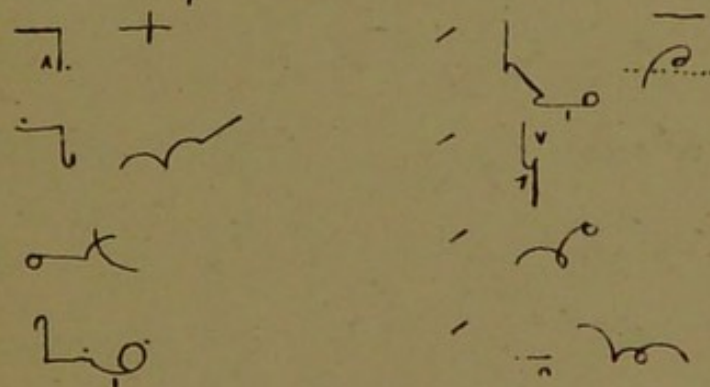
. Large mononuclears /  v. Jaksch's

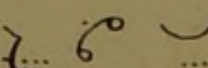
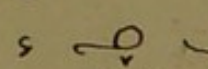
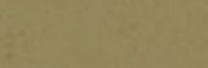


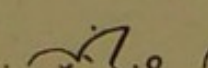
. Eosinophiles /  v. Jaksch's

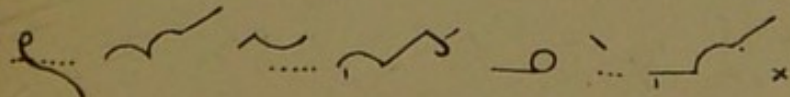


.  v. Jaksch's



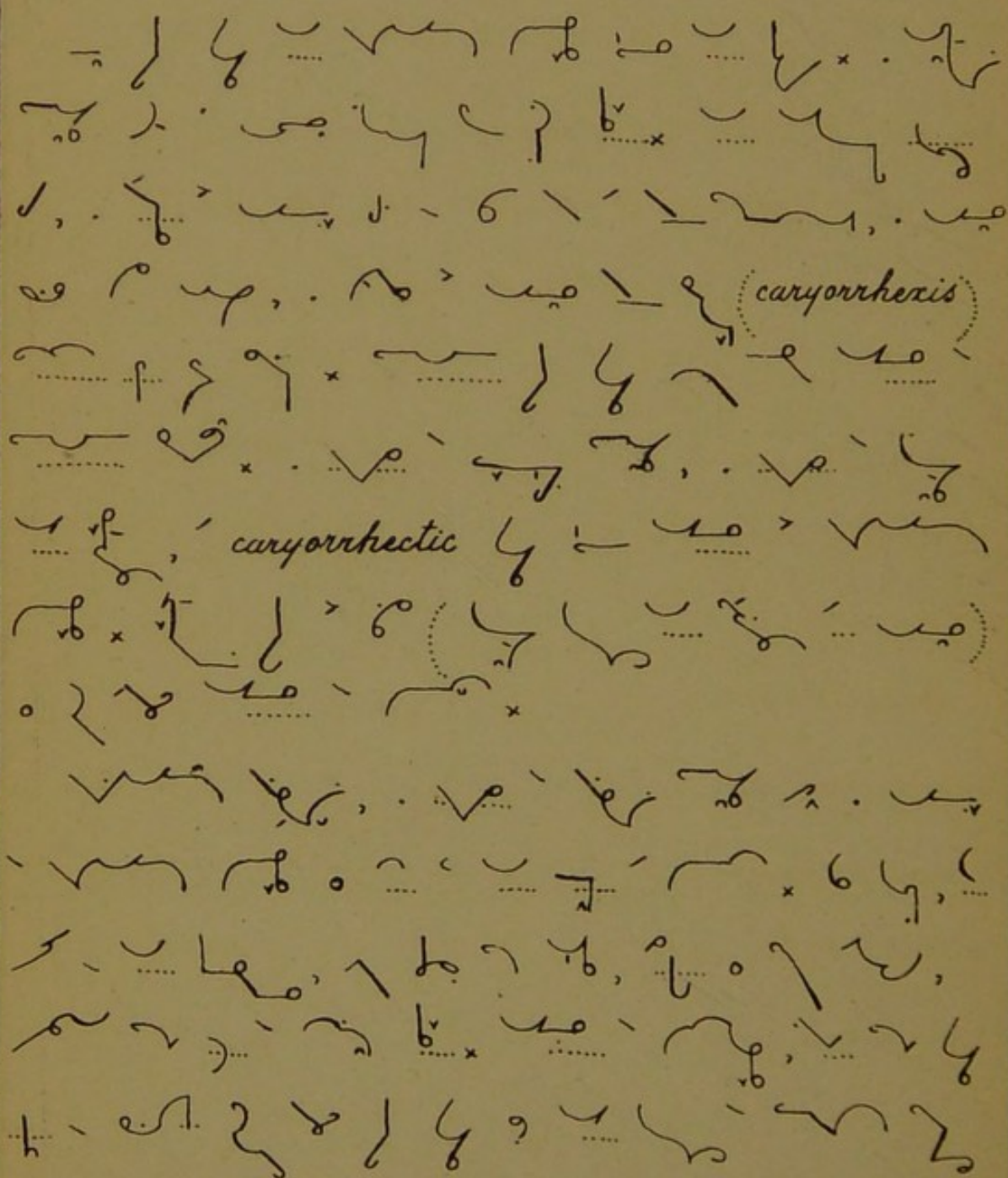
prognosis : . 



Mast cells /  v. Jaksch's





*Deductions to be made from observations of
degenerative changes in Leucocytes.*



Caryorrhesis. . ٢ > م١ - . ٦ , ٧ ٦ \.

٢ ٢ () *

Erythroblast. . م١ ١ ٦ *

Granulocyte. . ٢ / ١ م١ *

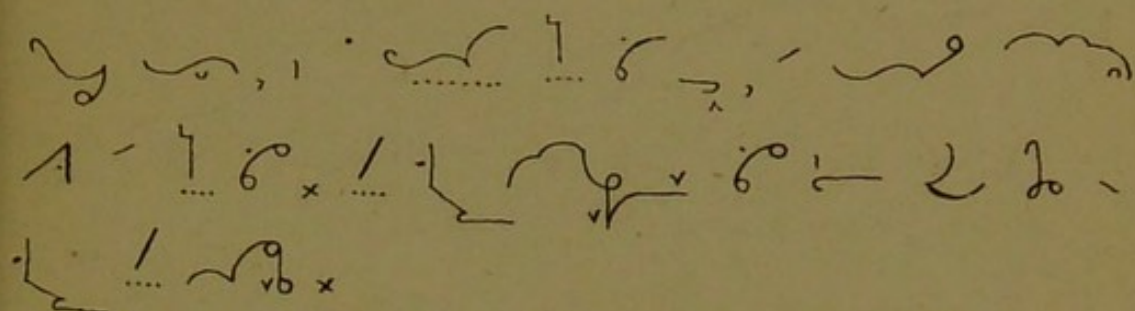
Gigantoblast. . م١ ١ ٦ م١ *

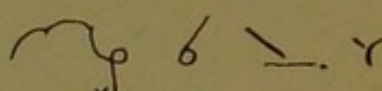
Large Lymphocyte. . ١ ٦ - ١ ٦ - ١

٦ * . ٦ ٠ ! , . ٦ ٠ م١ - ١ م١ , م١ . م١
٠ م١ , . ١ ٠ م١ م١ , ٢ م١ : م١ *


Leucaemia. . ١ ٧ ٢ م١ > < \ م١ م١
- م١ م١ , ٦ \ م١ / م١ } م١ - ١ * ١
٦ م١ ١ ٦ : " م١ م١ " , ٦ م١ ٦ - م١ م١ *
٢ م١ م١ م١ * . م١ م١ م١ , م١ م١ , م١ ,
١ , / م١ , ١ م١ / م١ م١ م١ م١ م١ م١
م١ م١ م١ (> ٠ م١ * . م١ م١ م١ م١ م١
٦ / م١ م١ م١ / م١ م١ . م١ ٠ م١ ! ,
١ م١ م١ م١ م١ م١ م١ م١ م١ م١ م١
٠ م١ ٠ م١ , ١ م١ م١ م١ م١ م١ م١ م١
- م١ م١ م١ م١ *

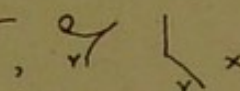
Leucanaemia. . ١ ٧ ٢ م١ , م١ م١

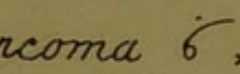
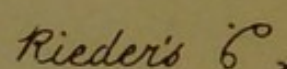


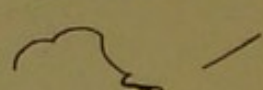
Leucocytoid lymphocyte. 

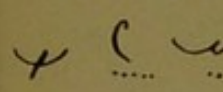
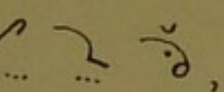
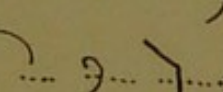
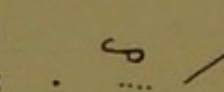
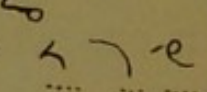
(18) x

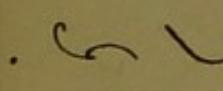
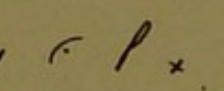
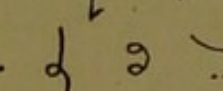
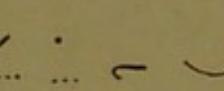
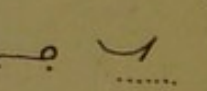
Leucocytoid lymphoidocyte. 

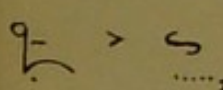
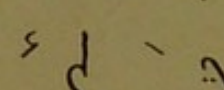
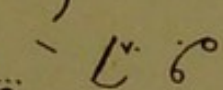
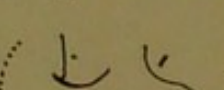
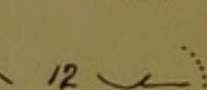
Rieder's  x

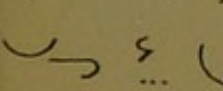
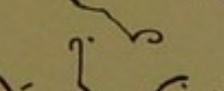
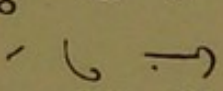
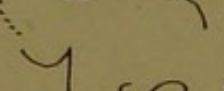
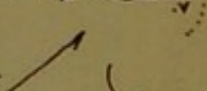
Leucosarcoma  x Rieder's  x

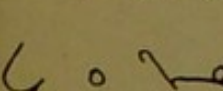
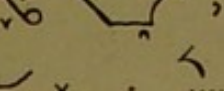
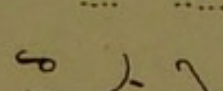
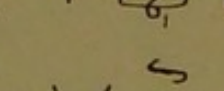
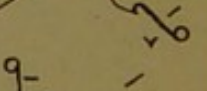
Lymphadenoma. 

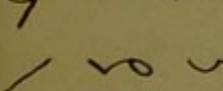
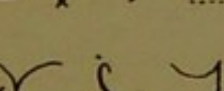
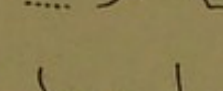
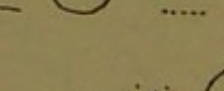
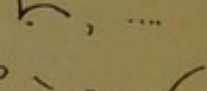
    

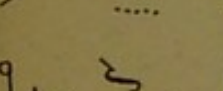
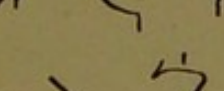
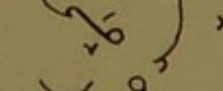
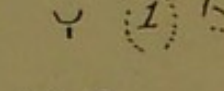
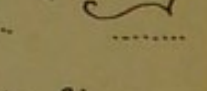
    

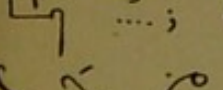
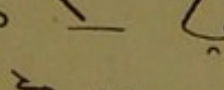
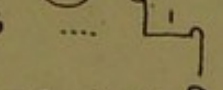
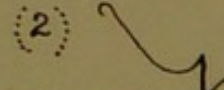
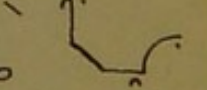
    

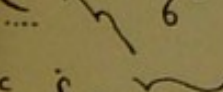
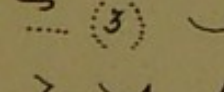
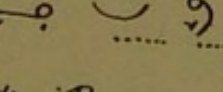
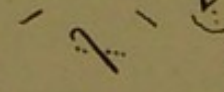
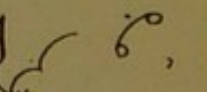
    

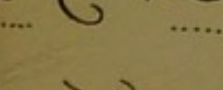
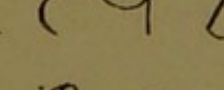
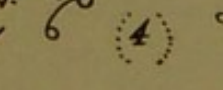
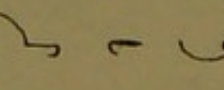
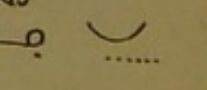
    

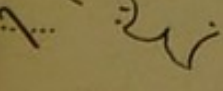
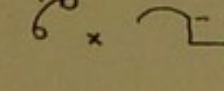
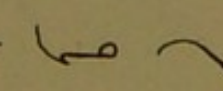
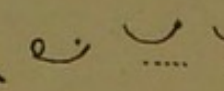
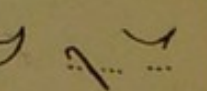
    

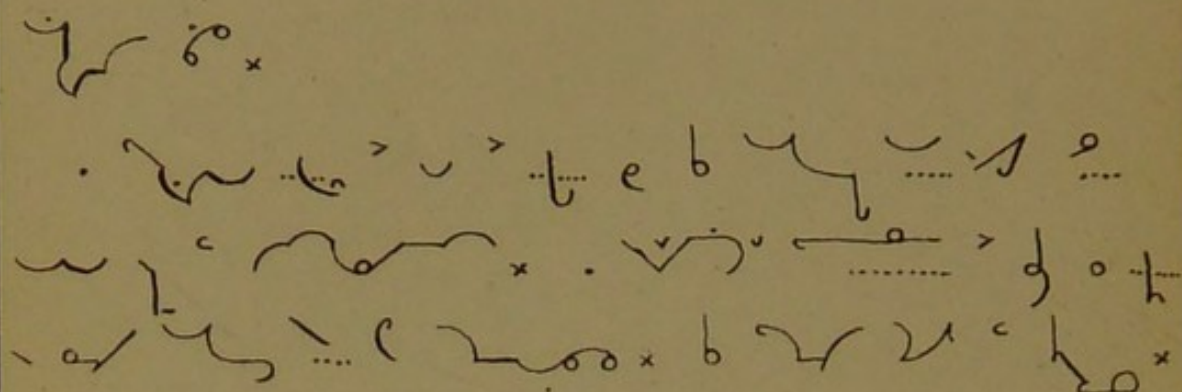
    

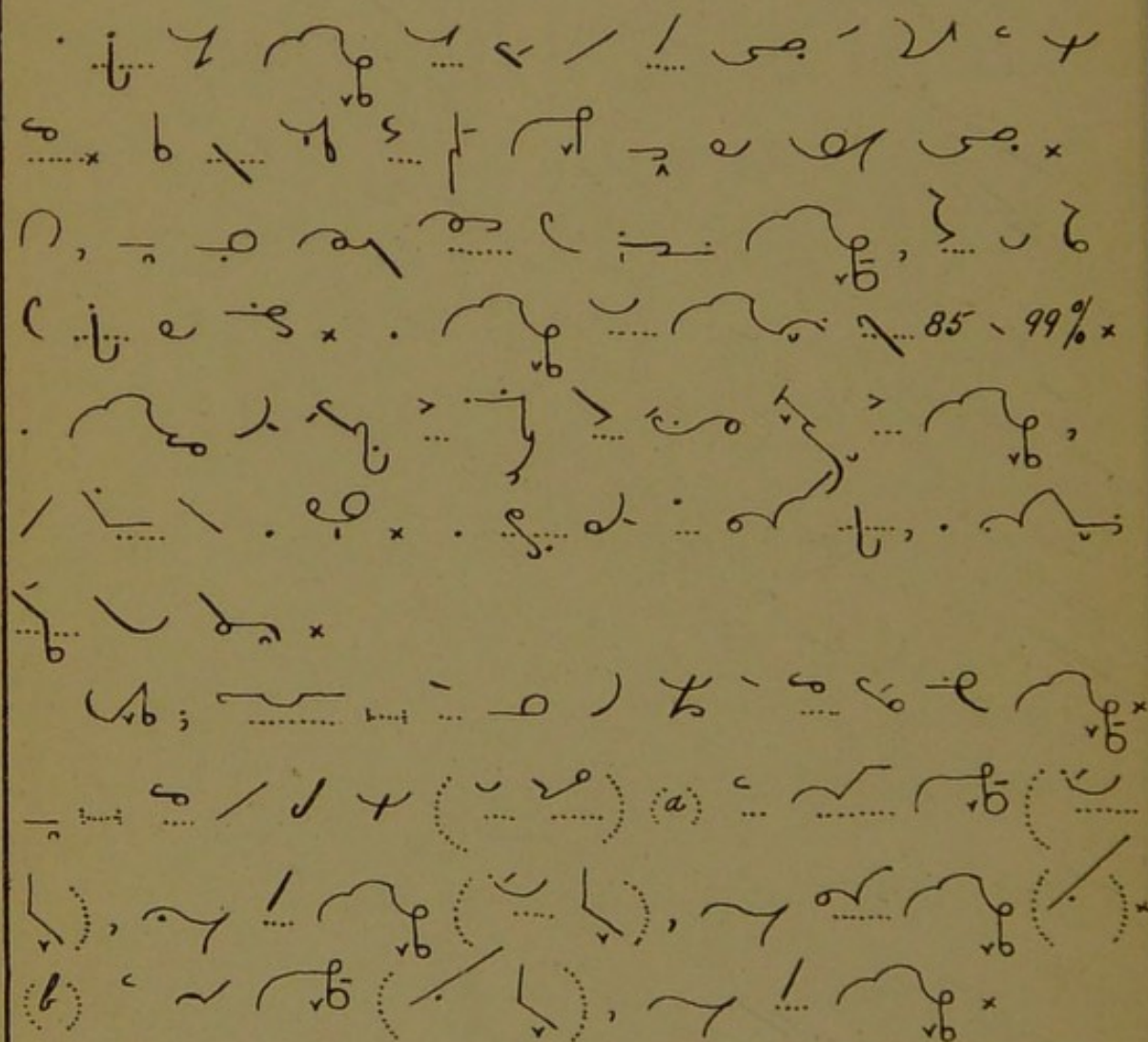
    



Lymphatic leucaemia. Synonyms:

acute lymphæmia, lymphocythæmia.



Lymphoid marrow cell. N 6 - Türk x

Lymphoid leucocyte. N 6 - Türk x

2 ✓ \ { ' 6 = \ - m x , l m
 e) | . e , . 6 m ✓ . m x
 x o r . 6 o . 2 \ - . m x

Lympholeucocyte ○ = \ x

Lymphoidocyte . ! 6 \ . m ,

✓ m , \ x . 6 o m x

Lymphosarcoma . m m

✓ > m , m m m m m m m m
 m m m m m m m m m m m m
 () ✓ 2) x

Megaloblast . m A 6 \ / 9 () > ¹⁰

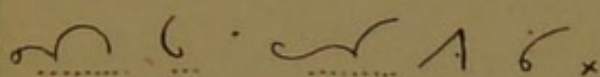
Metachromatophilia . m m m x

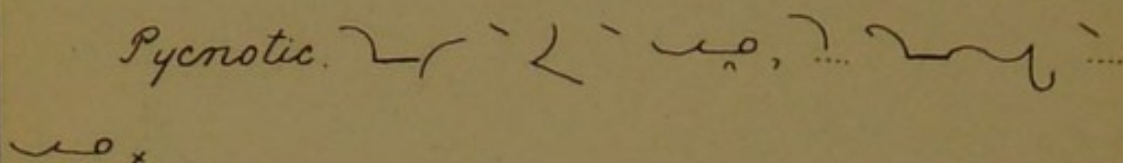
Metamyelocyte . m m m x

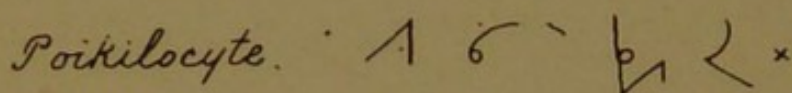
Myelocyte . m m m x m

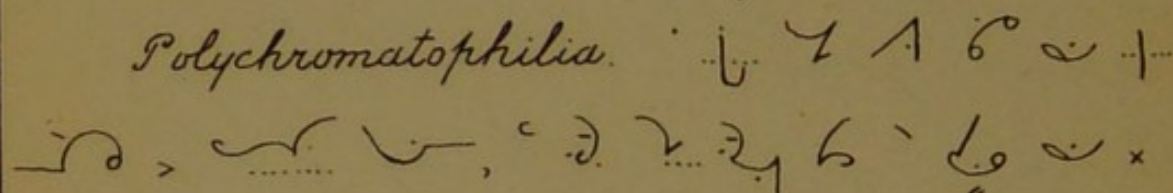
> m m m m m m m m m m m m
 m m m m m m m m m m m m
 m m m m m m m m m m m m
 m m m m m m m m m m m m

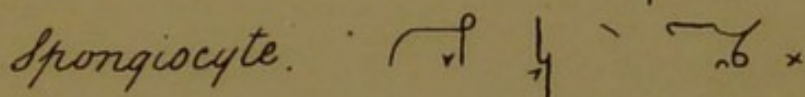
Normoblast . m A 6 > o 9 m

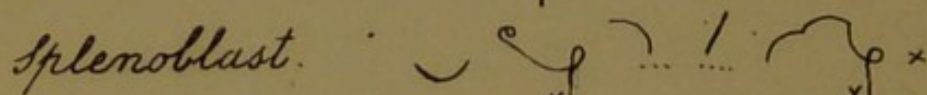
 6 x

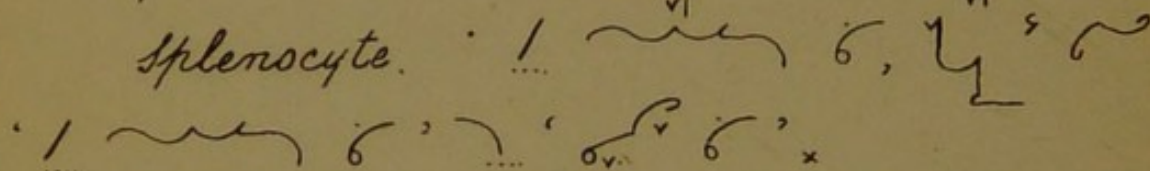
Pycnotic.  x

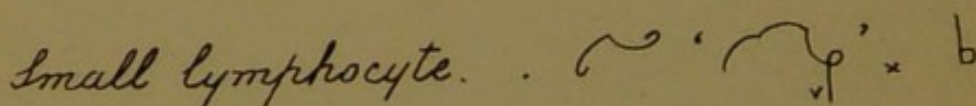
Poikilocyte.  x

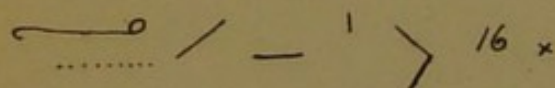
Polychromatophilia.  x

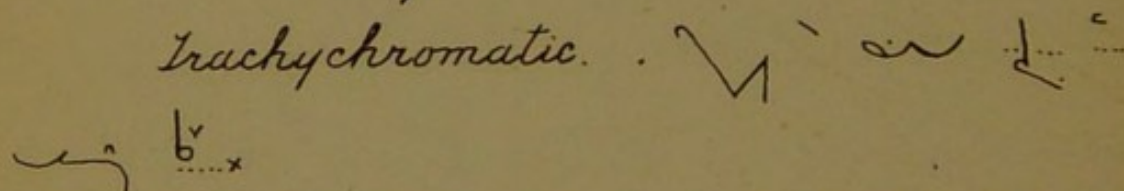
Spongiocyte.  x

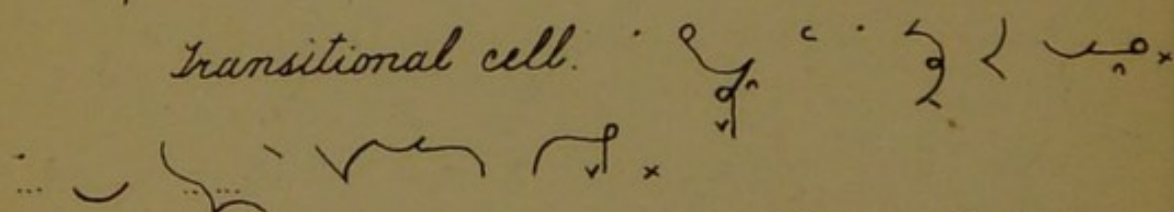
Splenoblast.  x

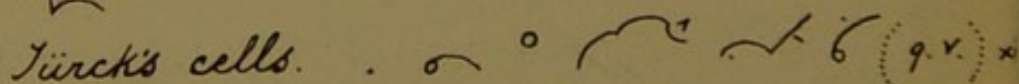
Splensocyte.  x

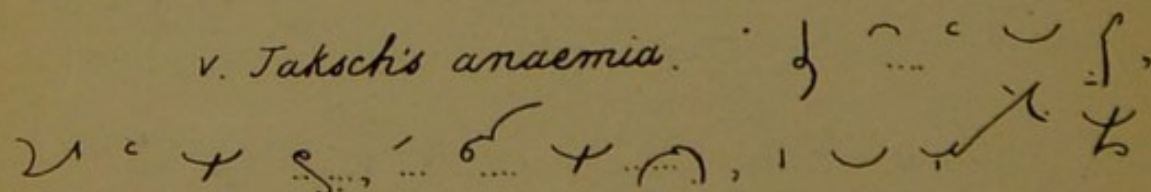
Small lymphocyte.  x




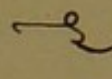


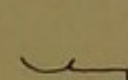





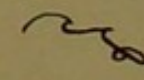

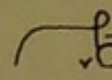



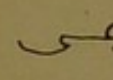
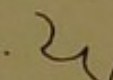
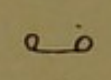
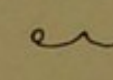
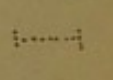
 16 x

Trachychromatic.  x

Transitional cell.  x

Türck's cells.  x

v. Jaksch's anaemia.  x

-  x . A 6  -  , '  
 -  x  A 6  -  /  , 
 o    x  20   
 '   \  x  

anaemia infantum pseudo-leukaemica x

SECTION II.

THE DIAGNOSIS OF MORBID TISSUES.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

To prepare the tissue for section-cutting, 1.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

the best general stain

Sartorius of Göttingen,

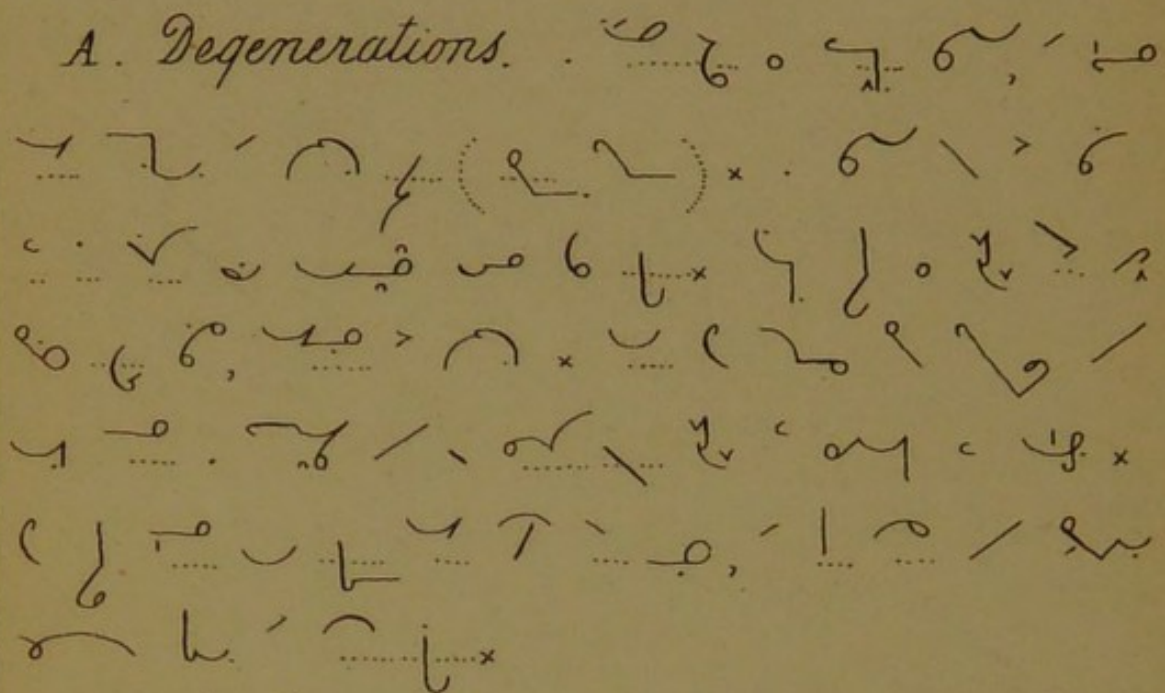
Procedure for arriving at a diagnosis.

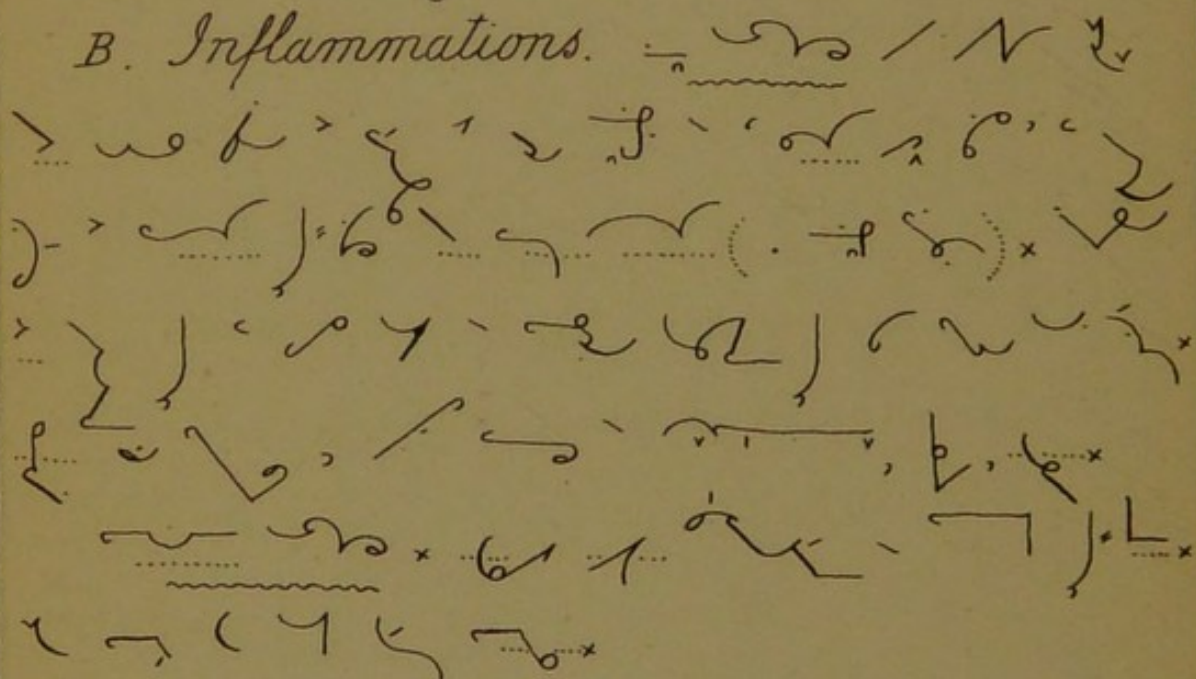
A.

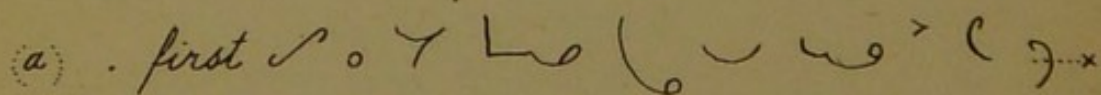
B.

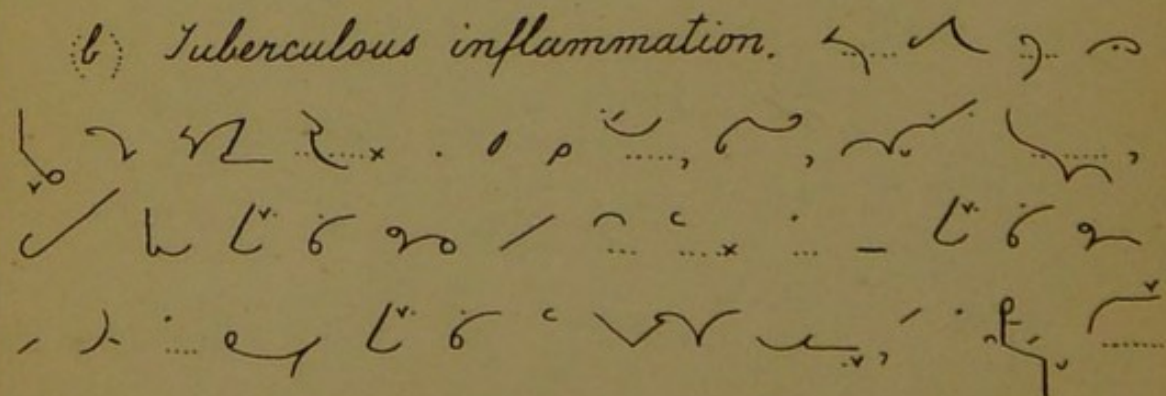
C.

(a) (b) (c) (d)

A. Degenerations. 

B. Inflammations. 

(a) first 

(b) Tuberculous inflammation. 

Handwritten musical notation on a single page, featuring various notes, rests, and bar lines. The notation is written in a cursive, handwritten style, typical of early manuscript notation. The page is numbered '1' in the top right corner.

c) Syphilitic lesions. . ✓ en, ... L
 } - e o b y y x . L - L o y }
 } o u b y x } , } o r b . 2 y
 } r r r x . b y - L . L L y
 . m - m - m ✓ b x . y , h
 } + ' u r L - h 8 : e
 b / e - e - e - e , y y x
 b u y z } o f a . e p
 - e e x . e L a , - e L f a
 } ' f e a i y h L . e o , i c
 } w (e e o . h f x . e a y
 . e e e p o . - y y x
 d } b e , e e , y y y , i c
 } - e y y y x . b o o
 } y - L , o : ' M ' y , b y y e
 o L ✓ y y y y y y y y y x
 . o b y x . y y y y y y y
 i)) y y e p e y y y y
 y y . L x . y c y y y o h x

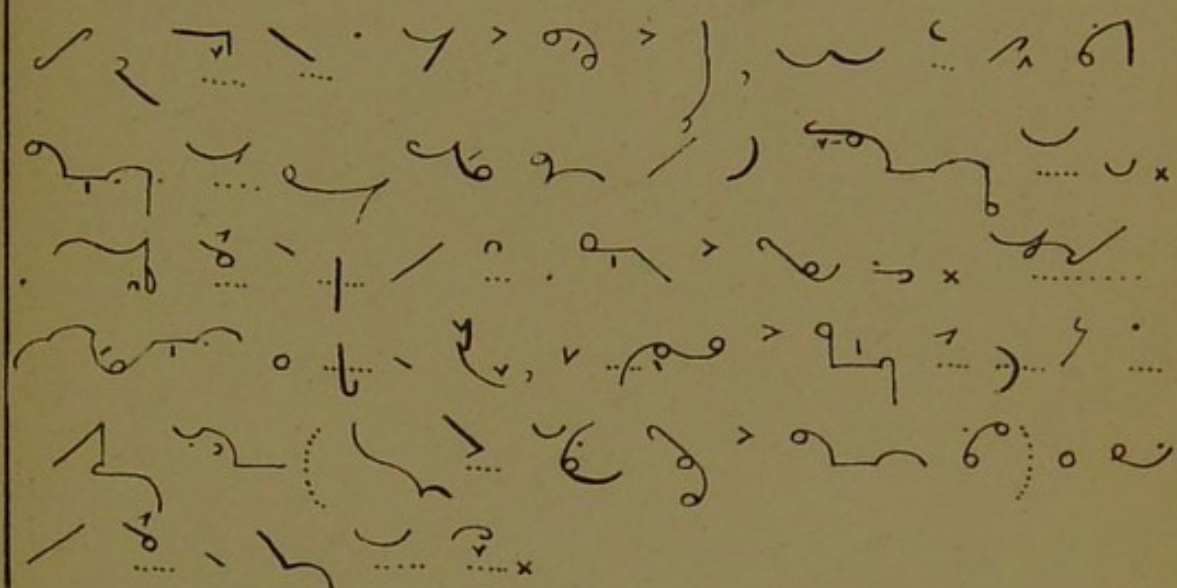
1. > u 6, - 2 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1. Spindle-shaped cells - 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100

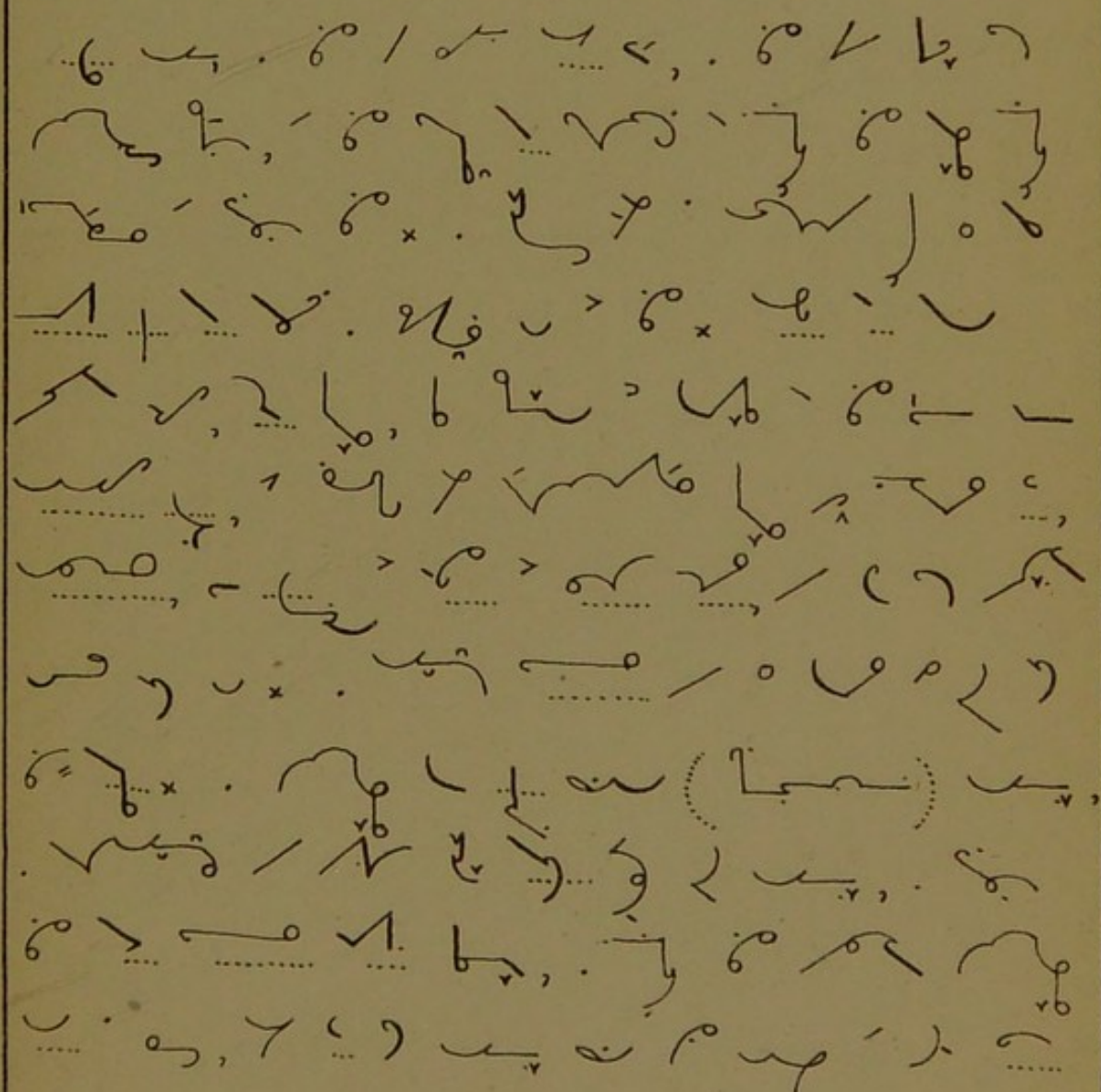
> - - - - - 9 - - - - - 6 - - - - - 1
 0 - - - - - 4 - - - - - 8 - - - - - 2 - - - - - 5
 0 - - - - - 7 - - - - - 3 - - - - - 6 - - - - - 1
 0 - - - - - 5 - - - - - 4 - - - - - 3 - - - - - 2
 4 - - - - - 7 - - - - - 6 - - - - - 5 - - - - - 4
 7 - - - - - 6 - - - - - 5 - - - - - 4 - - - - - 3
 2 - - - - - 1 - - - - - 0 - - - - - 9 - - - - - 8

β. Round cells. 6 - - - - - 5 - - - - - 4 - - - - - 3
 - - - - - 2 - - - - - 1 - - - - - 0 - - - - - 9 - - - - - 8
 - - - - - 7 - - - - - 6 - - - - - 5 - - - - - 4 - - - - - 3
 2 - - - - - 1 - - - - - 0 - - - - - 9 - - - - - 8
 7 - - - - - 6 - - - - - 5 - - - - - 4 - - - - - 3
 2 - - - - - 1 - - - - - 0 - - - - - 9 - - - - - 8
 7 - - - - - 6 - - - - - 5 - - - - - 4 - - - - - 3
 2 - - - - - 1 - - - - - 0 - - - - - 9 - - - - - 8
 7 - - - - - 6 - - - - - 5 - - - - - 4 - - - - - 3
 2 - - - - - 1 - - - - - 0 - - - - - 9 - - - - - 8

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.



Round cells of inflammatory tissue.



1. ...
 2. ...
 3. ...
 4. ...
 5. ...
 6. ...
 7. ...
 8. ...
 9. ...
 10. ...

γ. Multinucleate cells. Giant cells. 16

1. ...
 2. ...
 3. ...
 4. ...
 5. ...
 6. ...
 7. ...
 8. ...

Handwritten musical notation on a single page, featuring a series of rhythmic symbols and notes arranged in a single line. The notation includes various symbols such as vertical lines, dots, and curved lines, suggesting a form of musical shorthand or a specific dialect of musical notation. The page is numbered '1' in the top right corner.

Handwritten musical notation on three staves, featuring various notes, rests, and decorative flourishes.

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

[illegible]

Handwritten notes in Arabic script, likely describing cellular morphology or diagnostic criteria for carcinoma cells.

. columnar carcinomata ¹ glandular tumours

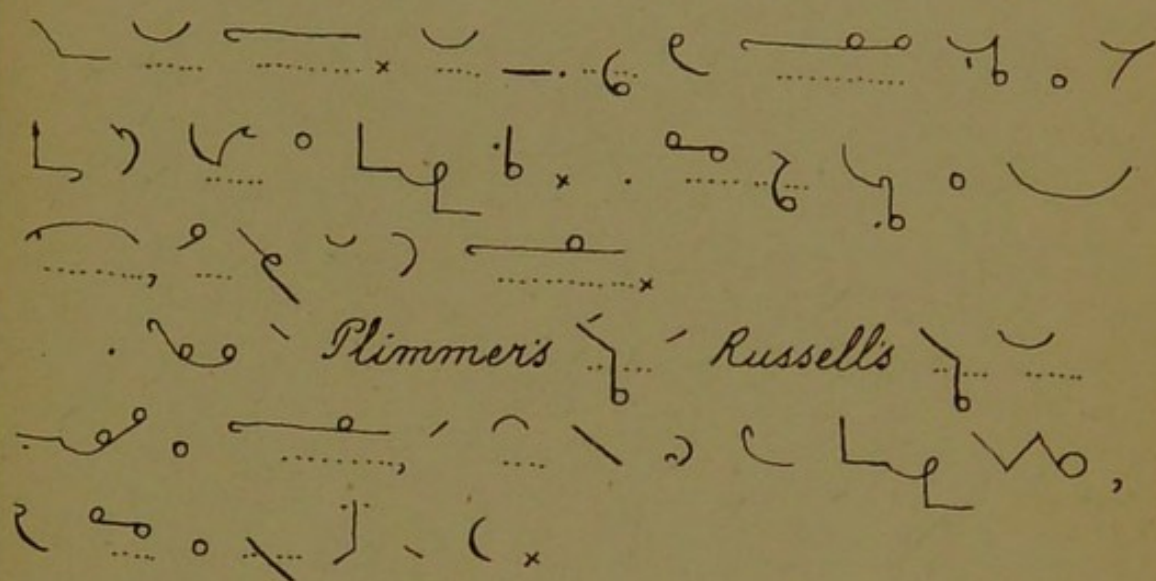
Handwritten notes in Arabic script, continuing the description of columnar carcinomata and glandular tumours.

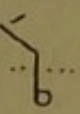
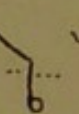
. spheroidal-celled carcinomata ¹ sarco-

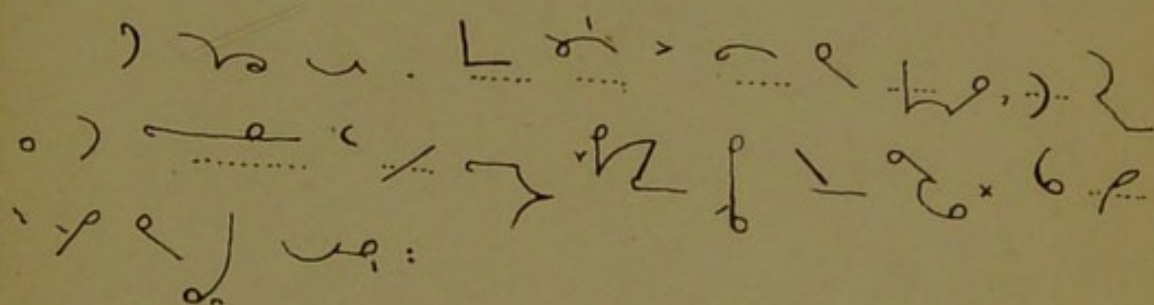
carcinomata () Handwritten notes in Arabic script, continuing the description of spheroidal-celled carcinomata and sarcomata.

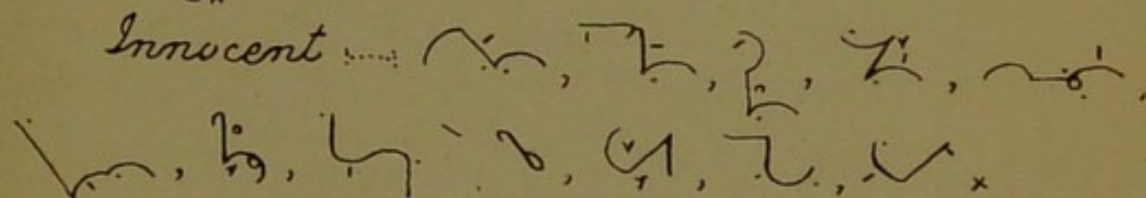
Handwritten notes in Arabic script, including numbered references (1) and (2) and (3).

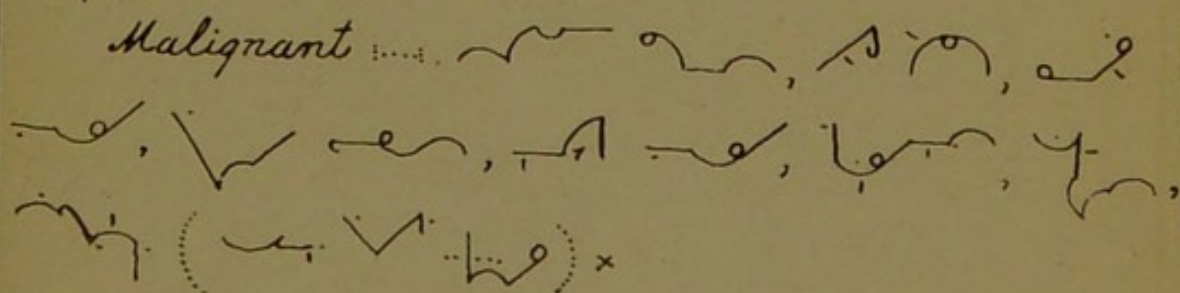
(1) ...
 ...
 ... (2) ...
 ...
 ...
 ...
 ... (3) ...
 ...
 ...
 ...
 ... (4) ...
 ...
 ...
 ...
 ... (5) ...
 ...
 ...
 ...
 ... (6) ...
 ...
 ...
 ... (7) ...
 ...
 ...
 ...
 ...
 ... (8) ...
 ...
 ...
 ...
 ...
 ... (9) ...
 ...



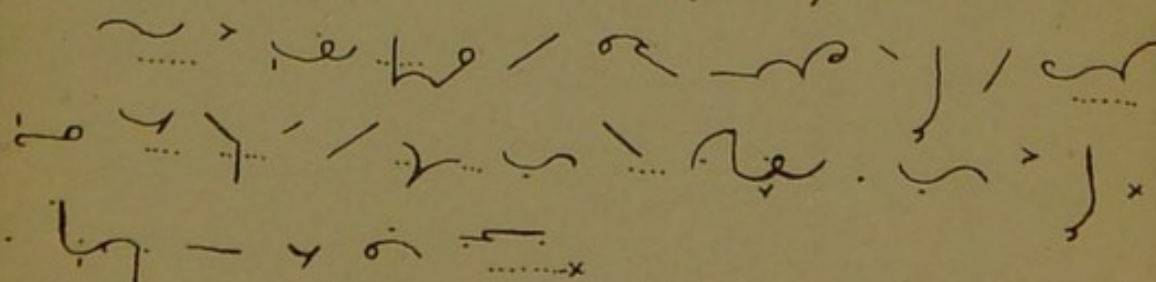
 Plimmer's  Russell's 

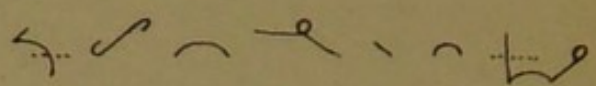


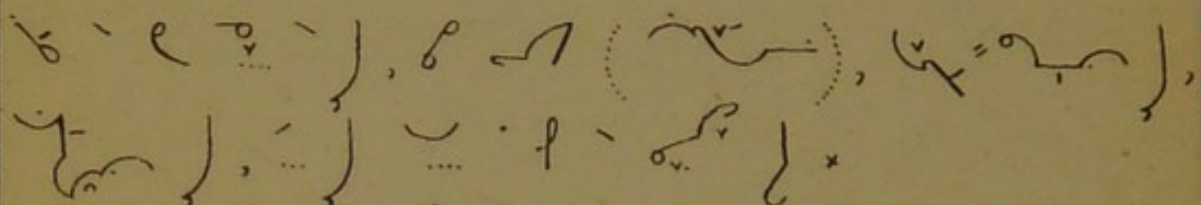
Innocent 

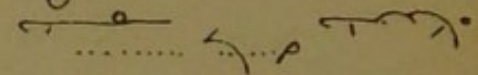
Malignant 

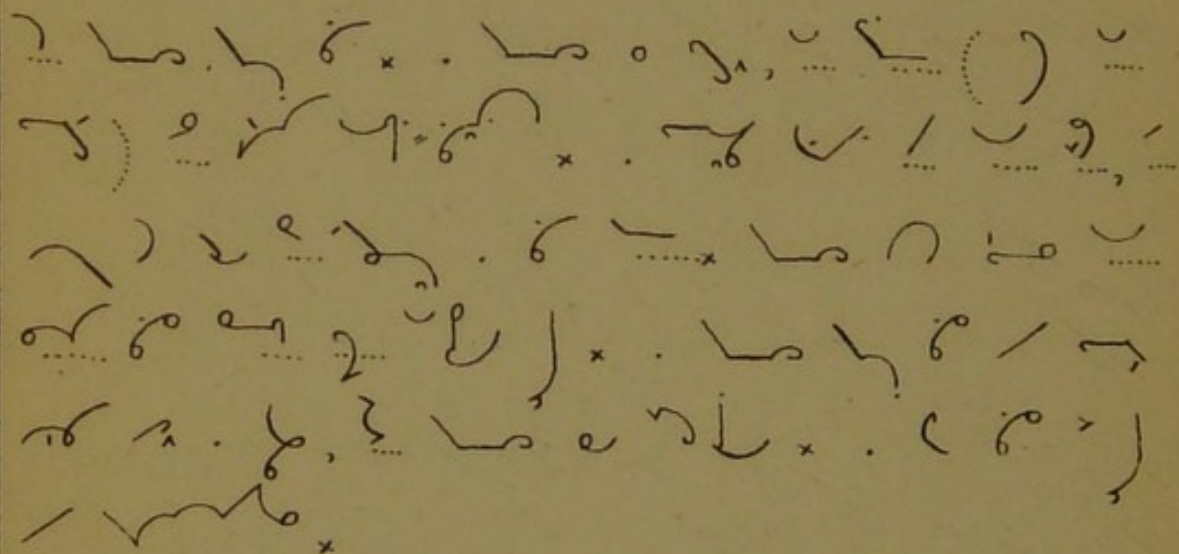
Maligno-innocent hyperrephroma.

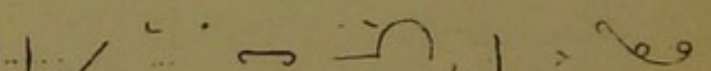
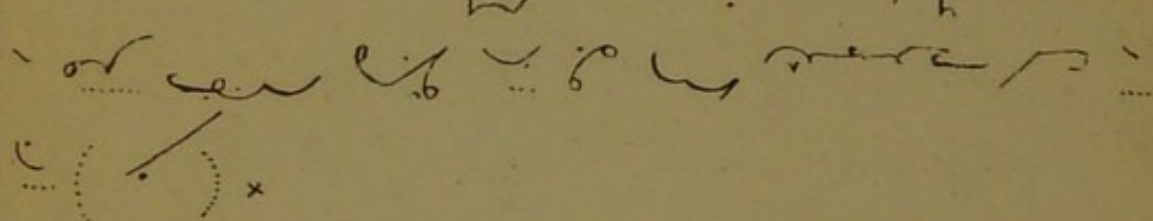


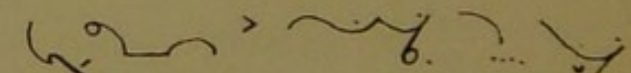
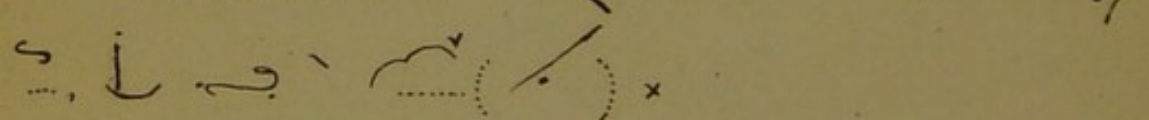
Parotid Tumour x 

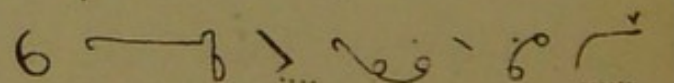
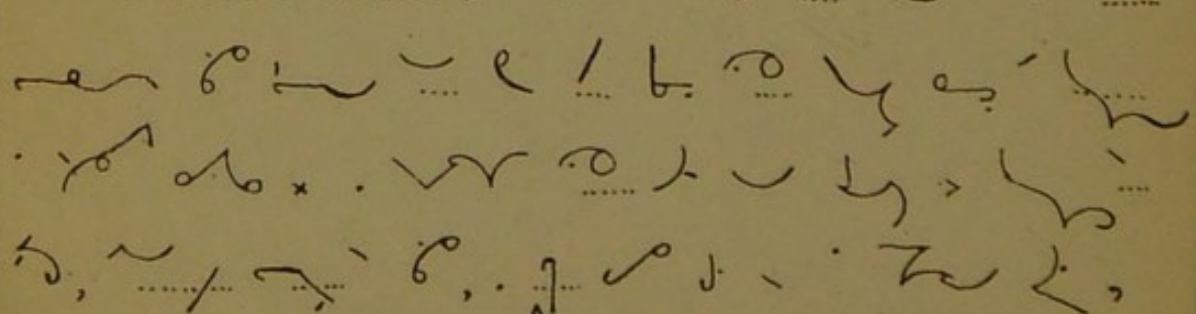


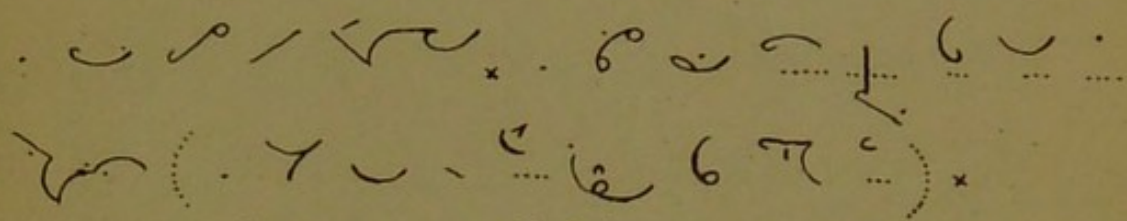
Melanotic Sarcoma x 

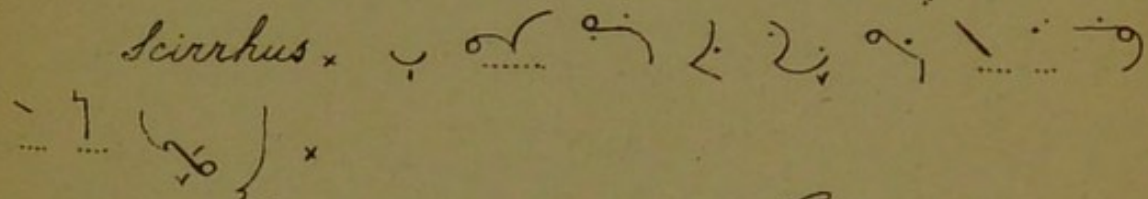


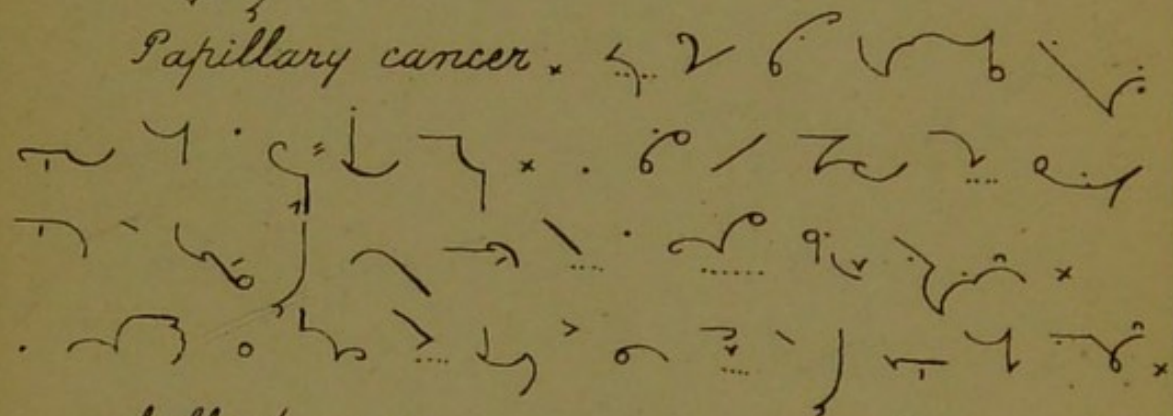
Chloroma o 


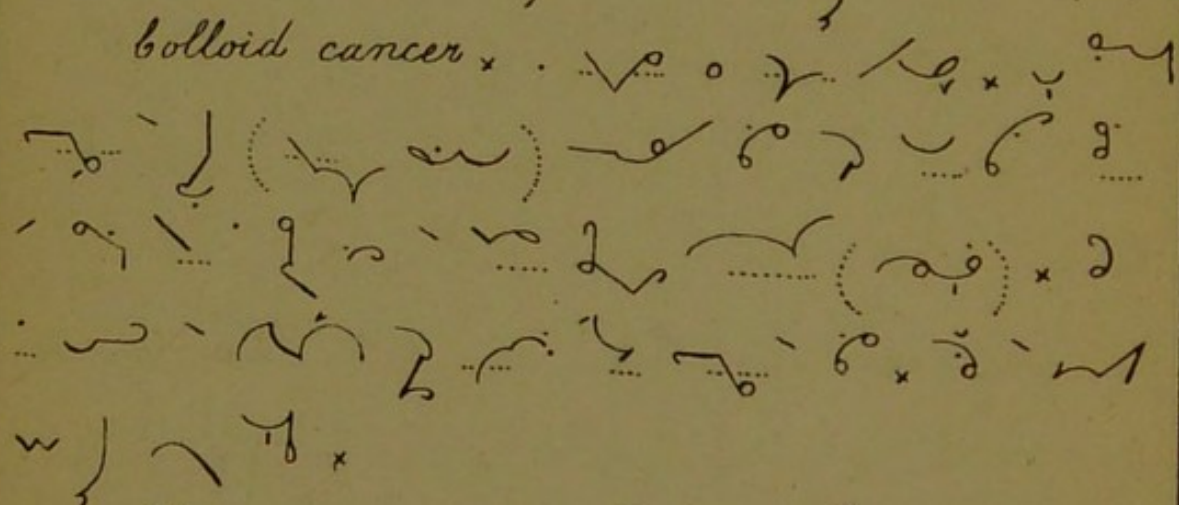
Psamomma o 


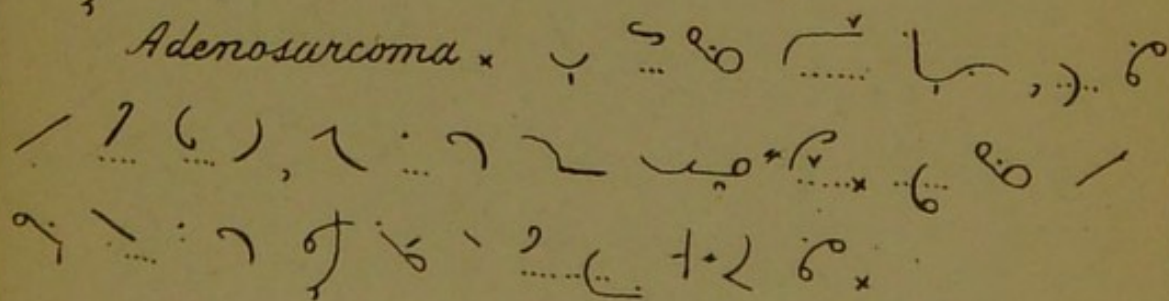
Rodent Ulcer x 


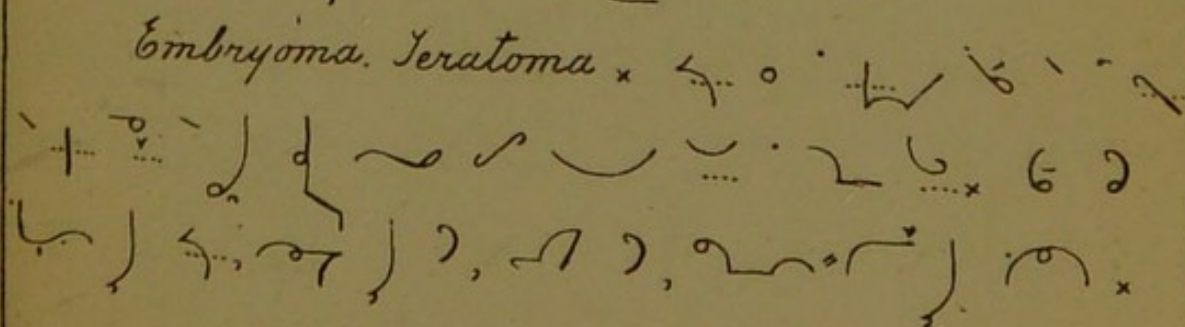
Scirrhus. 

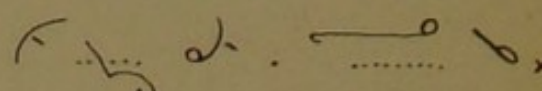
Papillary cancer. 

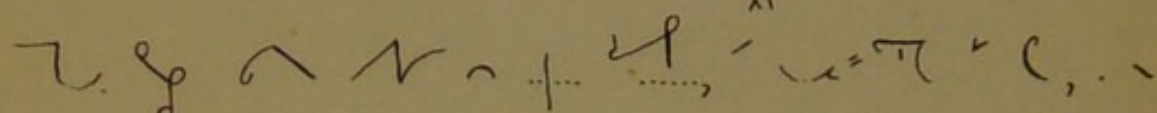
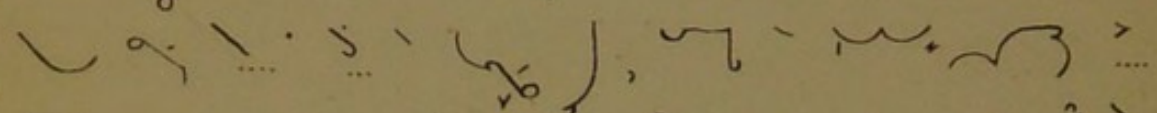
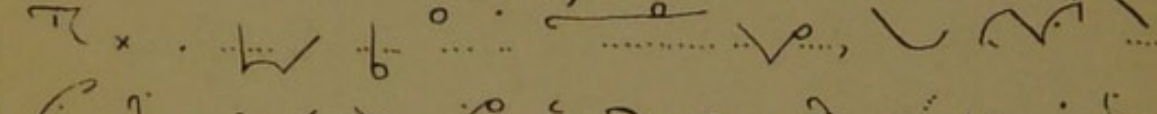
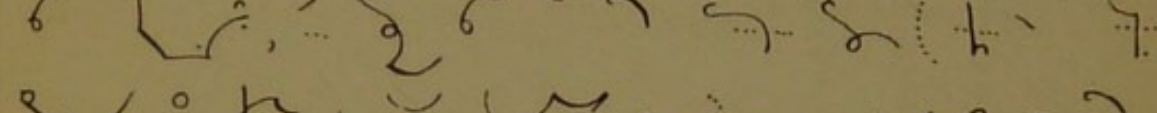
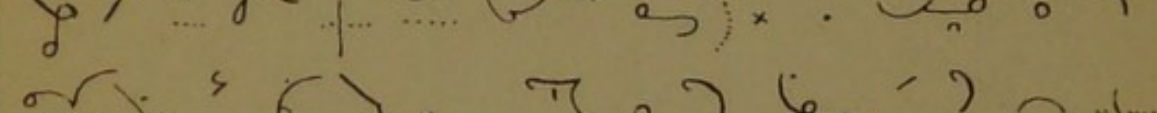
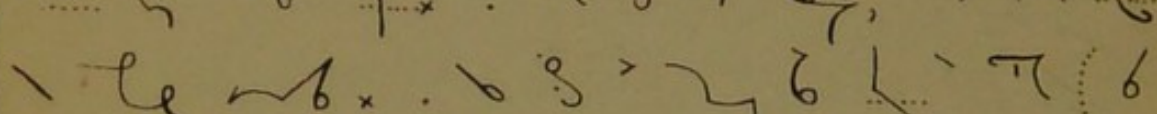
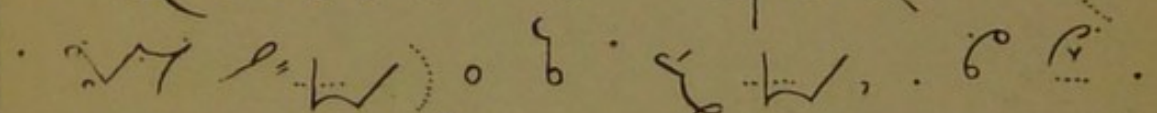
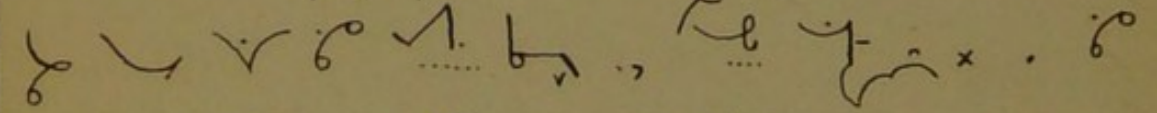
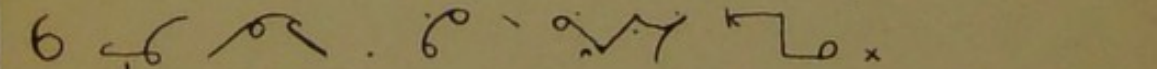
Colloid cancer. 

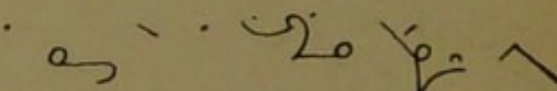
Adenosarcoma. 

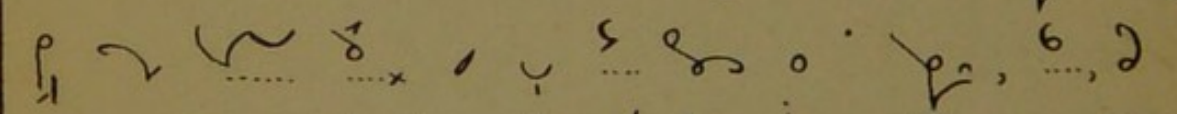
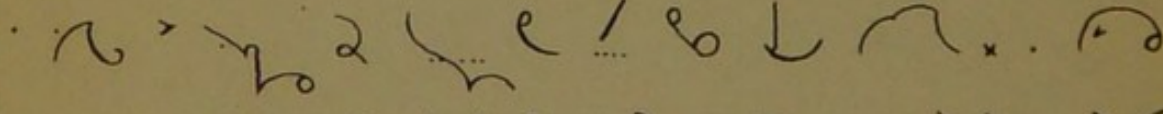
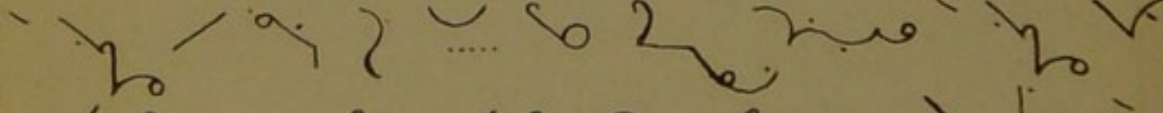
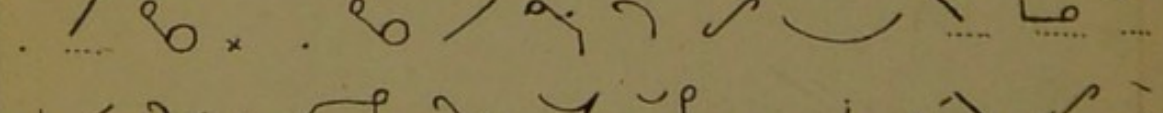
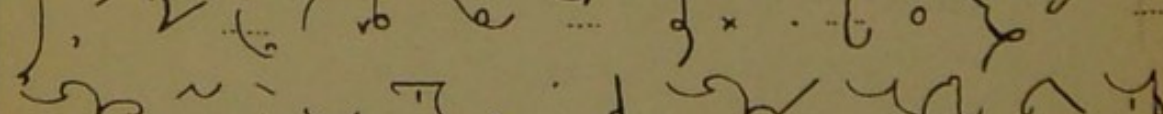
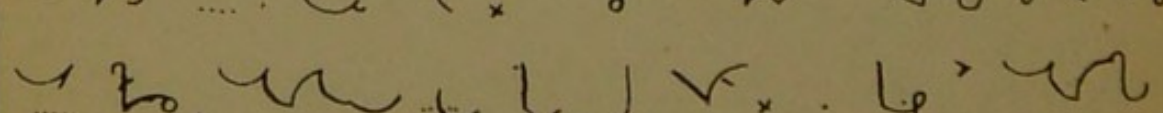
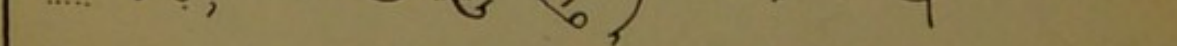
Embryoma. Teratoma. 



Hypernephroma x . 

Anthrax Pustule x . 

Molluscum contagiosum . . .

Specimens of Kidney . . .

Handwritten musical notation on a page with ten staves. The notation is a form of musical shorthand using various symbols, including lines, curves, and dots, some of which are circled or underlined. The page is numbered '10' in the top right corner.

Handwritten musical notation on a single staff. The notation includes various rhythmic symbols, rests, and accidentals. The first measure contains a half note, a quarter note, and a half note. The second measure contains a half note, a quarter note, and a half note. The third measure contains a half note, a quarter note, and a half note. The fourth measure contains a half note, a quarter note, and a half note. The fifth measure contains a half note, a quarter note, and a half note. The sixth measure contains a half note, a quarter note, and a half note. The seventh measure contains a half note, a quarter note, and a half note. The eighth measure contains a half note, a quarter note, and a half note. The ninth measure contains a half note, a quarter note, and a half note. The tenth measure contains a half note, a quarter note, and a half note. The eleventh measure contains a half note, a quarter note, and a half note. The twelfth measure contains a half note, a quarter note, and a half note. The thirteenth measure contains a half note, a quarter note, and a half note. The fourteenth measure contains a half note, a quarter note, and a half note. The fifteenth measure contains a half note, a quarter note, and a half note. The sixteenth measure contains a half note, a quarter note, and a half note. The seventeenth measure contains a half note, a quarter note, and a half note. The eighteenth measure contains a half note, a quarter note, and a half note. The nineteenth measure contains a half note, a quarter note, and a half note. The twentieth measure contains a half note, a quarter note, and a half note. The notation is written in a cursive style with many slurs and ties.

pneumokonioses

١. ٢. ٣. ٤. ٥. ٦. ٧. ٨. ٩. ١٠. ١١. ١٢. ١٣. ١٤. ١٥. ١٦. ١٧. ١٨. ١٩. ٢٠. ٢١. ٢٢. ٢٣. ٢٤. ٢٥. ٢٦. ٢٧. ٢٨. ٢٩. ٣٠. ٣١. ٣٢. ٣٣. ٣٤. ٣٥. ٣٦. ٣٧. ٣٨. ٣٩. ٤٠. ٤١. ٤٢. ٤٣. ٤٤. ٤٥. ٤٦. ٤٧. ٤٨. ٤٩. ٥٠. ٥١. ٥٢. ٥٣. ٥٤. ٥٥. ٥٦. ٥٧. ٥٨. ٥٩. ٦٠. ٦١. ٦٢. ٦٣. ٦٤. ٦٥. ٦٦. ٦٧. ٦٨. ٦٩. ٧٠. ٧١. ٧٢. ٧٣. ٧٤. ٧٥. ٧٦. ٧٧. ٧٨. ٧٩. ٨٠. ٨١. ٨٢. ٨٣. ٨٤. ٨٥. ٨٦. ٨٧. ٨٨. ٨٩. ٩٠. ٩١. ٩٢. ٩٣. ٩٤. ٩٥. ٩٦. ٩٧. ٩٨. ٩٩. ١٠٠.

Diseases of the Liver * & areogenous capsula-

tus ١. ٢. ٣. ٤. ٥. ٦. ٧. ٨. ٩. ١٠. ١١. ١٢. ١٣. ١٤. ١٥. ١٦. ١٧. ١٨. ١٩. ٢٠. ٢١. ٢٢. ٢٣. ٢٤. ٢٥. ٢٦. ٢٧. ٢٨. ٢٩. ٣٠. ٣١. ٣٢. ٣٣. ٣٤. ٣٥. ٣٦. ٣٧. ٣٨. ٣٩. ٤٠. ٤١. ٤٢. ٤٣. ٤٤. ٤٥. ٤٦. ٤٧. ٤٨. ٤٩. ٥٠. ٥١. ٥٢. ٥٣. ٥٤. ٥٥. ٥٦. ٥٧. ٥٨. ٥٩. ٦٠. ٦١. ٦٢. ٦٣. ٦٤. ٦٥. ٦٦. ٦٧. ٦٨. ٦٩. ٧٠. ٧١. ٧٢. ٧٣. ٧٤. ٧٥. ٧٦. ٧٧. ٧٨. ٧٩. ٨٠. ٨١. ٨٢. ٨٣. ٨٤. ٨٥. ٨٦. ٨٧. ٨٨. ٨٩. ٩٠. ٩١. ٩٢. ٩٣. ٩٤. ٩٥. ٩٦. ٩٧. ٩٨. ٩٩. ١٠٠.

١. ٢. ٣. ٤. ٥. ٦. ٧. ٨. ٩. ١٠. ١١. ١٢. ١٣. ١٤. ١٥. ١٦. ١٧. ١٨. ١٩. ٢٠. ٢١. ٢٢. ٢٣. ٢٤. ٢٥. ٢٦. ٢٧. ٢٨. ٢٩. ٣٠. ٣١. ٣٢. ٣٣. ٣٤. ٣٥. ٣٦. ٣٧. ٣٨. ٣٩. ٤٠. ٤١. ٤٢. ٤٣. ٤٤. ٤٥. ٤٦. ٤٧. ٤٨. ٤٩. ٥٠. ٥١. ٥٢. ٥٣. ٥٤. ٥٥. ٥٦. ٥٧. ٥٨. ٥٩. ٦٠. ٦١. ٦٢. ٦٣. ٦٤. ٦٥. ٦٦. ٦٧. ٦٨. ٦٩. ٧٠. ٧١. ٧٢. ٧٣. ٧٤. ٧٥. ٧٦. ٧٧. ٧٨. ٧٩. ٨٠. ٨١. ٨٢. ٨٣. ٨٤. ٨٥. ٨٦. ٨٧. ٨٨. ٨٩. ٩٠. ٩١. ٩٢. ٩٣. ٩٤. ٩٥. ٩٦. ٩٧. ٩٨. ٩٩. ١٠٠.

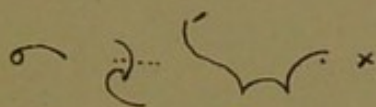
Handwritten musical notation on ten staves, featuring various notes, rests, and clefs.

Lymph-glands and spleen.

Ulcers of the Intestine.

. 9_v x m c v > m -) (\ b r
 > w a l j o b x y \ . h v , p . m
 m - j , c x y \ j w , a m , y
 (l x y \ m w b > w , b u m
 > b j w o a b y x
 p - ' h ' v ^ . m m l a }
 r v j c ' m , ' v m - b - l
 , m a u l a - p w l - j o x .
 v p - w + v - m m o o m j ((
 z b o v m m x
 . y > m > m o h . - b ,
 -) r - v l o m ({ o u . r
 v b - - z - h v b y h - e
 1 - o x y w m w m v j >
 v m m , m y j v m - m j
 o y v . p - - y . y v - practical
 v - m l x b y m m m m
 (b r y c . j - a - j v
 ~ m y b - m }

Appendix.



Toison's fluid : Sodium Chloride 1 gm. —

Sodium Sulphate 8 gm.

Glycerin 30 c.c.

Distilled Water 160 c.c.

Methyl violet 0.025 gm

Hayem's fluid. Sodium chloride 1 gm.

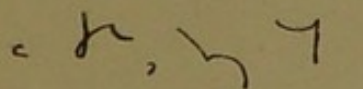
Sodium Sulphate 5 gm

Mercuric chloride 0.5 gm

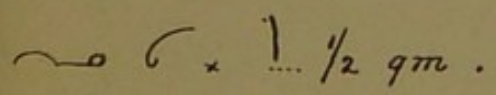
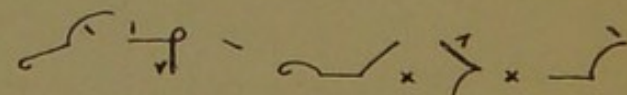
Distilled water 200 c.c.

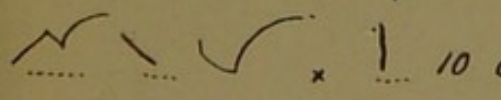
Harris' haematoxylin. Haematoxylin 1 gm

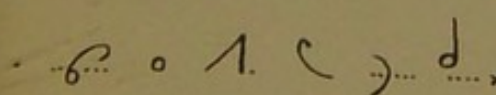
Alcohol 10 c.c

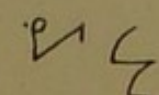
 Potash or Ammonia alum 20 gm

Hot water 200 c.c.

 1/2 gm. 

 10 c.c. glacial acetic acid.



Picric-erythrosin stain  erythrosin 4 c.c.

✓ $\text{C}_6\text{H}_3\text{O}_6$ picric acid 50 c.c.

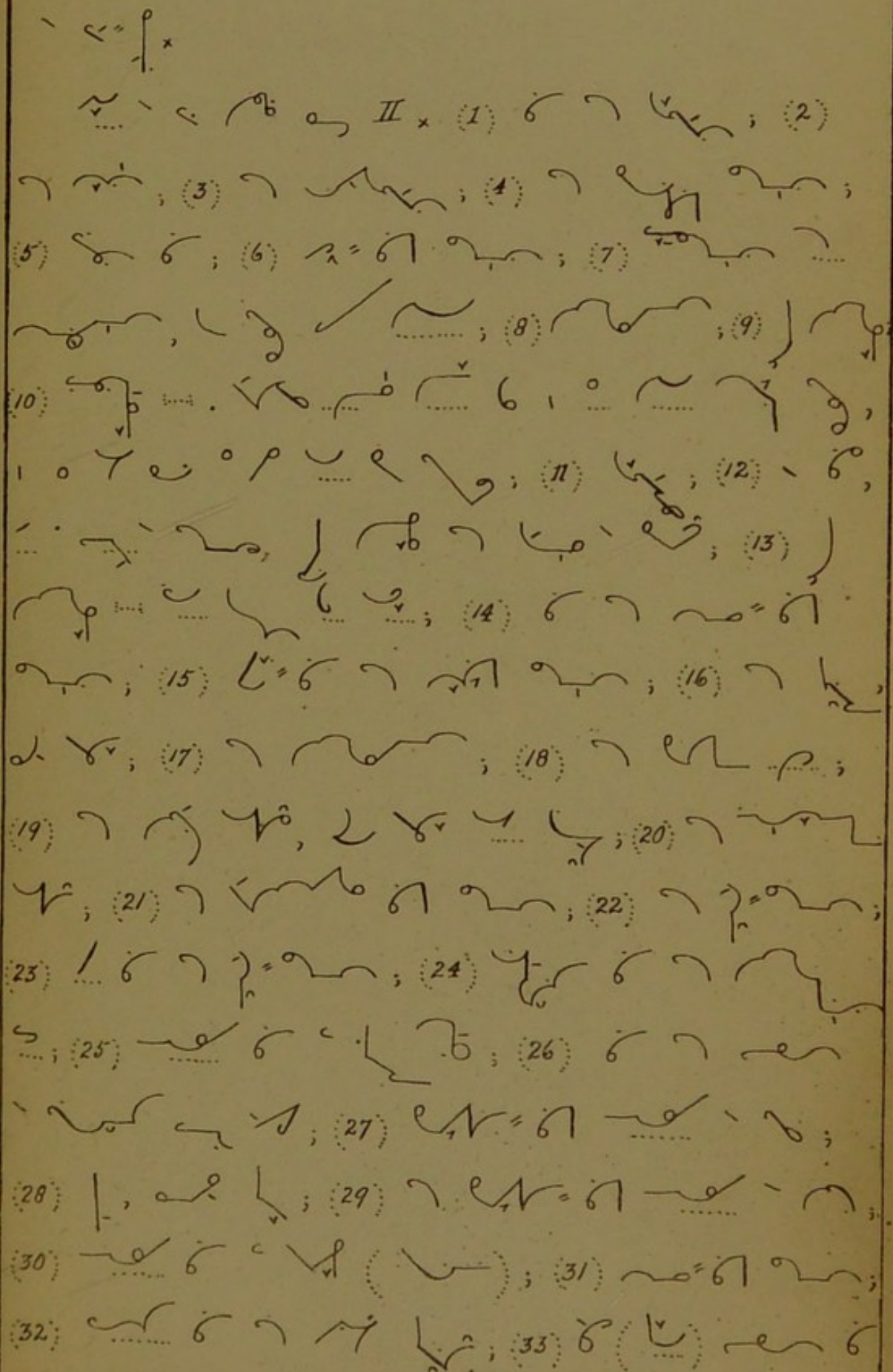
Distilled water 100 c.c.

calcium carbonate CaCO_3

1 2 5 $\text{C}_6\text{H}_3\text{O}_6$ $\frac{1}{2}$ $\text{C}_6\text{H}_3\text{O}_6$ ✓ $\text{C}_6\text{H}_3\text{O}_6$ $\text{C}_6\text{H}_3\text{O}_6$ $\text{C}_6\text{H}_3\text{O}_6$

Description of Plate.

- 1 $\text{C}_6\text{H}_3\text{O}_6$; (1) $\text{C}_6\text{H}_3\text{O}_6$; (2) $\text{C}_6\text{H}_3\text{O}_6$; (3) $\text{C}_6\text{H}_3\text{O}_6$; (4) $\text{C}_6\text{H}_3\text{O}_6$; (5) $\text{C}_6\text{H}_3\text{O}_6$; (6) $\text{C}_6\text{H}_3\text{O}_6$; (7) $\text{C}_6\text{H}_3\text{O}_6$; (8) $\text{C}_6\text{H}_3\text{O}_6$; (9) $\text{C}_6\text{H}_3\text{O}_6$; (10) $\text{C}_6\text{H}_3\text{O}_6$; (11) $\text{C}_6\text{H}_3\text{O}_6$; (12) $\text{C}_6\text{H}_3\text{O}_6$; (13) $\text{C}_6\text{H}_3\text{O}_6$; (14) $\text{C}_6\text{H}_3\text{O}_6$; (15) $\text{C}_6\text{H}_3\text{O}_6$; (16) $\text{C}_6\text{H}_3\text{O}_6$; (17) $\text{C}_6\text{H}_3\text{O}_6$; (18) $\text{C}_6\text{H}_3\text{O}_6$; (19) $\text{C}_6\text{H}_3\text{O}_6$; (20) $\text{C}_6\text{H}_3\text{O}_6$; (21) $\text{C}_6\text{H}_3\text{O}_6$; (22) $\text{C}_6\text{H}_3\text{O}_6$; (23) $\text{C}_6\text{H}_3\text{O}_6$; (24) $\text{C}_6\text{H}_3\text{O}_6$; (25) $\text{C}_6\text{H}_3\text{O}_6$; (26) $\text{C}_6\text{H}_3\text{O}_6$; (27) $\text{C}_6\text{H}_3\text{O}_6$; (28) $\text{C}_6\text{H}_3\text{O}_6$; (29) $\text{C}_6\text{H}_3\text{O}_6$; (30) $\text{C}_6\text{H}_3\text{O}_6$; (31) $\text{C}_6\text{H}_3\text{O}_6$; 19, 1



(34 - 36) eio en 6 x
y { 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100





