In [1]:
```python
import numpy as np
from PIL import Image
import matplotlib.pyplot as plt
import os
import slide as slideprocess
from slide import *
```

```
In [2]: BASE_DIR = os.path.join(".", "/media/raj/Raj1_5/data")
        # BASE_DIR = os.path.join(os.sep, "Volumes", "BigData", "TUPAC")
        TRAIN_PREFIX = "TCGA-GBM-"
        SRC_TRAIN_DIR = os.path.join(BASE_DIR, "training_slides")
        #SRC_TRAIN_DIR = os.path.join(BASE_DIR, "training_image_data")
        SRC_TRAIN_EXT = "svs"
        DEST_TRAIN_SUFFIX = ""   # Example: "train-"
        DEST_TRAIN_EXT = "png"
        SCALE_FACTOR = 32
        DEST_TRAIN_DIR = os.path.join(BASE_DIR, "training_" + DEST_TRAIN_EXT)
        THUMBNAIL_SIZE = 300
        THUMBNAIL_EXT = "jpg"

        DEST_TRAIN_THUMBNAIL_DIR = os.path.join(BASE_DIR, "training_thumbnail
        _" + THUMBNAIL_EXT)

        FILTER_SUFFIX = ""   # Example: "filter-"
        FILTER_RESULT_TEXT = "filtered"
        FILTER_DIR = os.path.join(BASE_DIR, "filter_" + DEST_TRAIN_EXT)
        FILTER_THUMBNAIL_DIR = os.path.join(BASE_DIR, "filter_thumbnail_" + T
        HUMBNAIL_EXT)
        FILTER_PAGINATION_SIZE = 50
        FILTER_PAGINATE = True
        FILTER_HTML_DIR = BASE_DIR

        TILE_SUMMARY_DIR = os.path.join(BASE_DIR, "tile_summary_" + DEST_TRAI
        N_EXT)
        TILE_SUMMARY_ON_ORIGINAL_DIR = os.path.join(BASE_DIR, "tile_summary_o
        n_original_" + DEST_TRAIN_EXT)
        TILE_SUMMARY_SUFFIX = "tile_summary"
        TILE_SUMMARY_THUMBNAIL_DIR = os.path.join(BASE_DIR, "tile_summary_thu
        mbnail_" + THUMBNAIL_EXT)
        TILE_SUMMARY_ON_ORIGINAL_THUMBNAIL_DIR = os.path.join(BASE_DIR, "tile
        _summary_on_original_thumbnail_" + THUMBNAIL_EXT)
        TILE_SUMMARY_PAGINATION_SIZE = 50
        TILE_SUMMARY_PAGINATE = True
        TILE_SUMMARY_HTML_DIR = BASE_DIR

        TILE_DATA_DIR = os.path.join(BASE_DIR, "tile_data")
        TILE_DATA_SUFFIX = "tile_data"

        TOP_TILES_SUFFIX = "top_tile_summary"
        TOP_TILES_DIR = os.path.join(BASE_DIR, TOP_TILES_SUFFIX + "_" + DEST_
        TRAIN_EXT)
        TOP_TILES_THUMBNAIL_DIR = os.path.join(BASE_DIR, TOP_TILES_SUFFIX +
        "_thumbnail_" + THUMBNAIL_EXT)
        TOP_TILES_ON_ORIGINAL_DIR = os.path.join(BASE_DIR, TOP_TILES_SUFFIX +
         "_on_original_" + DEST_TRAIN_EXT)
        TOP_TILES_ON_ORIGINAL_THUMBNAIL_DIR = os.path.join(BASE_DIR,
                                                        TOP_TILES_SUFFIX +
         "_on_original_thumbnail_" + THUMBNAIL_EXT)

        TILE_DIR = os.path.join(BASE_DIR, "tiles_" + DEST_TRAIN_EXT)
        TILE_SUFFIX = "tile"

        STATS_DIR = os.path.join(BASE_DIR, "svs_stats")
```

In [4]:
```
slideprocess.singleprocess_training_slides_to_images()
```

```
Opening Slide #1: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-032
-TCGA-02-0021-01Z-00-DX1.1cf4eb25-9406-4638-b69c-e9e141930716.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
32-TCGA-02-0021-01Z-00-DX1.1cf4eb25-9406-4638-b69c-e9e141930716.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-001-32x
-36001x28953-1125x904.png
Opening Slide #2: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-029
-TCGA-02-0007-01A-01-BS1.daf31c78-c900-400a-a63f-b25c53daf160.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
29-TCGA-02-0007-01A-01-BS1.daf31c78-c900-400a-a63f-b25c53daf160.svs
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-85895x42764-2684x1336.png
Opening Slide #3: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-017
-TCGA-02-0001-01C-01-BS1.0cc8ca55-d024-440c-a4f0-01cf5b3af861.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
17-TCGA-02-0001-01C-01-BS1.0cc8ca55-d024-440c-a4f0-01cf5b3af861.svs
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-89890x29684-2809x927.png
Opening Slide #4: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-013
-TCGA-02-0025-01Z-00-DX2.aa8923a0-2930-47f4-bbff-ceb080fafc9e.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
13-TCGA-02-0025-01Z-00-DX2.aa8923a0-2930-47f4-bbff-ceb080fafc9e.svs
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-68003x40359-2125x1261.png
Opening Slide #5: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-007
-TCGA-02-0003-01Z-00-DX2.c7652d8d-d78f-49ae-8259-bb2bdb5d50fb.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
07-TCGA-02-0003-01Z-00-DX2.c7652d8d-d78f-49ae-8259-bb2bdb5d50fb.svs
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-50002x26379-1562x824.png
Opening Slide #6: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-001
-TCGA-02-0021-01A-01-BS1.fa85bc28-b7d4-41c9-a840-568353e0edd6.svs
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01-TCGA-02-0021-01A-01-BS1.fa85bc28-b7d4-41c9-a840-568353e0edd6.svs
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-89890x42546-2809x1329.png
Opening Slide #7: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-020
-TCGA-02-0027-01A-01-BS1.08d266e3-c3e7-4445-87a9-69b8c8da54aa.svs
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-73910x42761-2309x1336.png
Opening Slide #8: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-009
-TCGA-02-0026-01Z-00-DX2.ff8b5c7e-b5ec-43e5-b078-54ab86737f6f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
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-46002x37949-1437x1185.png
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-TCGA-02-0025-01A-01-BS1.c97b92ed-147a-4676-8cbe-d1f3cb585372.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
12-TCGA-02-0025-01A-01-BS1.c97b92ed-147a-4676-8cbe-d1f3cb585372.svs
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-65919x42884-2059x1340.png
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2-TCGA-02-0016-01Z-00-DX1.BDC4422F-DA4A-4239-B2CF-F19796446767.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
```

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02-TCGA-02-0016-01Z-00-DX1.BDC4422F-DA4A-4239-B2CF-F19796446767.svs
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-81671x59711-2552x1865.png
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8-TCGA-02-0009-01Z-00-DX3.BAA1276B-E4D7-43D4-BDDF-807532462518.svs
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08-TCGA-02-0009-01Z-00-DX3.BAA1276B-E4D7-43D4-BDDF-807532462518.svs
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-99599x53954-3112x1686.png
Opening Slide #12: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
8-TCGA-02-0027-01Z-00-DX1.8F83A541-8884-45C8-BE51-04ADE5D8D6F2.svs
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-83663x76347-2614x2385.png
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3-TCGA-02-0024-01Z-00-DX1.d4cec60d-e2b6-41d1-92af-2d24f15b03a9.svs
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33-TCGA-02-0024-01Z-00-DX1.d4cec60d-e2b6-41d1-92af-2d24f15b03a9.svs
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-26001x26335-812x822.png
Opening Slide #14: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
7-TCGA-02-0026-01A-01-TS1.7d45400b-00cc-4174-aa6d-5e40f514f930.svs
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27-TCGA-02-0026-01A-01-TS1.7d45400b-00cc-4174-aa6d-5e40f514f930.svs
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-57929x18245-1810x570.png
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2-TCGA-02-0004-01A-01-BS1.64d91764-048f-419a-872d-bbd75246fb2e.svs
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52-TCGA-02-0004-01A-01-BS1.64d91764-048f-419a-872d-bbd75246fb2e.svs
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-60002x35651-1875x1114.png
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5-TCGA-02-0026-01B-01-TS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
15-TCGA-02-0026-01B-01-TS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
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-27965x43300-873x1353.png
Opening Slide #18: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
5-TCGA-02-0010-01Z-00-DX1.b53f8c4e-6e10-4684-b7fc-fd9e0b9d6c01.svs
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45-TCGA-02-0010-01Z-00-DX1.b53f8c4e-6e10-4684-b7fc-fd9e0b9d6c01.svs
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-36001x25891-1125x809.png
Opening Slide #19: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
9-TCGA-02-0028-01A-01-TS2.d9b3c085-9d7f-4b74-a7fc-b30bca81b178.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
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Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-019-32x
-67917x38688-2122x1209.png
```

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Opening Slide #20: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
6-TCGA-02-0033-01Z-00-DX1.3c22d6a0-8b25-4f00-a499-b610d0f3c9a0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
06-TCGA-02-0033-01Z-00-DX1.3c22d6a0-8b25-4f00-a499-b610d0f3c9a0.svs
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-60002x41413-1875x1294.png
Opening Slide #21: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-06
0-TCGA-02-0025-01A-01-TS1.9146b647-aed2-4d31-b8f5-2750c028a356.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
60-TCGA-02-0025-01A-01-TS1.9146b647-aed2-4d31-b8f5-2750c028a356.svs
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-69062x30201-2158x943.png
Opening Slide #22: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
3-TCGA-02-0023-01Z-00-DX1.69f7c0c4-ff59-4100-94c3-86b7bf2c27c8.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
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-32612x27027-1019x844.png
Opening Slide #23: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
7-TCGA-02-0009-01A-01-BS1.dfcc32a1-9a93-4b65-adb6-9ef510994f07.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
57-TCGA-02-0009-01A-01-BS1.dfcc32a1-9a93-4b65-adb6-9ef510994f07.svs
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-19975x12691-624x396.png
Opening Slide #24: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
9-TCGA-02-0010-01A-01-TS2.dabc8968-8590-40e9-9916-6bc523a85bb4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
49-TCGA-02-0010-01A-01-TS2.dabc8968-8590-40e9-9916-6bc523a85bb4.svs
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-81900x40437-2559x1263.png
Opening Slide #25: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
4-TCGA-02-0010-01A-01-BS1.37c68e18-09f3-429d-80d9-9f1ffb51ac2e.svs
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-87893x42768-2746x1336.png
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6-TCGA-02-0015-01A-01-BS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
16-TCGA-02-0015-01A-01-BS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
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-79902x28445-2496x888.png
Opening Slide #29: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
3-TCGA-02-0024-01B-01-TS1.ab1c5ed9-9f8e-4160-942f-84fb74fe7daa.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
```

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03-TCGA-02-0024-01B-01-TS1.ab1c5ed9-9f8e-4160-942f-84fb74fe7daa.svs
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8-TCGA-02-0010-01Z-00-DX2.5334831b-8e1f-4b61-bbf6-0f6e950a1b2f.svs
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41-TCGA-02-0006-01B-01-TS2.15b581bb-b760-46b4-b8ae-79c1fcd17d67.svs
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-95883x42779-2996x1336.png
Opening Slide #32: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
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35-TCGA-02-0006-01B-01-BS1.e426e878-9367-482d-8cd9-2f389aa96dfe.svs
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Opening Slide #33: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
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got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
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Opening Slide #34: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
1-TCGA-02-0014-01A-01-TS2.3c136536-3c20-4da2-a41b-a4221137ad23.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
31-TCGA-02-0014-01A-01-TS2.3c136536-3c20-4da2-a41b-a4221137ad23.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-034-32x
-63922x36365-1997x1136.png
Opening Slide #35: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
1-TCGA-02-0011-01B-01-TS1.e0250635-3446-4c9e-a271-ac25428fc090.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
11-TCGA-02-0011-01B-01-TS1.e0250635-3446-4c9e-a271-ac25428fc090.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-035-32x
-27965x19190-873x599.png
Opening Slide #36: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
6-TCGA-02-0011-01B-01-BS1.90348ecd-40b3-477c-8888-076f5f8f8a98.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
56-TCGA-02-0011-01B-01-BS1.90348ecd-40b3-477c-8888-076f5f8f8a98.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-036-32x
-75907x25348-2372x792.png
Opening Slide #37: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
6-TCGA-02-0027-01A-01-TS1.f7418da1-4691-4dd3-acb0-8fc3e4d737da.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
36-TCGA-02-0027-01A-01-TS1.f7418da1-4691-4dd3-acb0-8fc3e4d737da.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-037-32x
-82491x44547-2577x1392.png
Opening Slide #38: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
4-TCGA-02-0006-01Z-00-DX1.a37df719-8b93-4245-ae49-67eb1114253a.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
44-TCGA-02-0006-01Z-00-DX1.a37df719-8b93-4245-ae49-67eb1114253a.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-038-32x
-40001x31019-1250x969.png
```

```
Opening Slide #39: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
4-TCGA-02-0014-01A-01-BS1.c0d26a6a-e351-46c2-bce4-7ea67c1007dd.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
24-TCGA-02-0014-01A-01-BS1.c0d26a6a-e351-46c2-bce4-7ea67c1007dd.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-039-32x
-59927x29451-1872x920.png
Opening Slide #40: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
8-TCGA-02-0001-01Z-00-DX3.2836ce55-491f-4d86-99b1-668946927af8.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
28-TCGA-02-0001-01Z-00-DX3.2836ce55-491f-4d86-99b1-668946927af8.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-040-32x
-52002x34553-1625x1079.png
Opening Slide #41: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
0-TCGA-02-0016-01A-01-BS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
30-TCGA-02-0016-01A-01-BS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-041-32x
-67917x37008-2122x1156.png
Opening Slide #42: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
2-TCGA-02-0015-01B-01-TS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
22-TCGA-02-0015-01B-01-TS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-042-32x
-53934x16596-1685x518.png
Opening Slide #43: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
4-TCGA-02-0010-01Z-00-DX4.07de2e55-a8fe-40ee-9e98-bcb78050b9f7.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
14-TCGA-02-0010-01Z-00-DX4.07de2e55-a8fe-40ee-9e98-bcb78050b9f7.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-043-32x
-32001x38474-1000x1202.png
Opening Slide #44: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
2-TCGA-02-0028-01A-01-BS1.e447454b-fce4-4791-8526-2387a6be22fe.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
42-TCGA-02-0028-01A-01-BS1.e447454b-fce4-4791-8526-2387a6be22fe.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-044-32x
-83897x38110-2621x1190.png
Opening Slide #45: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
0-TCGA-02-0016-01A-01-TS1.97330d4f-c7ca-44a5-a7e6-7c6bee198110.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
40-TCGA-02-0016-01A-01-TS1.97330d4f-c7ca-44a5-a7e6-7c6bee198110.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-045-32x
-81531x32525-2547x1016.png
Opening Slide #46: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
4-TCGA-02-0033-01A-01-BS1.325cc830-c031-4c5e-8d18-2d14eea0be9d.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
34-TCGA-02-0033-01A-01-BS1.325cc830-c031-4c5e-8d18-2d14eea0be9d.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-046-32x
-79902x35432-2496x1107.png
Opening Slide #47: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
8-TCGA-02-0003-01Z-00-DX3.995C2924-E298-4517-82A4-15806766CE31.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
58-TCGA-02-0003-01Z-00-DX3.995C2924-E298-4517-82A4-15806766CE31.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-047-32x
-49799x47673-1556x1489.png
Opening Slide #48: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
7-TCGA-02-0003-01A-01-BS1.0156cf95-2119-4a30-9894-2c0315c954d1.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
```

47-TCGA-02-0003-01A-01-BS1.0156cf95-2119-4a30-9894-2c0315c954d1.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-048-32x
-89890x42769-2809x1336.png
Opening Slide #49: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
0-TCGA-02-0004-01A-01-TS1.7acffca5-3a57-4fe9-ad59-9379f4bb11a9.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
10-TCGA-02-0004-01A-01-TS1.7acffca5-3a57-4fe9-ad59-9379f4bb11a9.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-049-32x
-45082x31524-1408x985.png
Opening Slide #50: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
6-TCGA-02-0014-01Z-00-DX1.b7fd5196-fc51-4dc7-aa6d-e74e1e9ee71d.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
46-TCGA-02-0014-01Z-00-DX1.b7fd5196-fc51-4dc7-aa6d-e74e1e9ee71d.svs
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-77695x20687-2427x646.png
Opening Slide #51: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
8-TCGA-02-0004-01Z-00-DX1.d8189fdc-c669-48d5-bc9e-8ddf104caff6.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
18-TCGA-02-0004-01Z-00-DX1.d8189fdc-c669-48d5-bc9e-8ddf104caff6.svs
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-45082x30758-1408x961.png
Opening Slide #52: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
5-TCGA-02-0021-01A-01-TS1.d7321a97-688f-4106-b569-eb2783ee7bbd.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
05-TCGA-02-0021-01A-01-TS1.d7321a97-688f-4106-b569-eb2783ee7bbd.svs
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-39327x30394-1228x949.png
Opening Slide #53: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
6-TCGA-02-0023-01B-01-TS1.8bce3519-fded-4567-89a7-cc7638a442da.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
26-TCGA-02-0023-01B-01-TS1.8bce3519-fded-4567-89a7-cc7638a442da.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-053-32x
-63922x41430-1997x1294.png
Opening Slide #54: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
9-TCGA-02-0011-01Z-00-DX1.7CF44982-AE5A-47A5-8D07-E526522DC094.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
39-TCGA-02-0011-01Z-00-DX1.7CF44982-AE5A-47A5-8D07-E526522DC094.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-054-32x
-81671x63104-2552x1972.png
Opening Slide #55: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
7-TCGA-02-0034-01A-01-BS1.0f95c851-8845-41d3-86d0-158eeed2b950.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
37-TCGA-02-0034-01A-01-BS1.0f95c851-8845-41d3-86d0-158eeed2b950.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-055-32x
-87893x46207-2746x1443.png
Opening Slide #56: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
9-TCGA-02-0015-01A-01-TS1.afb08afd-8e23-4ced-90ef-abf1e458f091.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
19-TCGA-02-0015-01A-01-TS1.afb08afd-8e23-4ced-90ef-abf1e458f091.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-056-32x
-75907x30400-2372x950.png
Opening Slide #57: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
5-TCGA-02-0023-01B-01-BS1.dbe1cb38-9c15-44cc-ac94-e2f17e427aa0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
25-TCGA-02-0023-01B-01-BS1.dbe1cb38-9c15-44cc-ac94-e2f17e427aa0.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-057-32x
-65919x35886-2059x1121.png

```
Opening Slide #58: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
1-TCGA-02-0003-01A-01-TS1.6fc43119-1e2b-4c23-bd58-af026407d094.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
21-TCGA-02-0003-01A-01-TS1.6fc43119-1e2b-4c23-bd58-af026407d094.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-058-32x
-48919x36996-1528x1156.png
Opening Slide #59: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
3-TCGA-02-0026-01B-01-BS1.51aee3a8-ff85-49f4-9de7-a3824bd9ca4f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
53-TCGA-02-0026-01B-01-BS1.51aee3a8-ff85-49f4-9de7-a3824bd9ca4f.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-059-32x
-31961x23204-998x725.png
Opening Slide #60: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
5-TCGA-02-0024-01B-01-BS1.6bad2316-6812-47b2-b35a-d0a3ef2b618f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
55-TCGA-02-0024-01B-01-BS1.6bad2316-6812-47b2-b35a-d0a3ef2b618f.svs
Saving image to: /media/raj/Raj1_5/data/training_png/TCGA-GBM-060-32x
-63922x25109-1997x784.png
Time elapsed: 0:01:30.431009
```

In [5]: `slideprocess.slide_info()`

```
Opening Slide #1: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-032
-TCGA-02-0021-01Z-00-DX1.1cf4eb25-9406-4638-b69c-e9e141930716.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
32-TCGA-02-0021-01Z-00-DX1.1cf4eb25-9406-4638-b69c-e9e141930716.svs
Level count: 3
Level dimensions: ((36001, 28953), (9000, 7238), (2250, 1809))
Level downsamples: (1.0, 4.000124635411869, 16.002709784411277)
Dimensions: (36001, 28953)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A437A
240>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A437
A1D0>
  thumbnail: <PIL.Image.Image image mode=RGBA size=954x768 at 0x7F94A
437A240>
Format: aperio

Opening Slide #2: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-029
-TCGA-02-0007-01A-01-BS1.daf31c78-c900-400a-a63f-b25c53daf160.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
29-TCGA-02-0007-01A-01-BS1.daf31c78-c900-400a-a63f-b25c53daf160.svs
Level count: 4
Level dimensions: ((85895, 42764), (21473, 10691), (5368, 2672), (268
4, 1336))
Level downsamples: (1.0, 4.000069855166954, 16.00289752090454, 32.005
79504180908)
Dimensions: (85895, 42764)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
1D0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A240>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x509 at 0x7F94
A437A1D0>
Format: aperio

Opening Slide #3: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-017
-TCGA-02-0001-01C-01-BS1.0cc8ca55-d024-440c-a4f0-01cf5b3af861.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
17-TCGA-02-0001-01C-01-BS1.0cc8ca55-d024-440c-a4f0-01cf5b3af861.svs
Level count: 4
Level dimensions: ((89890, 29684), (22472, 7421), (5618, 1855), (280
9, 927))
Level downsamples: (1.0, 4.000044499822001, 16.001256166403905, 32.01
114348509165)
Dimensions: (89890, 29684)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
550>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A2E8>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x338 at 0x7F94
A437A550>
Format: aperio
```

```
Opening Slide #4: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-013
-TCGA-02-0025-01Z-00-DX2.aa8923a0-2930-47f4-bbff-ceb080fafc9e.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
13-TCGA-02-0025-01Z-00-DX2.aa8923a0-2930-47f4-bbff-ceb080fafc9e.svs
Level count: 3
Level dimensions: ((68003, 40359), (17000, 10089), (4250, 2522))
Level downsamples: (1.0, 4.000236912070806, 16.001740728646734)
Dimensions: (68003, 40359)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A437A
2B0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A437
A240>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x607 at 0x7F94
A437A2B0>
Format: aperio

Opening Slide #5: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-007
-TCGA-02-0003-01Z-00-DX2.c7652d8d-d78f-49ae-8259-bb2bdb5d50fb.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
07-TCGA-02-0003-01Z-00-DX2.c7652d8d-d78f-49ae-8259-bb2bdb5d50fb.svs
Level count: 3
Level dimensions: ((50002, 26379), (12500, 6594), (3125, 1648))
Level downsamples: (1.0, 4.0003074795268425, 16.003657378640778)
Dimensions: (50002, 26379)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A437A
2E8>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A437
A710>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x540 at 0x7F94
A437A2E8>
Format: aperio

Opening Slide #6: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-001
-TCGA-02-0021-01A-01-BS1.fa85bc28-b7d4-41c9-a840-568353e0edd6.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
01-TCGA-02-0021-01A-01-BS1.fa85bc28-b7d4-41c9-a840-568353e0edd6.svs
Level count: 4
Level dimensions: ((89890, 42546), (22472, 10636), (5618, 2659), (280
9, 1329))
Level downsamples: (1.0, 4.000138520130387, 16.00055408052155, 32.007
128007605345)
Dimensions: (89890, 42546)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
6A0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A240>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x484 at 0x7F94
A437A6A0>
Format: aperio
```

Opening Slide #7: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-020
-TCGA-02-0027-01A-01-BS1.08d266e3-c3e7-4445-87a9-69b8c8da54aa.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
20-TCGA-02-0027-01A-01-BS1.08d266e3-c3e7-4445-87a9-69b8c8da54aa.svs
Level count: 3
Level dimensions: ((73910, 42761), (18477, 10690), (4619, 2672))
Level downsamples: (1.0, 4.000100894024796, 16.002333622968393)
Dimensions: (73910, 42761)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
898>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A710>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x592 at 0x7F94
A437A898>
Format: aperio

Opening Slide #8: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-009
-TCGA-02-0026-01Z-00-DX2.ff8b5c7e-b5ec-43e5-b078-54ab86737f6f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
09-TCGA-02-0026-01Z-00-DX2.ff8b5c7e-b5ec-43e5-b078-54ab86737f6f.svs
Level count: 3
Level dimensions: ((46002, 37949), (11500, 9487), (2875, 2371))
Level downsamples: (1.0, 4.000139660221539, 16.003089285386828)
Dimensions: (46002, 37949)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A437A
668>
    macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A437
A240>
    thumbnail: <PIL.Image.Image image mode=RGBA size=930x768 at 0x7F94A
437A668>
Format: aperio

Opening Slide #9: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-012
-TCGA-02-0025-01A-01-BS1.c97b92ed-147a-4676-8cbe-d1f3cb585372.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
12-TCGA-02-0025-01A-01-BS1.c97b92ed-147a-4676-8cbe-d1f3cb585372.svs
Level count: 3
Level dimensions: ((65919, 42884), (16479, 10721), (4119, 2680))
Level downsamples: (1.0, 4.000091024940834, 16.002567098955332)
Dimensions: (65919, 42884)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
940>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A668>
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A437A898>
Format: aperio

Opening Slide #10: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
2-TCGA-02-0016-01Z-00-DX1.BDC4422F-DA4A-4239-B2CF-F19796446767.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0

02-TCGA-02-0016-01Z-00-DX1.BDC4422F-DA4A-4239-B2CF-F19796446767.svs
Level count: 4
Level dimensions: ((81671, 59711), (20417, 14927), (5104, 3731), (255
2, 1865))
Level downsamples: (1.0, 4.000173957234969, 16.00269592161413, 32.009
682465311336)
Dimensions: (81671, 59711)
Objective power: 40
Associated images:
  macro: <PIL.Image.Image image mode=RGBA size=1600x624 at 0x7F94A437
A668>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x748 at 0x7F94
A437A710>
Format: aperio

Opening Slide #11: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
8-TCGA-02-0009-01Z-00-DX3.BAA1276B-E4D7-43D4-BDDF-807532462518.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
08-TCGA-02-0009-01Z-00-DX3.BAA1276B-E4D7-43D4-BDDF-807532462518.svs
Level count: 4
Level dimensions: ((99599, 53954), (24899, 13488), (6224, 3372), (311
2, 1686))
Level downsamples: (1.0, 4.000134383359544, 16.00150157275857, 32.003
00314551714)
Dimensions: (99599, 53954)
Objective power: 40
Associated images:
  macro: <PIL.Image.Image image mode=RGBA size=1600x624 at 0x7F94A437
A668>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x554 at 0x7F94
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Format: aperio

Opening Slide #12: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
8-TCGA-02-0027-01Z-00-DX1.8F83A541-8884-45C8-BE51-04ADE5D8D6F2.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
48-TCGA-02-0027-01Z-00-DX1.8F83A541-8884-45C8-BE51-04ADE5D8D6F2.svs
Level count: 4
Level dimensions: ((83663, 76347), (20915, 19086), (5228, 4771), (261
4, 2385))
Level downsamples: (1.0, 4.00015031049991, 16.00258738117006, 32.0085
2954338757)
Dimensions: (83663, 76347)
Objective power: 40
Associated images:
  macro: <PIL.Image.Image image mode=RGBA size=1600x624 at 0x7F94A446
50B8>
  thumbnail: <PIL.Image.Image image mode=RGBA size=841x768 at 0x7F94A
4465128>
Format: aperio

Opening Slide #13: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
3-TCGA-02-0024-01Z-00-DX1.d4cec60d-e2b6-41d1-92af-2d24f15b03a9.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
33-TCGA-02-0024-01Z-00-DX1.d4cec60d-e2b6-41d1-92af-2d24f15b03a9.svs
Level count: 3
Level dimensions: ((26001, 26335), (6500, 6583), (1625, 1645))

```
Level downsamples: (1.0, 4.000304782715386, 16.00486696282441)
Dimensions: (26001, 26335)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A4465
320>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A446
5080>
  thumbnail: <PIL.Image.Image image mode=RGBA size=758x768 at 0x7F94A
4465320>
Format: aperio

Opening Slide #14: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
7-TCGA-02-0026-01A-01-TS1.7d45400b-00cc-4174-aa6d-5e40f514f930.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
27-TCGA-02-0026-01A-01-TS1.7d45400b-00cc-4174-aa6d-5e40f514f930.svs
Level count: 3
Level dimensions: ((57929, 18245), (14482, 4561), (3620, 1140))
Level downsamples: (1.0, 4.000144150700228, 16.00343607637879)
Dimensions: (57929, 18245)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
2B0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
52E8>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x322 at 0x7F94
A44652B0>
Format: aperio

Opening Slide #15: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
2-TCGA-02-0004-01A-01-BS1.64d91764-048f-419a-872d-bbd75246fb2e.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
52-TCGA-02-0004-01A-01-BS1.64d91764-048f-419a-872d-bbd75246fb2e.svs
Level count: 4
Level dimensions: ((91888, 35230), (22972, 8807), (5743, 2201), (287
1, 1100))
Level downsamples: (1.0, 4.00011354604292, 16.003180372557928, 32.016
42284918147)
Dimensions: (91888, 35230)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
240>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5080>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x392 at 0x7F94
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Format: aperio

Opening Slide #16: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
0-TCGA-02-0009-01Z-00-DX2.f5c99ad0-30b1-4f1b-afb0-0a355068eacc.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
50-TCGA-02-0009-01Z-00-DX2.f5c99ad0-30b1-4f1b-afb0-0a355068eacc.svs
Level count: 3
Level dimensions: ((60002, 35651), (15000, 8912), (3750, 2228))
Level downsamples: (1.0, 4.000234979054458, 16.00093991621783)
```

```
Dimensions: (60002, 35651)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A4465
390>
   macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A446
52E8>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x608 at 0x7F94
A4465390>
Format: aperio

Opening Slide #17: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
5-TCGA-02-0026-01B-01-TS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
15-TCGA-02-0026-01B-01-TS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
Level count: 3
Level dimensions: ((27965, 43300), (6991, 10825), (1747, 2706))
Level downsamples: (1.0, 4.000071520526391, 16.004459762295493)
Dimensions: (27965, 43300)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
668>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5358>
   thumbnail: <PIL.Image.Image image mode=RGBA size=496x768 at 0x7F94A
4465240>
Format: aperio

Opening Slide #18: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
5-TCGA-02-0010-01Z-00-DX1.b53f8c4e-6e10-4684-b7fc-fd9e0b9d6c01.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
45-TCGA-02-0010-01Z-00-DX1.b53f8c4e-6e10-4684-b7fc-fd9e0b9d6c01.svs
Level count: 3
Level dimensions: ((36001, 25891), (9000, 6472), (2250, 1618))
Level downsamples: (1.0, 4.0002873231698945, 16.001149292679578)
Dimensions: (36001, 25891)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A4465
240>
   macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A446
52E8>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x736 at 0x7F94
A4465240>
Format: aperio

Opening Slide #19: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
9-TCGA-02-0028-01A-01-TS2.d9b3c085-9d7f-4b74-a7fc-b30bca81b178.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
59-TCGA-02-0028-01A-01-TS2.d9b3c085-9d7f-4b74-a7fc-b30bca81b178.svs
Level count: 3
Level dimensions: ((67917, 38688), (16979, 9672), (4244, 2418))
Level downsamples: (1.0, 4.000029448141822, 16.001531573986803)
Dimensions: (67917, 38688)
Objective power: 20
Associated images:
```

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  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
2E8>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5240>
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A4465278>
Format: aperio

Opening Slide #20: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
6-TCGA-02-0033-01Z-00-DX1.3c22d6a0-8b25-4f00-a499-b610d0f3c9a0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
06-TCGA-02-0033-01Z-00-DX1.3c22d6a0-8b25-4f00-a499-b610d0f3c9a0.svs
Level count: 3
Level dimensions: ((60002, 41413), (15000, 10353), (3750, 2588))
Level downsamples: (1.0, 4.0001149618468075, 16.00123266357548)
Dimensions: (60002, 41413)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A47D3
4A8>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A47D
3438>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x706 at 0x7F94
A4465240>
Format: aperio

Opening Slide #21: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-06
0-TCGA-02-0025-01A-01-TS1.9146b647-aed2-4d31-b8f5-2750c028a356.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
60-TCGA-02-0025-01A-01-TS1.9146b647-aed2-4d31-b8f5-2750c028a356.svs
Level count: 3
Level dimensions: ((69062, 30201), (17265, 7550), (4316, 1887))
Level downsamples: (1.0, 4.000124145814274, 16.00307982572334)
Dimensions: (69062, 30201)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
240>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5240>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x447 at 0x7F94
A4465080>
Format: aperio

Opening Slide #22: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
3-TCGA-02-0023-01Z-00-DX1.69f7c0c4-ff59-4100-94c3-86b7bf2c27c8.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
43-TCGA-02-0023-01Z-00-DX1.69f7c0c4-ff59-4100-94c3-86b7bf2c27c8.svs
Level count: 3
Level dimensions: ((32612, 27027), (8153, 6756), (2038, 1689))
Level downsamples: (1.0, 4.000222024866785, 16.00186945373603)
Dimensions: (32612, 27027)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
080>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
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5080>
    thumbnail: <PIL.Image.Image image mode=RGBA size=926x768 at 0x7F94A
4465278>
Format: aperio

Opening Slide #23: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
7-TCGA-02-0009-01A-01-BS1.dfcc32a1-9a93-4b65-adb6-9ef510994f07.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
57-TCGA-02-0009-01A-01-BS1.dfcc32a1-9a93-4b65-adb6-9ef510994f07.svs
Level count: 2
Level dimensions: ((19975, 12691), (4993, 3172))
Level downsamples: (1.0, 4.000773308356794)
Dimensions: (19975, 12691)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A47D3
438>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5278>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x650 at 0x7F94
A43EEF60>
Format: aperio

Opening Slide #24: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
9-TCGA-02-0010-01A-01-TS2.dabc8968-8590-40e9-9916-6bc523a85bb4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
49-TCGA-02-0010-01A-01-TS2.dabc8968-8590-40e9-9916-6bc523a85bb4.svs
Level count: 3
Level dimensions: ((81900, 40437), (20475, 10109), (5118, 2527))
Level downsamples: (1.0, 4.000049460876447, 16.002161648336305)
Dimensions: (81900, 40437)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A43EE
F60>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A43E
EF60>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x505 at 0x7F94
A43EEFD0>
Format: aperio

Opening Slide #25: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
4-TCGA-02-0010-01A-01-BS1.37c68e18-09f3-429d-80d9-9f1ffb51ac2e.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
54-TCGA-02-0010-01A-01-BS1.37c68e18-09f3-429d-80d9-9f1ffb51ac2e.svs
Level count: 4
Level dimensions: ((87893, 42768), (21973, 10692), (5493, 2673), (274
6, 1336))
Level downsamples: (1.0, 4.000022755199563, 16.000455124704168, 32.00
9811767579194)
Dimensions: (87893, 42768)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A43EE
FD0>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A43E
EFD0>

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     thumbnail: <PIL.Image.Image image mode=RGBA size=1024x498 at 0x7F94
A43EEE48>
Format: aperio


Opening Slide #26: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
4-TCGA-02-0001-01Z-00-DX2.b521a862-280c-4251-ab54-5636f20605d0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
04-TCGA-02-0001-01Z-00-DX2.b521a862-280c-4251-ab54-5636f20605d0.svs
Level count: 3
Level dimensions: ((54002, 41831), (13500, 10457), (3375, 2614))
Level downsamples: (1.0, 4.00021751865665, 16.0016352404432)
Dimensions: (54002, 41831)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A43EE
E48>
   macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A43E
EE48>
   thumbnail: <PIL.Image.Image image mode=RGBA size=991x768 at 0x7F94A
43EEC88>
Format: aperio


Opening Slide #27: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
1-TCGA-02-0009-01A-01-TS1.f7c6584a-198d-451e-a91c-59b3f40fe0ca.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
51-TCGA-02-0009-01A-01-TS1.f7c6584a-198d-451e-a91c-59b3f40fe0ca.svs
Level count: 3
Level dimensions: ((20143, 30114), (5035, 7528), (1258, 1882))
Level downsamples: (1.0, 4.00043075200483, 16.006493193825193)
Dimensions: (20143, 30114)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A43EE
C88>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A43E
EC88>
   thumbnail: <PIL.Image.Image image mode=RGBA size=513x768 at 0x7F94A
43EEE80>
Format: aperio


Opening Slide #28: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
6-TCGA-02-0015-01A-01-BS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
16-TCGA-02-0015-01A-01-BS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
Level count: 3
Level dimensions: ((79902, 28445), (19975, 7111), (4993, 1777))
Level downsamples: (1.0, 4.0001203761768735, 16.005059813057358)
Dimensions: (79902, 28445)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A43EE
E80>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A43E
EE80>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x364 at 0x7F94
A43EED30>
Format: aperio
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Opening Slide #29: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
3-TCGA-02-0024-01B-01-TS1.ab1c5ed9-9f8e-4160-942f-84fb74fe7daa.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
03-TCGA-02-0024-01B-01-TS1.ab1c5ed9-9f8e-4160-942f-84fb74fe7daa.svs
Level count: 4
Level dimensions: ((93885, 40560), (23471, 10140), (5867, 2535), (293
3, 1267))
Level downsamples: (1.0, 4.000021302884411, 16.001107891597066, 32.01
125787146832)
Dimensions: (93885, 40560)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A43EE
D30>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A43E
ED30>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x442 at 0x7F94
A43EEDA0>
Format: aperio

Opening Slide #30: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
8-TCGA-02-0010-01Z-00-DX2.5334831b-8e1f-4b61-bbf6-0f6e950a1b2f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
38-TCGA-02-0010-01Z-00-DX2.5334831b-8e1f-4b61-bbf6-0f6e950a1b2f.svs
Level count: 3
Level dimensions: ((54002, 40857), (13500, 10214), (3375, 2553))
Level downsamples: (1.0, 4.000123026492323, 16.00205892849371)
Dimensions: (54002, 40857)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A43EE
DA0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A43E
EDA0>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1015x768 at 0x7F94
A43EECF8>
Format: aperio

Opening Slide #31: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
1-TCGA-02-0006-01B-01-TS2.15b581bb-b760-46b4-b8ae-79c1fcd17d67.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
41-TCGA-02-0006-01B-01-TS2.15b581bb-b760-46b4-b8ae-79c1fcd17d67.svs
Level count: 4
Level dimensions: ((95883, 42779), (23970, 10694), (5992, 2673), (299
6, 1336))
Level downsamples: (1.0, 4.000202843792256, 16.00297550368942, 32.011
940571460556)
Dimensions: (95883, 42779)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A43EE
CF8>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A43E
ECF8>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x456 at 0x7F94
A43EEF98>
```

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                      Format: aperio

                      Opening Slide #32: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
                      5-TCGA-02-0006-01B-01-BS1.e426e878-9367-482d-8cd9-2f389aa96dfe.svs
                      got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
                      35-TCGA-02-0006-01B-01-BS1.e426e878-9367-482d-8cd9-2f389aa96dfe.svs
                      Level count: 3
                      Level dimensions: ((69914, 38139), (17478, 9534), (4369, 2383))
                      Level downsamples: (1.0, 4.0002145464394285, 16.00345244174926)
                      Dimensions: (69914, 38139)
                      Objective power: 20
                      Associated images:
                        label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A43EE
                      F98>
                        macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A43E
                      EF98>
                        thumbnail: <PIL.Image.Image image mode=RGBA size=1024x558 at 0x7F94
                      A43EEF28>
                      Format: aperio

                      Opening Slide #33: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
                      3-TCGA-02-0007-01A-01-TS2.b97b0953-afe4-4c7a-98d7-921d12e26887.svs
                      got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
                      23-TCGA-02-0007-01A-01-TS2.b97b0953-afe4-4c7a-98d7-921d12e26887.svs
                      Level count: 3
                      Level dimensions: ((81900, 39098), (20475, 9774), (5118, 2443))
                      Level downsamples: (1.0, 4.000102312257008, 16.003218996880335)
                      Dimensions: (81900, 39098)
                      Objective power: 20
                      Associated images:
                        label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
                      668>
                        macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
                      A240>
                        thumbnail: <PIL.Image.Image image mode=RGBA size=1024x488 at 0x7F94
                      A438B6A0>
                      Format: aperio

                      Opening Slide #34: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
                      1-TCGA-02-0014-01A-01-TS2.3c136536-3c20-4da2-a41b-a4221137ad23.svs
                      got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
                      31-TCGA-02-0014-01A-01-TS2.3c136536-3c20-4da2-a41b-a4221137ad23.svs
                      Level count: 3
                      Level dimensions: ((63922, 36365), (15980, 9091), (3995, 2272))
                      Level downsamples: (1.0, 4.000117577672784, 16.00311122838407)
                      Dimensions: (63922, 36365)
                      Objective power: 20
                      Associated images:
                        label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
                      6A0>
                        macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
                      B6A0>
                        thumbnail: <PIL.Image.Image image mode=RGBA size=1024x582 at 0x7F94
                      A438B828>
                      Format: aperio

                      Opening Slide #35: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
```

```
1-TCGA-02-0011-01B-01-TS1.e0250635-3446-4c9e-a271-ac25428fc090.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
11-TCGA-02-0011-01B-01-TS1.e0250635-3446-4c9e-a271-ac25428fc090.svs
Level count: 3
Level dimensions: ((27965, 19190), (6991, 4797), (3495, 2398))
Level downsamples: (1.0, 4.000279984149489, 8.001966350117707)
Dimensions: (27965, 19190)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
828>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B828>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x702 at 0x7F94
A438B748>
Format: aperio


Opening Slide #36: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
6-TCGA-02-0011-01B-01-BS1.90348ecd-40b3-477c-8888-076f5f8f8a98.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
56-TCGA-02-0011-01B-01-BS1.90348ecd-40b3-477c-8888-076f5f8f8a98.svs
Level count: 3
Level dimensions: ((75907, 25348), (18976, 6337), (4744, 1584))
Level downsamples: (1.0, 4.000079047217538, 16.001578815132778)
Dimensions: (75907, 25348)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
748>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B748>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x341 at 0x7F94
A438B6D8>
Format: aperio


Opening Slide #37: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
6-TCGA-02-0027-01A-01-TS1.f7418da1-4691-4dd3-acb0-8fc3e4d737da.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
36-TCGA-02-0027-01A-01-TS1.f7418da1-4691-4dd3-acb0-8fc3e4d737da.svs
Level count: 4
Level dimensions: ((82491, 44547), (20622, 11136), (5155, 2784), (257
7, 1392))
Level downsamples: (1.0, 4.00020743612864, 16.001605718418677, 32.006
316235799446)
Dimensions: (82491, 44547)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
6D8>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B6D8>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x552 at 0x7F94
A438B668>
Format: aperio


Opening Slide #38: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
4-TCGA-02-0006-01Z-00-DX1.a37df719-8b93-4245-ae49-67eb1114253a.svs
```

```
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
44-TCGA-02-0006-01Z-00-DX1.a37df719-8b93-4245-ae49-67eb1114253a.svs
Level count: 3
Level dimensions: ((40001, 31019), (10000, 7754), (2500, 1938))
Level downsamples: (1.0, 4.000243448542688, 16.00303797729618)
Dimensions: (40001, 31019)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A438B
668>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A438
B668>
  thumbnail: <PIL.Image.Image image mode=RGBA size=990x768 at 0x7F94A
438B4E0>
Format: aperio

Opening Slide #39: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
4-TCGA-02-0014-01A-01-BS1.c0d26a6a-e351-46c2-bce4-7ea67c1007dd.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
24-TCGA-02-0014-01A-01-BS1.c0d26a6a-e351-46c2-bce4-7ea67c1007dd.svs
Level count: 3
Level dimensions: ((59927, 29451), (14981, 7362), (3745, 1840))
Level downsamples: (1.0, 4.000303875808569, 16.003923709874037)
Dimensions: (59927, 29451)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
4E0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B4E0>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x503 at 0x7F94
A438B518>
Format: aperio

Opening Slide #40: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
8-TCGA-02-0001-01Z-00-DX3.2836ce55-491f-4d86-99b1-668946927af8.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
28-TCGA-02-0001-01Z-00-DX3.2836ce55-491f-4d86-99b1-668946927af8.svs
Level count: 3
Level dimensions: ((52002, 34553), (13000, 8638), (3250, 2159))
Level downsamples: (1.0, 4.000134806846313, 16.002391990593935)
Dimensions: (52002, 34553)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A438B
518>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A438
B518>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x680 at 0x7F94
A438B438>
Format: aperio

Opening Slide #41: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
0-TCGA-02-0016-01A-01-BS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
30-TCGA-02-0016-01A-01-BS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
Level count: 3
```

```
Level dimensions: ((67917, 37008), (16979, 9252), (4244, 2313))
Level downsamples: (1.0, 4.000029448141822, 16.001531573986803)
Dimensions: (67917, 37008)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
438>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B438>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x557 at 0x7F94
A438B588>
Format: aperio


Opening Slide #42: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
2-TCGA-02-0015-01B-01-TS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
22-TCGA-02-0015-01B-01-TS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
Level count: 3
Level dimensions: ((53934, 16596), (13483, 4149), (3370, 1037))
Level downsamples: (1.0, 4.000074167470148, 16.004005791643895)
Dimensions: (53934, 16596)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
588>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B588>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x315 at 0x7F94
A438B470>
Format: aperio


Opening Slide #43: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
4-TCGA-02-0010-01Z-00-DX4.07de2e55-a8fe-40ee-9e98-bcb78050b9f7.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
14-TCGA-02-0010-01Z-00-DX4.07de2e55-a8fe-40ee-9e98-bcb78050b9f7.svs
Level count: 3
Level dimensions: ((32001, 38474), (8000, 9618), (2000, 2404))
Level downsamples: (1.0, 4.000166471719693, 16.002329866888516)
Dimensions: (32001, 38474)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A438B
470>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A438
B470>
  thumbnail: <PIL.Image.Image image mode=RGBA size=638x768 at 0x7F94A
438B320>
Format: aperio


Opening Slide #44: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
2-TCGA-02-0028-01A-01-BS1.e447454b-fce4-4791-8526-2387a6be22fe.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
42-TCGA-02-0028-01A-01-BS1.e447454b-fce4-4791-8526-2387a6be22fe.svs
Level count: 4
Level dimensions: ((83897, 38110), (20974, 9527), (5243, 2381), (262
1, 1190))
Level downsamples: (1.0, 4.00012880387559, 16.003798228441305, 32.017
```

374214088534)
Dimensions: (83897, 38110)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
320>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B320>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x465 at 0x7F94
A438B390>
Format: aperio

Opening Slide #45: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
0-TCGA-02-0016-01A-01-TS1.97330d4f-c7ca-44a5-a7e6-7c6bee198110.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
40-TCGA-02-0016-01A-01-TS1.97330d4f-c7ca-44a5-a7e6-7c6bee198110.svs
Level count: 3
Level dimensions: ((81531, 32525), (20382, 8131), (5095, 2032))
Level downsamples: (1.0, 4.000135087399239, 16.004278308593417)
Dimensions: (81531, 32525)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
390>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B390>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x408 at 0x7F94
A438B2E8>
Format: aperio

Opening Slide #46: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
4-TCGA-02-0033-01A-01-BS1.325cc830-c031-4c5e-8d18-2d14eea0be9d.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
34-TCGA-02-0033-01A-01-BS1.325cc830-c031-4c5e-8d18-2d14eea0be9d.svs
Level count: 3
Level dimensions: ((79902, 35432), (19975, 8858), (4993, 2214))
Level downsamples: (1.0, 4.000050062578223, 16.00320864748136)
Dimensions: (79902, 35432)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
2E8>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B2E8>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x454 at 0x7F94
A438B128>
Format: aperio

Opening Slide #47: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
8-TCGA-02-0003-01Z-00-DX3.995C2924-E298-4517-82A4-15806766CE31.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
58-TCGA-02-0003-01Z-00-DX3.995C2924-E298-4517-82A4-15806766CE31.svs
Level count: 3
Level dimensions: ((49799, 47673), (12449, 11918), (3112, 2979))
Level downsamples: (1.0, 4.000162444953629, 16.0026635252681365)
Dimensions: (49799, 47673)
Objective power: 40

Associated images:
  macro: <PIL.Image.Image image mode=RGBA size=1600x624 at 0x7F94A437
A240>
  thumbnail: <PIL.Image.Image image mode=RGBA size=802x768 at 0x7F94A
438B240>
Format: aperio

Opening Slide #48: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
7-TCGA-02-0003-01A-01-BS1.0156cf95-2119-4a30-9894-2c0315c954d1.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
47-TCGA-02-0003-01A-01-BS1.0156cf95-2119-4a30-9894-2c0315c954d1.svs
Level count: 4
Level dimensions: ((89890, 42769), (22472, 10692), (5618, 2673), (280
9, 1336))
Level downsamples: (1.0, 4.000091263757653, 16.000365055030613, 32.00
6718274025104)
Dimensions: (89890, 42769)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
208>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B080>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x487 at 0x7F94
A438B208>
Format: aperio

Opening Slide #49: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
0-TCGA-02-0004-01A-01-TS1.7acffca5-3a57-4fe9-ad59-9379f4bb11a9.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
10-TCGA-02-0004-01A-01-TS1.7acffca5-3a57-4fe9-ad59-9379f4bb11a9.svs
Level count: 3
Level dimensions: ((45082, 31524), (11270, 7881), (2817, 1970))
Level downsamples: (1.0, 4.000088731144632, 16.00279016630357)
Dimensions: (45082, 31524)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
860>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B128>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x716 at 0x7F94
A438B860>
Format: aperio

Opening Slide #50: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
6-TCGA-02-0014-01Z-00-DX1.b7fd5196-fc51-4dc7-aa6d-e74e1e9ee71d.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
46-TCGA-02-0014-01Z-00-DX1.b7fd5196-fc51-4dc7-aa6d-e74e1e9ee71d.svs
Level count: 3
Level dimensions: ((77695, 20687), (19423, 5171), (4855, 1292))
Level downsamples: (1.0, 4.0003673073169645, 16.00734975273648)
Dimensions: (77695, 20687)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
7F0>

```
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B080>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x272 at 0x7F94
A438B7F0>
Format: aperio

Opening Slide #51: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
8-TCGA-02-0004-01Z-00-DX1.d8189fdc-c669-48d5-bc9e-8ddf104caff6.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
18-TCGA-02-0004-01Z-00-DX1.d8189fdc-c669-48d5-bc9e-8ddf104caff6.svs
Level count: 3
Level dimensions: ((45082, 30758), (11270, 7689), (2817, 1922))
Level downsamples: (1.0, 4.000218787068679, 16.003335811966664)
Dimensions: (45082, 30758)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
898>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B128>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x698 at 0x7F94
A438B898>
Format: aperio

Opening Slide #52: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
5-TCGA-02-0021-01A-01-TS1.d7321a97-688f-4106-b569-eb2783ee7bbd.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
05-TCGA-02-0021-01A-01-TS1.d7321a97-688f-4106-b569-eb2783ee7bbd.svs
Level count: 3
Level dimensions: ((39327, 30394), (9831, 7598), (2457, 1899))
Level downsamples: (1.0, 4.000284192160489, 16.005685467770775)
Dimensions: (39327, 30394)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
940>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B080>
   thumbnail: <PIL.Image.Image image mode=RGBA size=993x768 at 0x7F94A
438B940>
Format: aperio

Opening Slide #53: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
6-TCGA-02-0023-01B-01-TS1.8bce3519-fded-4567-89a7-cc7638a442da.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
26-TCGA-02-0023-01B-01-TS1.8bce3519-fded-4567-89a7-cc7638a442da.svs
Level count: 3
Level dimensions: ((63922, 41430), (15980, 10357), (3995, 2589))
Level downsamples: (1.0, 4.000159131278682, 16.00140906144268)
Dimensions: (63922, 41430)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
908>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B128>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x663 at 0x7F94
```

```
A438B908>
Format: aperio

Opening Slide #54: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
9-TCGA-02-0011-01Z-00-DX1.7CF44982-AE5A-47A5-8D07-E526522DC094.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
39-TCGA-02-0011-01Z-00-DX1.7CF44982-AE5A-47A5-8D07-E526522DC094.svs
Level count: 4
Level dimensions: ((81671, 63104), (20417, 15776), (5104, 3944), (255
2, 1972))
Level downsamples: (1.0, 4.000073468188274, 16.000685736677116, 32.00
137147335423)
Dimensions: (81671, 63104)
Objective power: 40
Associated images:
  macro: <PIL.Image.Image image mode=RGBA size=1600x624 at 0x7F94A438
B908>
  thumbnail: <PIL.Image.Image image mode=RGBA size=993x768 at 0x7F94A
438B908>
Format: aperio

Opening Slide #55: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
7-TCGA-02-0034-01A-01-BS1.0f95c851-8845-41d3-86d0-158eeed2b950.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
37-TCGA-02-0034-01A-01-BS1.0f95c851-8845-41d3-86d0-158eeed2b950.svs
Level count: 4
Level dimensions: ((87893, 46207), (21973, 11551), (5493, 2887), (274
6, 1443))
Level downsamples: (1.0, 4.00015261408624, 16.00305297714615, 32.0145
65254368605)
Dimensions: (87893, 46207)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
128>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B080>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x538 at 0x7F94
A438B128>
Format: aperio

Opening Slide #56: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
9-TCGA-02-0015-01A-01-TS1.afb08afd-8e23-4ced-90ef-abf1e458f091.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
19-TCGA-02-0015-01A-01-TS1.afb08afd-8e23-4ced-90ef-abf1e458f091.svs
Level count: 3
Level dimensions: ((75907, 30400), (18976, 7600), (4744, 1900))
Level downsamples: (1.0, 4.000079047217538, 16.00031618887015)
Dimensions: (75907, 30400)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
8D0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B940>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x410 at 0x7F94
A438B8D0>
```

```
Format: aperio

Opening Slide #57: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
5-TCGA-02-0023-01B-01-BS1.dbe1cb38-9c15-44cc-ac94-e2f17e427aa0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
25-TCGA-02-0023-01B-01-BS1.dbe1cb38-9c15-44cc-ac94-e2f17e427aa0.svs
Level count: 3
Level dimensions: ((65919, 35886), (16479, 8971), (4119, 2242))
Level downsamples: (1.0, 4.000202495234001, 16.004943042609053)
Dimensions: (65919, 35886)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
9B0>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B080>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x557 at 0x7F94
A438B128>
Format: aperio

Opening Slide #58: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
1-TCGA-02-0003-01A-01-TS1.6fc43119-1e2b-4c23-bd58-af026407d094.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
21-TCGA-02-0003-01A-01-TS1.6fc43119-1e2b-4c23-bd58-af026407d094.svs
Level count: 3
Level dimensions: ((48919, 36996), (12229, 9249), (3057, 2312))
Level downsamples: (1.0, 4.000122659252597, 16.00200996521682)
Dimensions: (48919, 36996)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
940>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B8D0>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1015x768 at 0x7F94
A438B9B0>
Format: aperio

Opening Slide #59: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
3-TCGA-02-0026-01B-01-BS1.51aee3a8-ff85-49f4-9de7-a3824bd9ca4f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
53-TCGA-02-0026-01B-01-BS1.51aee3a8-ff85-49f4-9de7-a3824bd9ca4f.svs
Level count: 3
Level dimensions: ((31961, 23204), (7990, 5801), (3995, 2900))
Level downsamples: (1.0, 4.000062578222778, 8.000814811617971)
Dimensions: (31961, 23204)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
940>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
BA20>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x743 at 0x7F94
A438B940>
Format: aperio

Opening Slide #60: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
```

```
5-TCGA-02-0024-01B-01-BS1.6bad2316-6812-47b2-b35a-d0a3ef2b618f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
55-TCGA-02-0024-01B-01-BS1.6bad2316-6812-47b2-b35a-d0a3ef2b618f.svs
Level count: 3
Level dimensions: ((63922, 25109), (15980, 6277), (3995, 1569))
Level downsamples: (1.0, 4.000142234109348, 16.001843684465364)
Dimensions: (63922, 25109)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
A20>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
BA90>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x402 at 0x7F94
A438BA20>
Format: aperio


Slide Magnifications:
  20x Slides: [1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 17, 18, 19,
20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 3
7, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 49, 50, 51, 52, 53, 55, 5
6, 57, 58, 59, 60]
  40x Slides: [10, 11, 12, 47, 54]
  ??x Slides: []

Time elapsed: 0:00:03.438818
```

In [6]: `slideprocess.slide_info(display_all_properties=True)`

```
Opening Slide #1: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-032
-TCGA-02-0021-01Z-00-DX1.1cf4eb25-9406-4638-b69c-e9e141930716.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
32-TCGA-02-0021-01Z-00-DX1.1cf4eb25-9406-4638-b69c-e9e141930716.svs
Level count: 3
Level dimensions: ((36001, 28953), (9000, 7238), (2250, 1809))
Level downsamples: (1.0, 4.000124635411869, 16.002709784411277)
Dimensions: (36001, 28953)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A438B
B70>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A438
BC18>
  thumbnail: <PIL.Image.Image image mode=RGBA size=954x768 at 0x7F94A
438BBE0>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: AP1258-DSR
  Property: aperio.Date, value: 01/20/09
  Property: aperio.Filename, value: 7542
  Property: aperio.Filtered, value: 5
  Property: aperio.ICC Profile, value: ScanScope v1
  Property: aperio.ImageID, value: 7542
  Property: aperio.Left, value: 25.008692
  Property: aperio.LineAreaXOffset, value: 0.021368
  Property: aperio.LineAreaYOffset, value: -0.005374
  Property: aperio.LineCameraSkew, value: -0.000389
  Property: aperio.MPP, value: 0.5015
  Property: aperio.OriginalWidth, value: 36720
  Property: aperio.Originalheight, value: 29053
  Property: aperio.ScanScope ID, value: SS1302
  Property: aperio.StripeWidth, value: 2040
  Property: aperio.Time, value: 16:54:31
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 19.117779
  Property: aperio.User, value: 766babaf-53b7-4270-acab-9f57558d4e14
  Property: openslide.comment, value: Aperio Image Library v9.0.22
36720x29053 [0,100 36001x28953] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7542|Title = none|
Date = 01/20/09|Time = 16:54:31|User = 766babaf-53b7-4270-acab-9f5755
8d4e14|MPP = 0.5015|Left = 25.008692|Top = 19.117779|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7542|OriginalWidth = 36720|Originalheight =
29053|Filtered = 5|ICC Profile = ScanScope v1
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 28953
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 36001
  Property: openslide.level[1].downsample, value: 4.0001246354118694
  Property: openslide.level[1].height, value: 7238
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 9000
```

```
   Property: openslide.level[2].downsample, value: 16.002709784411277
   Property: openslide.level[2].height, value: 1809
   Property: openslide.level[2].tile-height, value: 240
   Property: openslide.level[2].tile-width, value: 240
   Property: openslide.level[2].width, value: 2250
   Property: openslide.mpp-x, value: 0.50149999999999995
   Property: openslide.mpp-y, value: 0.50149999999999995
   Property: openslide.objective-power, value: 20
   Property: openslide.quickhash-1, value: 42e8c780edee6d1ebb2eb653608
4bf9230e850922e19c6ba78a90294e83b969d
   Property: openslide.vendor, value: aperio
   Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
36720x29053 [0,100 36001x28953] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7542|Title = none|
Date = 01/20/09|Time = 16:54:31|User = 766babaf-53b7-4270-acab-9f5755
8d4e14|MPP = 0.5015|Left = 25.008692|Top = 19.117779|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7542|OriginalWidth = 36720|Originalheight =
29053|Filtered = 5|ICC Profile = ScanScope v1
   Property: tiff.ResolutionUnit, value: inch


Opening Slide #2: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-029
-TCGA-02-0007-01A-01-BS1.daf31c78-c900-400a-a63f-b25c53daf160.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
29-TCGA-02-0007-01A-01-BS1.daf31c78-c900-400a-a63f-b25c53daf160.svs
Level count: 4
Level dimensions: ((85895, 42764), (21473, 10691), (5368, 2672), (268
4, 1336))
Level downsamples: (1.0, 4.000069855166954, 16.00289752090454, 32.005
79504180908)
Dimensions: (85895, 42764)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A47D3
438>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A47D
34A8>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x509 at 0x7F94
A43EEDA0>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 01/09/08
   Property: aperio.Filename, value: 2342
   Property: aperio.ImageID, value: 2342
   Property: aperio.Left, value: 15.274616
   Property: aperio.LineAreaXOffset, value: 0.012096
   Property: aperio.LineAreaYOffset, value: -0.021773
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5001
   Property: aperio.OriginalWidth, value: 87720
   Property: aperio.Originalheight, value: 42814
   Property: aperio.ScanScope ID, value: SS1258
   Property: aperio.StripeWidth, value: 2034
   Property: aperio.Time, value: 08:20:47
```

```
    Property: aperio.Title, value: none
    Property: aperio.Top, value: 21.872098
    Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
    Property: openslide.comment, value: Aperio Image Library v8.2.43
87720x42814 [0,0 85895x42764] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2342|Title = none|Da
te = 01/09/08|Time = 08:20:47|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 15.274616|Top = 21.872098|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2342|OriginalWidth = 87720|Originalheight =
42814
    Property: openslide.level-count, value: 4
    Property: openslide.level[0].downsample, value: 1
    Property: openslide.level[0].height, value: 42764
    Property: openslide.level[0].tile-height, value: 240
    Property: openslide.level[0].tile-width, value: 240
    Property: openslide.level[0].width, value: 85895
    Property: openslide.level[1].downsample, value: 4.000069855166954
    Property: openslide.level[1].height, value: 10691
    Property: openslide.level[1].tile-height, value: 240
    Property: openslide.level[1].tile-width, value: 240
    Property: openslide.level[1].width, value: 21473
    Property: openslide.level[2].downsample, value: 16.00289752090454
    Property: openslide.level[2].height, value: 2672
    Property: openslide.level[2].tile-height, value: 240
    Property: openslide.level[2].tile-width, value: 240
    Property: openslide.level[2].width, value: 5368
    Property: openslide.level[3].downsample, value: 32.00579504180908
    Property: openslide.level[3].height, value: 1336
    Property: openslide.level[3].tile-height, value: 240
    Property: openslide.level[3].tile-width, value: 240
    Property: openslide.level[3].width, value: 2684
    Property: openslide.mpp-x, value: 0.50009999999999999
    Property: openslide.mpp-y, value: 0.50009999999999999
    Property: openslide.objective-power, value: 20
    Property: openslide.quickhash-1, value: 649a1fb1fcb7ee998b6ff638d6f
6edaa860ef022a829a7656259157e6a16c16b
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
87720x42814 [0,0 85895x42764] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2342|Title = none|Da
te = 01/09/08|Time = 08:20:47|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 15.274616|Top = 21.872098|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2342|OriginalWidth = 87720|Originalheight =
42814
    Property: tiff.ResolutionUnit, value: inch

Opening Slide #3: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-017
-TCGA-02-0001-01C-01-BS1.0cc8ca55-d024-440c-a4f0-01cf5b3af861.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
17-TCGA-02-0001-01C-01-BS1.0cc8ca55-d024-440c-a4f0-01cf5b3af861.svs
Level count: 4
Level dimensions: ((89890, 29684), (22472, 7421), (5618, 1855), (280
9, 927))
Level downsamples: (1.0, 4.000044499822001, 16.001256166403905, 32.01
```

```
                114348509165)
                Dimensions: (89890, 29684)
                Objective power: 20
                Associated images:
                  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
                240>
                  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
                5240>
                  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x338 at 0x7F94
                A4465080>
                Format: aperio
                Properties:
                  Property: aperio.AppMag, value: 20
                  Property: aperio.DSR ID, value: ap1258-dsr
                  Property: aperio.Date, value: 01/09/08
                  Property: aperio.Filename, value: 2336
                  Property: aperio.ImageID, value: 2336
                  Property: aperio.Left, value: 12.227448
                  Property: aperio.LineAreaXOffset, value: 0.012096
                  Property: aperio.LineAreaYOffset, value: -0.021773
                  Property: aperio.LineCameraSkew, value: 0.000989
                  Property: aperio.MPP, value: 0.5001
                  Property: aperio.OriginalWidth, value: 91800
                  Property: aperio.Originalheight, value: 29734
                  Property: aperio.ScanScope ID, value: SS1258
                  Property: aperio.StripeWidth, value: 2034
                  Property: aperio.Time, value: 07:40:27
                  Property: aperio.Title, value: none
                  Property: aperio.Top, value: 21.878080
                  Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
                  Property: openslide.comment, value: Aperio Image Library v8.2.43
                91800x29734 [0,0 89890x29684] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
                ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2336|Title = none|Da
                te = 01/09/08|Time = 07:40:27|User = 62b4f535-7795-449b-9333-19179be0
                1318|MPP = 0.5001|Left = 12.227448|Top = 21.878080|LineCameraSkew =
                0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
                D = ap1258-dsr|ImageID = 2336|OriginalWidth = 91800|Originalheight =
                29734
                  Property: openslide.level-count, value: 4
                  Property: openslide.level[0].downsample, value: 1
                  Property: openslide.level[0].height, value: 29684
                  Property: openslide.level[0].tile-height, value: 240
                  Property: openslide.level[0].tile-width, value: 240
                  Property: openslide.level[0].width, value: 89890
                  Property: openslide.level[1].downsample, value: 4.0000444998220006
                  Property: openslide.level[1].height, value: 7421
                  Property: openslide.level[1].tile-height, value: 240
                  Property: openslide.level[1].tile-width, value: 240
                  Property: openslide.level[1].width, value: 22472
                  Property: openslide.level[2].downsample, value: 16.001256166403905
                  Property: openslide.level[2].height, value: 1855
                  Property: openslide.level[2].tile-height, value: 240
                  Property: openslide.level[2].tile-width, value: 240
                  Property: openslide.level[2].width, value: 5618
                  Property: openslide.level[3].downsample, value: 32.011143485091651
                  Property: openslide.level[3].height, value: 927
                  Property: openslide.level[3].tile-height, value: 240
```

```
    Property: openslide.level[3].tile-width, value: 240
    Property: openslide.level[3].width, value: 2809
    Property: openslide.mpp-x, value: 0.50009999999999999
    Property: openslide.mpp-y, value: 0.50009999999999999
    Property: openslide.objective-power, value: 20
    Property: openslide.quickhash-1, value: 8299d6b01d30110e05dc9f66468
25121bbfcabfca65497847d6f95941deaa0ea
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
91800x29734 [0,0 89890x29684] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2336|Title = none|Da
te = 01/09/08|Time = 07:40:27|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 12.227448|Top = 21.878080|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2336|OriginalWidth = 91800|Originalheight =
29734
    Property: tiff.ResolutionUnit, value: inch


Opening Slide #4: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-013
-TCGA-02-0025-01Z-00-DX2.aa8923a0-2930-47f4-bbff-ceb080fafc9e.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
13-TCGA-02-0025-01Z-00-DX2.aa8923a0-2930-47f4-bbff-ceb080fafc9e.svs
Level count: 3
Level dimensions: ((68003, 40359), (17000, 10089), (4250, 2522))
Level downsamples: (1.0, 4.000236912070806, 16.001740728646734)
Dimensions: (68003, 40359)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A4465
390>
    macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A446
5358>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x607 at 0x7F94
A44652B0>
Format: aperio
Properties:
    Property: aperio.AppMag, value: 20
    Property: aperio.DSR ID, value: AP1258-DSR
    Property: aperio.Date, value: 01/21/09
    Property: aperio.Filename, value: 7569
    Property: aperio.Filtered, value: 5
    Property: aperio.ICC Profile, value: ScanScope v1
    Property: aperio.ImageID, value: 7569
    Property: aperio.Left, value: 18.343998
    Property: aperio.LineAreaXOffset, value: 0.021368
    Property: aperio.LineAreaYOffset, value: -0.005374
    Property: aperio.LineCameraSkew, value: -0.000389
    Property: aperio.MPP, value: 0.5015
    Property: aperio.OriginalWidth, value: 69360
    Property: aperio.Originalheight, value: 40459
    Property: aperio.ScanScope ID, value: SS1302
    Property: aperio.StripeWidth, value: 2040
    Property: aperio.Time, value: 15:25:16
    Property: aperio.Title, value: none
    Property: aperio.Top, value: 21.885571
    Property: aperio.User, value: d7f93a12-41d0-44e0-b08e-c73b751a2d26
```

```
      Property: openslide.comment, value: Aperio Image Library v9.0.22
69360x40459 [0,100 68003x40359] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7569|Title = none|
Date = 01/21/09|Time = 15:25:16|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 18.343998|Top = 21.885571|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7569|OriginalWidth = 69360|Originalheight =
40459|Filtered = 5|ICC Profile = ScanScope v1
    Property: openslide.level-count, value: 3
    Property: openslide.level[0].downsample, value: 1
    Property: openslide.level[0].height, value: 40359
    Property: openslide.level[0].tile-height, value: 240
    Property: openslide.level[0].tile-width, value: 240
    Property: openslide.level[0].width, value: 68003
    Property: openslide.level[1].downsample, value: 4.0002369120708057
    Property: openslide.level[1].height, value: 10089
    Property: openslide.level[1].tile-height, value: 240
    Property: openslide.level[1].tile-width, value: 240
    Property: openslide.level[1].width, value: 17000
    Property: openslide.level[2].downsample, value: 16.001740728646734
    Property: openslide.level[2].height, value: 2522
    Property: openslide.level[2].tile-height, value: 240
    Property: openslide.level[2].tile-width, value: 240
    Property: openslide.level[2].width, value: 4250
    Property: openslide.mpp-x, value: 0.50149999999999995
    Property: openslide.mpp-y, value: 0.50149999999999995
    Property: openslide.objective-power, value: 20
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
69360x40459 [0,100 68003x40359] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7569|Title = none|
Date = 01/21/09|Time = 15:25:16|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 18.343998|Top = 21.885571|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7569|OriginalWidth = 69360|Originalheight =
40459|Filtered = 5|ICC Profile = ScanScope v1
    Property: tiff.ResolutionUnit, value: inch

Opening Slide #5: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-007
-TCGA-02-0003-01Z-00-DX2.c7652d8d-d78f-49ae-8259-bb2bdb5d50fb.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
07-TCGA-02-0003-01Z-00-DX2.c7652d8d-d78f-49ae-8259-bb2bdb5d50fb.svs
Level count: 3
Level dimensions: ((50002, 26379), (12500, 6594), (3125, 1648))
Level downsamples: (1.0, 4.0003074795268425, 16.003657378640778)
Dimensions: (50002, 26379)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A4465
2B0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A446
52B0>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x540 at 0x7F94
A4465278>
Format: aperio
Properties:
```

```
       Property: aperio.AppMag, value: 20
       Property: aperio.DSR ID, value: AP1258-DSR
       Property: aperio.Date, value: 01/21/09
       Property: aperio.Filename, value: 7560
       Property: aperio.Filtered, value: 5
       Property: aperio.ICC Profile, value: ScanScope v1
       Property: aperio.ImageID, value: 7560
       Property: aperio.Left, value: 21.324450
       Property: aperio.LineAreaXOffset, value: 0.021368
       Property: aperio.LineAreaYOffset, value: -0.005374
       Property: aperio.LineCameraSkew, value: -0.000389
       Property: aperio.MPP, value: 0.5015
       Property: aperio.OriginalWidth, value: 51000
       Property: aperio.Originalheight, value: 26479
       Property: aperio.ScanScope ID, value: SS1302
       Property: aperio.StripeWidth, value: 2040
       Property: aperio.Time, value: 13:01:53
       Property: aperio.Title, value: none
       Property: aperio.Top, value: 16.201426
       Property: aperio.User, value: d7f93a12-41d0-44e0-b08e-c73b751a2d26
       Property: openslide.comment, value: Aperio Image Library v9.0.22
51000x26479 [0,100 50002x26379] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7560|Title = none|
Date = 01/21/09|Time = 13:01:53|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 21.324450|Top = 16.201426|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7560|OriginalWidth = 51000|Originalheight =
26479|Filtered = 5|ICC Profile = ScanScope v1
       Property: openslide.level-count, value: 3
       Property: openslide.level[0].downsample, value: 1
       Property: openslide.level[0].height, value: 26379
       Property: openslide.level[0].tile-height, value: 240
       Property: openslide.level[0].tile-width, value: 240
       Property: openslide.level[0].width, value: 50002
       Property: openslide.level[1].downsample, value: 4.0003074795268425
       Property: openslide.level[1].height, value: 6594
       Property: openslide.level[1].tile-height, value: 240
       Property: openslide.level[1].tile-width, value: 240
       Property: openslide.level[1].width, value: 12500
       Property: openslide.level[2].downsample, value: 16.003657378640778
       Property: openslide.level[2].height, value: 1648
       Property: openslide.level[2].tile-height, value: 240
       Property: openslide.level[2].tile-width, value: 240
       Property: openslide.level[2].width, value: 3125
       Property: openslide.mpp-x, value: 0.50149999999999995
       Property: openslide.mpp-y, value: 0.50149999999999995
       Property: openslide.objective-power, value: 20
       Property: openslide.vendor, value: aperio
       Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
51000x26479 [0,100 50002x26379] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7560|Title = none|
Date = 01/21/09|Time = 13:01:53|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 21.324450|Top = 16.201426|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7560|OriginalWidth = 51000|Originalheight =
26479|Filtered = 5|ICC Profile = ScanScope v1
```

    Property: tiff.ResolutionUnit, value: inch

Opening Slide #6: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-001
-TCGA-02-0021-01A-01-BS1.fa85bc28-b7d4-41c9-a840-568353e0edd6.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
01-TCGA-02-0021-01A-01-BS1.fa85bc28-b7d4-41c9-a840-568353e0edd6.svs
Level count: 4
Level dimensions: ((89890, 42546), (22472, 10636), (5618, 2659), (280
9, 1329))
Level downsamples: (1.0, 4.000138520130387, 16.00055408052155, 32.007
128007605345)
Dimensions: (89890, 42546)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
278>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5278>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x484 at 0x7F94
A4465128>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 01/09/08
  Property: aperio.Filename, value: 2350
  Property: aperio.ImageID, value: 2350
  Property: aperio.Left, value: 15.219213
  Property: aperio.LineAreaXOffset, value: 0.012096
  Property: aperio.LineAreaYOffset, value: -0.021773
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5001
  Property: aperio.OriginalWidth, value: 91800
  Property: aperio.Originalheight, value: 42596
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 2034
  Property: aperio.Time, value: 09:04:11
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 21.872207
  Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
  Property: openslide.comment, value: Aperio Image Library v8.2.43
91800x42596 [0,0 89890x42546] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2350|Title = none|Da
te = 01/09/08|Time = 09:04:11|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 15.219213|Top = 21.872207|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2350|OriginalWidth = 91800|Originalheight =
42596
  Property: openslide.level-count, value: 4
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 42546
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 89890
  Property: openslide.level[1].downsample, value: 4.0001385201303874
  Property: openslide.level[1].height, value: 10636
  Property: openslide.level[1].tile-height, value: 240

```
   Property: openslide.level[1].tile-width, value: 240
   Property: openslide.level[1].width, value: 22472
   Property: openslide.level[2].downsample, value: 16.00055408052155
   Property: openslide.level[2].height, value: 2659
   Property: openslide.level[2].tile-height, value: 240
   Property: openslide.level[2].tile-width, value: 240
   Property: openslide.level[2].width, value: 5618
   Property: openslide.level[3].downsample, value: 32.007128007605345
   Property: openslide.level[3].height, value: 1329
   Property: openslide.level[3].tile-height, value: 240
   Property: openslide.level[3].tile-width, value: 240
   Property: openslide.level[3].width, value: 2809
   Property: openslide.mpp-x, value: 0.50009999999999999
   Property: openslide.mpp-y, value: 0.50009999999999999
   Property: openslide.objective-power, value: 20
   Property: openslide.quickhash-1, value: 7b88bf6a9e61291be92ea729ff9
df9a5fcbb074e020d34756e53b4f3b636e57c
   Property: openslide.vendor, value: aperio
   Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
91800x42596 [0,0 89890x42546] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2350|Title = none|Da
te = 01/09/08|Time = 09:04:11|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 15.219213|Top = 21.872207|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2350|OriginalWidth = 91800|Originalheight =
42596
   Property: tiff.ResolutionUnit, value: inch


Opening Slide #7: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-020
-TCGA-02-0027-01A-01-BS1.08d266e3-c3e7-4445-87a9-69b8c8da54aa.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
20-TCGA-02-0027-01A-01-BS1.08d266e3-c3e7-4445-87a9-69b8c8da54aa.svs
Level count: 3
Level dimensions: ((73910, 42761), (18477, 10690), (4619, 2672))
Level downsamples: (1.0, 4.000100894024796, 16.002333622968393)
Dimensions: (73910, 42761)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
128>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5128>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x592 at 0x7F94
A4465320>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 01/09/08
   Property: aperio.Filename, value: 2354
   Property: aperio.ImageID, value: 2354
   Property: aperio.Left, value: 15.828797
   Property: aperio.LineAreaXOffset, value: 0.012096
   Property: aperio.LineAreaYOffset, value: -0.021773
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5001
```

```
   Property: aperio.OriginalWidth, value: 75480
   Property: aperio.Originalheight, value: 42811
   Property: aperio.ScanScope ID, value: SS1258
   Property: aperio.StripeWidth, value: 2034
   Property: aperio.Time, value: 09:30:06
   Property: aperio.Title, value: none
   Property: aperio.Top, value: 21.870859
   Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
   Property: openslide.comment, value: Aperio Image Library v8.2.43
75480x42811 [0,0 73910x42761] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2354|Title = none|Da
te = 01/09/08|Time = 09:30:06|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 15.828797|Top = 21.870859|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2354|OriginalWidth = 75480|Originalheight =
42811
   Property: openslide.level-count, value: 3
   Property: openslide.level[0].downsample, value: 1
   Property: openslide.level[0].height, value: 42761
   Property: openslide.level[0].tile-height, value: 240
   Property: openslide.level[0].tile-width, value: 240
   Property: openslide.level[0].width, value: 73910
   Property: openslide.level[1].downsample, value: 4.0001008940247962
   Property: openslide.level[1].height, value: 10690
   Property: openslide.level[1].tile-height, value: 240
   Property: openslide.level[1].tile-width, value: 240
   Property: openslide.level[1].width, value: 18477
   Property: openslide.level[2].downsample, value: 16.002333622968393
   Property: openslide.level[2].height, value: 2672
   Property: openslide.level[2].tile-height, value: 240
   Property: openslide.level[2].tile-width, value: 240
   Property: openslide.level[2].width, value: 4619
   Property: openslide.mpp-x, value: 0.50009999999999999
   Property: openslide.mpp-y, value: 0.50009999999999999
   Property: openslide.objective-power, value: 20
   Property: openslide.quickhash-1, value: 52aaf71df7f5809fad580ce3584
142987f831e127096937a3537bf2e42396be0
   Property: openslide.vendor, value: aperio
   Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
75480x42811 [0,0 73910x42761] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2354|Title = none|Da
te = 01/09/08|Time = 09:30:06|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 15.828797|Top = 21.870859|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2354|OriginalWidth = 75480|Originalheight =
42811
   Property: tiff.ResolutionUnit, value: inch

Opening Slide #8: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-009
-TCGA-02-0026-01Z-00-DX2.ff8b5c7e-b5ec-43e5-b078-54ab86737f6f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
09-TCGA-02-0026-01Z-00-DX2.ff8b5c7e-b5ec-43e5-b078-54ab86737f6f.svs
Level count: 3
Level dimensions: ((46002, 37949), (11500, 9487), (2875, 2371))
Level downsamples: (1.0, 4.000139660221539, 16.003089285386828)
Dimensions: (46002, 37949)
```

```
            Objective power: 20
            Associated images:
              label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A4465
            320>
              macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A446
            5320>
              thumbnail: <PIL.Image.Image image mode=RGBA size=930x768 at 0x7F94A
            44652E8>
            Format: aperio
            Properties:
              Property: aperio.AppMag, value: 20
              Property: aperio.DSR ID, value: AP1258-DSR
              Property: aperio.Date, value: 01/21/09
              Property: aperio.Filename, value: 7568
              Property: aperio.Filtered, value: 5
              Property: aperio.ICC Profile, value: ScanScope v1
              Property: aperio.ImageID, value: 7568
              Property: aperio.Left, value: 22.449406
              Property: aperio.LineAreaXOffset, value: 0.021368
              Property: aperio.LineAreaYOffset, value: -0.005374
              Property: aperio.LineCameraSkew, value: -0.000389
              Property: aperio.MPP, value: 0.5015
              Property: aperio.OriginalWidth, value: 46920
              Property: aperio.Originalheight, value: 38049
              Property: aperio.ScanScope ID, value: SS1302
              Property: aperio.StripeWidth, value: 2040
              Property: aperio.Time, value: 15:14:26
              Property: aperio.Title, value: none
              Property: aperio.Top, value: 20.473629
              Property: aperio.User, value: d7f93a12-41d0-44e0-b08e-c73b751a2d26
              Property: openslide.comment, value: Aperio Image Library v9.0.22
            46920x38049 [0,100 46002x37949] (240x240) JPEG/RGB Q=70|AppMag = 20|S
            tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7568|Title = none|
            Date = 01/21/09|Time = 15:14:26|User = d7f93a12-41d0-44e0-b08e-c73b75
            1a2d26|MPP = 0.5015|Left = 22.449406|Top = 20.473629|LineCameraSkew =
            -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
            ID = AP1258-DSR|ImageID = 7568|OriginalWidth = 46920|Originalheight =
            38049|Filtered = 5|ICC Profile = ScanScope v1
              Property: openslide.level-count, value: 3
              Property: openslide.level[0].downsample, value: 1
              Property: openslide.level[0].height, value: 37949
              Property: openslide.level[0].tile-height, value: 240
              Property: openslide.level[0].tile-width, value: 240
              Property: openslide.level[0].width, value: 46002
              Property: openslide.level[1].downsample, value: 4.0001396602215387
              Property: openslide.level[1].height, value: 9487
              Property: openslide.level[1].tile-height, value: 240
              Property: openslide.level[1].tile-width, value: 240
              Property: openslide.level[1].width, value: 11500
              Property: openslide.level[2].downsample, value: 16.003089285386828
              Property: openslide.level[2].height, value: 2371
              Property: openslide.level[2].tile-height, value: 240
              Property: openslide.level[2].tile-width, value: 240
              Property: openslide.level[2].width, value: 2875
              Property: openslide.mpp-x, value: 0.50149999999999995
              Property: openslide.mpp-y, value: 0.50149999999999995
              Property: openslide.objective-power, value: 20
```

```
      Property: openslide.vendor, value: aperio
      Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
46920x38049 [0,100 46002x37949] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7568|Title = none|
Date = 01/21/09|Time = 15:14:26|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 22.449406|Top = 20.473629|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7568|OriginalWidth = 46920|Originalheight =
38049|Filtered = 5|ICC Profile = ScanScope v1
      Property: tiff.ResolutionUnit, value: inch


Opening Slide #9: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-012
-TCGA-02-0025-01A-01-BS1.c97b92ed-147a-4676-8cbe-d1f3cb585372.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
12-TCGA-02-0025-01A-01-BS1.c97b92ed-147a-4676-8cbe-d1f3cb585372.svs
Level count: 3
Level dimensions: ((65919, 42884), (16479, 10721), (4119, 2680))
Level downsamples: (1.0, 4.000091024940834, 16.002567098955332)
Dimensions: (65919, 42884)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
2E8>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
52E8>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x666 at 0x7F94
A4465208>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 01/14/08
   Property: aperio.Filename, value: 2674
   Property: aperio.ImageID, value: 2674
   Property: aperio.Left, value: 15.054410
   Property: aperio.LineAreaXOffset, value: 0.012096
   Property: aperio.LineAreaYOffset, value: -0.021773
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5001
   Property: aperio.OriginalWidth, value: 67320
   Property: aperio.Originalheight, value: 42934
   Property: aperio.ScanScope ID, value: SS1258
   Property: aperio.StripeWidth, value: 2034
   Property: aperio.Time, value: 05:44:57
   Property: aperio.Title, value: none
   Property: aperio.Top, value: 23.148308
   Property: aperio.User, value: a0092174-b177-4951-9d13-364d96b5c0be
   Property: openslide.comment, value: Aperio Image Library v8.2.43
67320x42934 [0,0 65919x42884] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2674|Title = none|Da
te = 01/14/08|Time = 05:44:57|User = a0092174-b177-4951-9d13-364d96b5
c0be|MPP = 0.5001|Left = 15.054410|Top = 23.148308|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2674|OriginalWidth = 67320|Originalheight =
42934
   Property: openslide.level-count, value: 3
```

```
    Property: openslide.level[0].downsample, value: 1
    Property: openslide.level[0].height, value: 42884
    Property: openslide.level[0].tile-height, value: 240
    Property: openslide.level[0].tile-width, value: 240
    Property: openslide.level[0].width, value: 65919
    Property: openslide.level[1].downsample, value: 4.0000910249408337
    Property: openslide.level[1].height, value: 10721
    Property: openslide.level[1].tile-height, value: 240
    Property: openslide.level[1].tile-width, value: 240
    Property: openslide.level[1].width, value: 16479
    Property: openslide.level[2].downsample, value: 16.002567098955332
    Property: openslide.level[2].height, value: 2680
    Property: openslide.level[2].tile-height, value: 240
    Property: openslide.level[2].tile-width, value: 240
    Property: openslide.level[2].width, value: 4119
    Property: openslide.mpp-x, value: 0.50009999999999999
    Property: openslide.mpp-y, value: 0.50009999999999999
    Property: openslide.objective-power, value: 20
    Property: openslide.quickhash-1, value: 5f63ff7efe108f7ee7e9025c8e2
4f6bbc422c47d46c9a8bb1a430293d916771a
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
67320x42934 [0,0 65919x42884] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2674|Title = none|Da
te = 01/14/08|Time = 05:44:57|User = a0092174-b177-4951-9d13-364d96b5
c0be|MPP = 0.5001|Left = 15.054410|Top = 23.148308|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2674|OriginalWidth = 67320|Originalheight =
42934
    Property: tiff.ResolutionUnit, value: inch


Opening Slide #10: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
2-TCGA-02-0016-01Z-00-DX1.BDC4422F-DA4A-4239-B2CF-F19796446767.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
02-TCGA-02-0016-01Z-00-DX1.BDC4422F-DA4A-4239-B2CF-F19796446767.svs
Level count: 4
Level dimensions: ((81671, 59711), (20417, 14927), (5104, 3731), (255
2, 1865))
Level downsamples: (1.0, 4.000173957234969, 16.00269592161413, 32.009
682465311336)
Dimensions: (81671, 59711)
Objective power: 40
Associated images:
  macro: <PIL.Image.Image image mode=RGBA size=1600x624 at 0x7F94A446
5208>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x748 at 0x7F94
A44650B8>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 40
  Property: aperio.DSR ID, value: spectrumresearch
  Property: aperio.Date, value: 10/01/14
  Property: aperio.DisplayColor, value: 0
  Property: aperio.Exposure Scale, value: 0.000001
  Property: aperio.Exposure Time, value: 45
  Property: aperio.Filename, value: 200852
```

        Property: aperio.Focus Offset, value: -0.000500
        Property: aperio.ICC Profile, value: AT2
        Property: aperio.ImageID, value: 200852
        Property: aperio.Left, value: 15.721060
        Property: aperio.LineAreaXOffset, value: 0.010473
        Property: aperio.LineAreaYOffset, value: 0.007821
        Property: aperio.LineCameraSkew, value: -0.000534
        Property: aperio.MPP, value: 0.2533
        Property: aperio.OriginalHeight, value: 59811
        Property: aperio.OriginalWidth, value: 83312
        Property: aperio.Parmset, value: Research: No skipping
        Property: aperio.ScanScope ID, value: SS7054
        Property: aperio.StripeWidth, value: 2032
        Property: aperio.Time, value: 10:50:52
        Property: aperio.Time Zone, value: GMT-05:00
        Property: aperio.Top, value: 21.833460
        Property: aperio.User, value: 5fdab0e3-772f-47a2-816c-c9361b2b8078
        Property: openslide.comment, value: Aperio Image Library v12.0.15
83312x59811 [0,100 81671x59711] (240x240) JPEG/RGB Q=70|AppMag = 40|S
tripeWidth = 2032|ScanScope ID = SS7054|Filename = 200852|Date = 10/0
1/14|Time = 10:50:52|Time Zone = GMT-05:00|User = 5fdab0e3-772f-47a2-
816c-c9361b2b8078|Parmset = Research: No skipping|MPP = 0.2533|Left =
15.721060|Top = 21.833460|LineCameraSkew = -0.000534|LineAreaXOffset
= 0.010473|LineAreaYOffset = 0.007821|Focus Offset = -0.000500|DSR ID
= spectrumresearch|ImageID = 200852|Exposure Time = 45|Exposure Scale
= 0.000001|DisplayColor = 0|OriginalWidth = 83312|OriginalHeight = 59
811|ICC Profile = AT2
      Property: openslide.level-count, value: 4
      Property: openslide.level[0].downsample, value: 1
      Property: openslide.level[0].height, value: 59711
      Property: openslide.level[0].tile-height, value: 240
      Property: openslide.level[0].tile-width, value: 240
      Property: openslide.level[0].width, value: 81671
      Property: openslide.level[1].downsample, value: 4.0001739572349688
      Property: openslide.level[1].height, value: 14927
      Property: openslide.level[1].tile-height, value: 240
      Property: openslide.level[1].tile-width, value: 240
      Property: openslide.level[1].width, value: 20417
      Property: openslide.level[2].downsample, value: 16.00269592161413
      Property: openslide.level[2].height, value: 3731
      Property: openslide.level[2].tile-height, value: 240
      Property: openslide.level[2].tile-width, value: 240
      Property: openslide.level[2].width, value: 5104
      Property: openslide.level[3].downsample, value: 32.009682465311336
      Property: openslide.level[3].height, value: 1865
      Property: openslide.level[3].tile-height, value: 240
      Property: openslide.level[3].tile-width, value: 240
      Property: openslide.level[3].width, value: 2552
      Property: openslide.mpp-x, value: 0.25330000000000003
      Property: openslide.mpp-y, value: 0.25330000000000003
      Property: openslide.objective-power, value: 40
      Property: openslide.quickhash-1, value: 56ffa91ade21d3c9b492623905b
4db87a3cc54bf7a8779f265d67b1d1a358a4a
      Property: openslide.vendor, value: aperio
      Property: tiff.ImageDescription, value: Aperio Image Library v12.0.
15
83312x59811 [0,100 81671x59711] (240x240) JPEG/RGB Q=70|AppMag = 40|S

tripeWidth = 2032|ScanScope ID = SS7054|Filename = 200852|Date = 10/0
1/14|Time = 10:50:52|Time Zone = GMT-05:00|User = 5fdab0e3-772f-47a2-
816c-c9361b2b8078|Parmset = Research: No skipping|MPP = 0.2533|Left =
15.721060|Top = 21.833460|LineCameraSkew = -0.000534|LineAreaXOffset
= 0.010473|LineAreaYOffset = 0.007821|Focus Offset = -0.000500|DSR ID
= spectrumresearch|ImageID = 200852|Exposure Time = 45|Exposure Scale
= 0.000001|DisplayColor = 0|OriginalWidth = 83312|OriginalHeight = 59
811|ICC Profile = AT2
   Property: tiff.ResolutionUnit, value: inch

Opening Slide #11: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
8-TCGA-02-0009-01Z-00-DX3.BAA1276B-E4D7-43D4-BDDF-807532462518.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
08-TCGA-02-0009-01Z-00-DX3.BAA1276B-E4D7-43D4-BDDF-807532462518.svs
Level count: 4
Level dimensions: ((99599, 53954), (24899, 13488), (6224, 3372), (311
2, 1686))
Level downsamples: (1.0, 4.000134383359544, 16.00150157275857, 32.003
00314551714)
Dimensions: (99599, 53954)
Objective power: 40
Associated images:
   macro: <PIL.Image.Image image mode=RGBA size=1600x624 at 0x7F94A43E
EE48>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x554 at 0x7F94
A437A668>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 40
   Property: aperio.DSR ID, value: spectrumresearch
   Property: aperio.Date, value: 10/01/14
   Property: aperio.DisplayColor, value: 0
   Property: aperio.Exposure Scale, value: 0.000001
   Property: aperio.Exposure Time, value: 45
   Property: aperio.Filename, value: 200841
   Property: aperio.Focus Offset, value: -0.000500
   Property: aperio.ICC Profile, value: AT2
   Property: aperio.ImageID, value: 200841
   Property: aperio.Left, value: 14.798785
   Property: aperio.LineAreaXOffset, value: 0.010473
   Property: aperio.LineAreaYOffset, value: 0.007821
   Property: aperio.LineCameraSkew, value: -0.000534
   Property: aperio.MPP, value: 0.2533
   Property: aperio.OriginalHeight, value: 54054
   Property: aperio.OriginalWidth, value: 101600
   Property: aperio.Parmset, value: Research: No skipping
   Property: aperio.ScanScope ID, value: SS7054
   Property: aperio.StripeWidth, value: 2032
   Property: aperio.Time, value: 10:40:03
   Property: aperio.Time Zone, value: GMT-05:00
   Property: aperio.Top, value: 18.687511
   Property: aperio.User, value: 5fdab0e3-772f-47a2-816c-c9361b2b8078
   Property: openslide.comment, value: Aperio Image Library v12.0.15
101600x54054 [0,100 99599x53954] (240x240) JPEG/RGB Q=70|AppMag = 40|
StripeWidth = 2032|ScanScope ID = SS7054|Filename = 200841|Date = 10/
01/14|Time = 10:40:03|Time Zone = GMT-05:00|User = 5fdab0e3-772f-47a2
-816c-c9361b2b8078|Parmset = Research: No skipping|MPP = 0.2533|Left

```
= 14.798785|Top = 18.687511|LineCameraSkew = -0.000534|LineAreaXOffse
t = 0.010473|LineAreaYOffset = 0.007821|Focus Offset = -0.000500|DSR
ID = spectrumresearch|ImageID = 200841|Exposure Time = 45|Exposure Sc
ale = 0.000001|DisplayColor = 0|OriginalWidth = 101600|OriginalHeight
= 54054|ICC Profile = AT2
  Property: openslide.level-count, value: 4
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 53954
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 99599
  Property: openslide.level[1].downsample, value: 4.0001343833595442
  Property: openslide.level[1].height, value: 13488
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 24899
  Property: openslide.level[2].downsample, value: 16.001501572758571
  Property: openslide.level[2].height, value: 3372
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 6224
  Property: openslide.level[3].downsample, value: 32.003003145517141
  Property: openslide.level[3].height, value: 1686
  Property: openslide.level[3].tile-height, value: 240
  Property: openslide.level[3].tile-width, value: 240
  Property: openslide.level[3].width, value: 3112
  Property: openslide.mpp-x, value: 0.25330000000000003
  Property: openslide.mpp-y, value: 0.25330000000000003
  Property: openslide.objective-power, value: 40
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v12.0.
15
101600x54054 [0,100 99599x53954] (240x240) JPEG/RGB Q=70|AppMag = 40|
StripeWidth = 2032|ScanScope ID = SS7054|Filename = 200841|Date = 10/
01/14|Time = 10:40:03|Time Zone = GMT-05:00|User = 5fdab0e3-772f-47a2
-816c-c9361b2b8078|Parmset = Research: No skipping|MPP = 0.2533|Left
= 14.798785|Top = 18.687511|LineCameraSkew = -0.000534|LineAreaXOffse
t = 0.010473|LineAreaYOffset = 0.007821|Focus Offset = -0.000500|DSR
ID = spectrumresearch|ImageID = 200841|Exposure Time = 45|Exposure Sc
ale = 0.000001|DisplayColor = 0|OriginalWidth = 101600|OriginalHeight
= 54054|ICC Profile = AT2
  Property: tiff.ResolutionUnit, value: inch


Opening Slide #12: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
8-TCGA-02-0027-01Z-00-DX1.8F83A541-8884-45C8-BE51-04ADE5D8D6F2.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
48-TCGA-02-0027-01Z-00-DX1.8F83A541-8884-45C8-BE51-04ADE5D8D6F2.svs
Level count: 4
Level dimensions: ((83663, 76347), (20915, 19086), (5228, 4771), (261
4, 2385))
Level downsamples: (1.0, 4.00015031049991, 16.00258738117006, 32.0085
2954338757)
Dimensions: (83663, 76347)
Objective power: 40
Associated images:
  macro: <PIL.Image.Image image mode=RGBA size=1600x624 at 0x7F94A437
A668>
```

```
           thumbnail: <PIL.Image.Image image mode=RGBA size=841x768 at 0x7F94A
         437A978>
         Format: aperio
         Properties:
           Property: aperio.AppMag, value: 40
           Property: aperio.DSR ID, value: spectrumresearch
           Property: aperio.Date, value: 10/01/14
           Property: aperio.DisplayColor, value: 0
           Property: aperio.Exposure Scale, value: 0.000001
           Property: aperio.Exposure Time, value: 45
           Property: aperio.Filename, value: 200866
           Property: aperio.Focus Offset, value: -0.000500
           Property: aperio.ICC Profile, value: AT2
           Property: aperio.ImageID, value: 200866
           Property: aperio.Left, value: 15.473500
           Property: aperio.LineAreaXOffset, value: 0.010473
           Property: aperio.LineAreaYOffset, value: 0.007821
           Property: aperio.LineCameraSkew, value: -0.000534
           Property: aperio.MPP, value: 0.2533
           Property: aperio.OriginalHeight, value: 76447
           Property: aperio.OriginalWidth, value: 85344
           Property: aperio.Parmset, value: Research: No skipping
           Property: aperio.ScanScope ID, value: SS7054
           Property: aperio.StripeWidth, value: 2032
           Property: aperio.Time, value: 11:07:08
           Property: aperio.Time Zone, value: GMT-05:00
           Property: aperio.Top, value: 21.547956
           Property: aperio.User, value: 5fdab0e3-772f-47a2-816c-c9361b2b8078
           Property: openslide.comment, value: Aperio Image Library v12.0.15
         85344x76447 [0,100 83663x76347] (240x240) JPEG/RGB Q=70|AppMag = 40|S
         tripeWidth = 2032|ScanScope ID = SS7054|Filename = 200866|Date = 10/0
         1/14|Time = 11:07:08|Time Zone = GMT-05:00|User = 5fdab0e3-772f-47a2-
         816c-c9361b2b8078|Parmset = Research: No skipping|MPP = 0.2533|Left =
         15.473500|Top = 21.547956|LineCameraSkew = -0.000534|LineAreaXOffset
         = 0.010473|LineAreaYOffset = 0.007821|Focus Offset = -0.000500|DSR ID
         = spectrumresearch|ImageID = 200866|Exposure Time = 45|Exposure Scale
         = 0.000001|DisplayColor = 0|OriginalWidth = 85344|OriginalHeight = 76
         447|ICC Profile = AT2
           Property: openslide.level-count, value: 4
           Property: openslide.level[0].downsample, value: 1
           Property: openslide.level[0].height, value: 76347
           Property: openslide.level[0].tile-height, value: 240
           Property: openslide.level[0].tile-width, value: 240
           Property: openslide.level[0].width, value: 83663
           Property: openslide.level[1].downsample, value: 4.0001503104999099
           Property: openslide.level[1].height, value: 19086
           Property: openslide.level[1].tile-height, value: 240
           Property: openslide.level[1].tile-width, value: 240
           Property: openslide.level[1].width, value: 20915
           Property: openslide.level[2].downsample, value: 16.002587381170059
           Property: openslide.level[2].height, value: 4771
           Property: openslide.level[2].tile-height, value: 240
           Property: openslide.level[2].tile-width, value: 240
           Property: openslide.level[2].width, value: 5228
           Property: openslide.level[3].downsample, value: 32.008529543387567
           Property: openslide.level[3].height, value: 2385
           Property: openslide.level[3].tile-height, value: 240
```

```
        Property: openslide.level[3].tile-width, value: 240
        Property: openslide.level[3].width, value: 2614
        Property: openslide.mpp-x, value: 0.2533000000000003
        Property: openslide.mpp-y, value: 0.2533000000000003
        Property: openslide.objective-power, value: 40
        Property: openslide.vendor, value: aperio
        Property: tiff.ImageDescription, value: Aperio Image Library v12.0.
15
85344x76447 [0,100 83663x76347] (240x240) JPEG/RGB Q=70|AppMag = 40|S
tripeWidth = 2032|ScanScope ID = SS7054|Filename = 200866|Date = 10/0
1/14|Time = 11:07:08|Time Zone = GMT-05:00|User = 5fdab0e3-772f-47a2-
816c-c9361b2b8078|Parmset = Research: No skipping|MPP = 0.2533|Left =
15.473500|Top = 21.547956|LineCameraSkew = -0.000534|LineAreaXOffset
= 0.010473|LineAreaYOffset = 0.007821|Focus Offset = -0.000500|DSR ID
= spectrumresearch|ImageID = 200866|Exposure Time = 45|Exposure Scale
= 0.000001|DisplayColor = 0|OriginalWidth = 85344|OriginalHeight = 76
447|ICC Profile = AT2
        Property: tiff.ResolutionUnit, value: inch


Opening Slide #13: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
3-TCGA-02-0024-01Z-00-DX1.d4cec60d-e2b6-41d1-92af-2d24f15b03a9.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
33-TCGA-02-0024-01Z-00-DX1.d4cec60d-e2b6-41d1-92af-2d24f15b03a9.svs
Level count: 3
Level dimensions: ((26001, 26335), (6500, 6583), (1625, 1645))
Level downsamples: (1.0, 4.000304782715386, 16.00486696282441)
Dimensions: (26001, 26335)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A437A
898>
    macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A437
A940>
    thumbnail: <PIL.Image.Image image mode=RGBA size=758x768 at 0x7F94A
437A898>
Format: aperio
Properties:
    Property: aperio.AppMag, value: 20
    Property: aperio.DSR ID, value: AP1258-DSR
    Property: aperio.Date, value: 01/20/09
    Property: aperio.Filename, value: 7510
    Property: aperio.Filtered, value: 5
    Property: aperio.ICC Profile, value: ScanScope v1
    Property: aperio.ImageID, value: 7510
    Property: aperio.Left, value: 25.321415
    Property: aperio.LineAreaXOffset, value: 0.021368
    Property: aperio.LineAreaYOffset, value: -0.005374
    Property: aperio.LineCameraSkew, value: -0.000389
    Property: aperio.MPP, value: 0.5015
    Property: aperio.OriginalWidth, value: 26520
    Property: aperio.Originalheight, value: 26435
    Property: aperio.ScanScope ID, value: SS1302
    Property: aperio.StripeWidth, value: 2040
    Property: aperio.Time, value: 14:22:08
    Property: aperio.Title, value: none
    Property: aperio.Top, value: 17.967278
    Property: aperio.User, value: 766babaf-53b7-4270-acab-9f57558d4e14
```

```
    Property: openslide.comment, value: Aperio Image Library v9.0.22
26520x26435 [0,100 26001x26335] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7510|Title = none|
Date = 01/20/09|Time = 14:22:08|User = 766babaf-53b7-4270-acab-9f5755
8d4e14|MPP = 0.5015|Left = 25.321415|Top = 17.967278|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7510|OriginalWidth = 26520|Originalheight =
26435|Filtered = 5|ICC Profile = ScanScope v1
    Property: openslide.level-count, value: 3
    Property: openslide.level[0].downsample, value: 1
    Property: openslide.level[0].height, value: 26335
    Property: openslide.level[0].tile-height, value: 240
    Property: openslide.level[0].tile-width, value: 240
    Property: openslide.level[0].width, value: 26001
    Property: openslide.level[1].downsample, value: 4.0003047827153857
    Property: openslide.level[1].height, value: 6583
    Property: openslide.level[1].tile-height, value: 240
    Property: openslide.level[1].tile-width, value: 240
    Property: openslide.level[1].width, value: 6500
    Property: openslide.level[2].downsample, value: 16.004866962824408
    Property: openslide.level[2].height, value: 1645
    Property: openslide.level[2].tile-height, value: 240
    Property: openslide.level[2].tile-width, value: 240
    Property: openslide.level[2].width, value: 1625
    Property: openslide.mpp-x, value: 0.50149999999999995
    Property: openslide.mpp-y, value: 0.50149999999999995
    Property: openslide.objective-power, value: 20
    Property: openslide.quickhash-1, value: 65e4f20a5b9ac5f1faa5b71c615
1a3fd86e1197fa1716e7cdbf8b6a3fc0acad6
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
26520x26435 [0,100 26001x26335] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7510|Title = none|
Date = 01/20/09|Time = 14:22:08|User = 766babaf-53b7-4270-acab-9f5755
8d4e14|MPP = 0.5015|Left = 25.321415|Top = 17.967278|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7510|OriginalWidth = 26520|Originalheight =
26435|Filtered = 5|ICC Profile = ScanScope v1
    Property: tiff.ResolutionUnit, value: inch


Opening Slide #14: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
7-TCGA-02-0026-01A-01-TS1.7d45400b-00cc-4174-aa6d-5e40f514f930.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
27-TCGA-02-0026-01A-01-TS1.7d45400b-00cc-4174-aa6d-5e40f514f930.svs
Level count: 3
Level dimensions: ((57929, 18245), (14482, 4561), (3620, 1140))
Level downsamples: (1.0, 4.000144150700228, 16.00343607637879)
Dimensions: (57929, 18245)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
6A0>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
AA90>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x322 at 0x7F94
A437A6A0>
```

```
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 01/14/08
  Property: aperio.Filename, value: 2676
  Property: aperio.ImageID, value: 2676
  Property: aperio.Left, value: 16.323153
  Property: aperio.LineAreaXOffset, value: 0.012096
  Property: aperio.LineAreaYOffset, value: -0.021773
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5001
  Property: aperio.OriginalWidth, value: 59160
  Property: aperio.Originalheight, value: 18295
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 2034
  Property: aperio.Time, value: 05:55:41
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 15.434501
  Property: aperio.User, value: a0092174-b177-4951-9d13-364d96b5c0be
  Property: openslide.comment, value: Aperio Image Library v8.2.43
59160x18295 [0,0 57929x18245] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2676|Title = none|Da
te = 01/14/08|Time = 05:55:41|User = a0092174-b177-4951-9d13-364d96b5
c0be|MPP = 0.5001|Left = 16.323153|Top = 15.434501|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2676|OriginalWidth = 59160|Originalheight =
18295
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 18245
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 57929
  Property: openslide.level[1].downsample, value: 4.000144150700228
  Property: openslide.level[1].height, value: 4561
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 14482
  Property: openslide.level[2].downsample, value: 16.00343607637879
  Property: openslide.level[2].height, value: 1140
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 3620
  Property: openslide.mpp-x, value: 0.50009999999999999
  Property: openslide.mpp-y, value: 0.50009999999999999
  Property: openslide.objective-power, value: 20
  Property: openslide.quickhash-1, value: 13cedd699c40d7f6f23486794e7
a7a8c1271a8b0ba0173ee27480292d667e3bd
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
59160x18295 [0,0 57929x18245] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2676|Title = none|Da
te = 01/14/08|Time = 05:55:41|User = a0092174-b177-4951-9d13-364d96b5
c0be|MPP = 0.5001|Left = 16.323153|Top = 15.434501|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
```

```
D = ap1258-dsr|ImageID = 2676|OriginalWidth = 59160|Originalheight =
18295
   Property: tiff.ResolutionUnit, value: inch


Opening Slide #15: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
2-TCGA-02-0004-01A-01-BS1.64d91764-048f-419a-872d-bbd75246fb2e.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
52-TCGA-02-0004-01A-01-BS1.64d91764-048f-419a-872d-bbd75246fb2e.svs
Level count: 4
Level dimensions: ((91888, 35230), (22972, 8807), (5743, 2201), (287
1, 1100))
Level downsamples: (1.0, 4.00011354604292, 16.003180372557928, 32.016
42284918147)
Dimensions: (91888, 35230)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
2E8>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A940>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x392 at 0x7F94
A437A2E8>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 01/11/08
   Property: aperio.Filename, value: 2644
   Property: aperio.ImageID, value: 2644
   Property: aperio.Left, value: 15.550972
   Property: aperio.LineAreaXOffset, value: 0.012096
   Property: aperio.LineAreaYOffset, value: -0.021773
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5001
   Property: aperio.OriginalWidth, value: 93840
   Property: aperio.Originalheight, value: 35280
   Property: aperio.ScanScope ID, value: SS1258
   Property: aperio.StripeWidth, value: 2034
   Property: aperio.Time, value: 12:53:45
   Property: aperio.Title, value: none
   Property: aperio.Top, value: 20.872700
   Property: aperio.User, value: bcf16975-48cc-4b99-9976-8e40bcb9abd0
   Property: openslide.comment, value: Aperio Image Library v8.2.43
93840x35280 [0,0 91888x35230] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2644|Title = none|Da
te = 01/11/08|Time = 12:53:45|User = bcf16975-48cc-4b99-9976-8e40bcb9
abd0|MPP = 0.5001|Left = 15.550972|Top = 20.872700|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2644|OriginalWidth = 93840|Originalheight =
35280
   Property: openslide.level-count, value: 4
   Property: openslide.level[0].downsample, value: 1
   Property: openslide.level[0].height, value: 35230
   Property: openslide.level[0].tile-height, value: 240
   Property: openslide.level[0].tile-width, value: 240
   Property: openslide.level[0].width, value: 91888
   Property: openslide.level[1].downsample, value: 4.00011354604292
```

```
       Property: openslide.level[1].height, value: 8807
       Property: openslide.level[1].tile-height, value: 240
       Property: openslide.level[1].tile-width, value: 240
       Property: openslide.level[1].width, value: 22972
       Property: openslide.level[2].downsample, value: 16.003180372557928
       Property: openslide.level[2].height, value: 2201
       Property: openslide.level[2].tile-height, value: 240
       Property: openslide.level[2].tile-width, value: 240
       Property: openslide.level[2].width, value: 5743
       Property: openslide.level[3].downsample, value: 32.016422849181467
       Property: openslide.level[3].height, value: 1100
       Property: openslide.level[3].tile-height, value: 240
       Property: openslide.level[3].tile-width, value: 240
       Property: openslide.level[3].width, value: 2871
       Property: openslide.mpp-x, value: 0.50009999999999999
       Property: openslide.mpp-y, value: 0.50009999999999999
       Property: openslide.objective-power, value: 20
       Property: openslide.quickhash-1, value: 63ceec466d5ccb91d5b76f69d6c
391e6acf48f4233a389e4cc134809e62463aa
     Property: openslide.vendor, value: aperio
     Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
93840x35280 [0,0 91888x35230] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2644|Title = none|Da
te = 01/11/08|Time = 12:53:45|User = bcf16975-48cc-4b99-9976-8e40bcb9
abd0|MPP = 0.5001|Left = 15.550972|Top = 20.872700|LineCameraSkew =
0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR I
D = ap1258-dsr|ImageID = 2644|OriginalWidth = 93840|Originalheight =
35280
     Property: tiff.ResolutionUnit, value: inch


Opening Slide #16: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
0-TCGA-02-0009-01Z-00-DX2.f5c99ad0-30b1-4f1b-afb0-0a355068eacc.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
50-TCGA-02-0009-01Z-00-DX2.f5c99ad0-30b1-4f1b-afb0-0a355068eacc.svs
Level count: 3
Level dimensions: ((60002, 35651), (15000, 8912), (3750, 2228))
Level downsamples: (1.0, 4.000234979054458, 16.00093991621783)
Dimensions: (60002, 35651)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A437A
2B0>
   macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A437
AA90>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x608 at 0x7F94
A437A2B0>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: AP1258-DSR
   Property: aperio.Date, value: 01/21/09
   Property: aperio.Filename, value: 7562
   Property: aperio.Filtered, value: 5
   Property: aperio.ICC Profile, value: ScanScope v1
   Property: aperio.ImageID, value: 7562
   Property: aperio.Left, value: 23.850248
```

```
Property: aperio.LineAreaXOffset, value: 0.021368
Property: aperio.LineAreaYOffset, value: -0.005374
Property: aperio.LineCameraSkew, value: -0.000389
Property: aperio.MPP, value: 0.5015
Property: aperio.OriginalWidth, value: 61200
Property: aperio.Originalheight, value: 35751
Property: aperio.ScanScope ID, value: SS1302
Property: aperio.StripeWidth, value: 2040
Property: aperio.Time, value: 13:52:08
Property: aperio.Title, value: none
Property: aperio.Top, value: 18.742260
Property: aperio.User, value: d7f93a12-41d0-44e0-b08e-c73b751a2d26
Property: openslide.comment, value: Aperio Image Library v9.0.22
61200x35751 [0,100 60002x35651] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7562|Title = none|
Date = 01/21/09|Time = 13:52:08|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 23.850248|Top = 18.742260|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7562|OriginalWidth = 61200|Originalheight =
35751|Filtered = 5|ICC Profile = ScanScope v1
Property: openslide.level-count, value: 3
Property: openslide.level[0].downsample, value: 1
Property: openslide.level[0].height, value: 35651
Property: openslide.level[0].tile-height, value: 240
Property: openslide.level[0].tile-width, value: 240
Property: openslide.level[0].width, value: 60002
Property: openslide.level[1].downsample, value: 4.0002349790544578
Property: openslide.level[1].height, value: 8912
Property: openslide.level[1].tile-height, value: 240
Property: openslide.level[1].tile-width, value: 240
Property: openslide.level[1].width, value: 15000
Property: openslide.level[2].downsample, value: 16.000939916217831
Property: openslide.level[2].height, value: 2228
Property: openslide.level[2].tile-height, value: 240
Property: openslide.level[2].tile-width, value: 240
Property: openslide.level[2].width, value: 3750
Property: openslide.mpp-x, value: 0.50149999999999995
Property: openslide.mpp-y, value: 0.50149999999999995
Property: openslide.objective-power, value: 20
Property: openslide.vendor, value: aperio
Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
61200x35751 [0,100 60002x35651] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7562|Title = none|
Date = 01/21/09|Time = 13:52:08|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 23.850248|Top = 18.742260|LineCameraSkew =
-0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
ID = AP1258-DSR|ImageID = 7562|OriginalWidth = 61200|Originalheight =
35751|Filtered = 5|ICC Profile = ScanScope v1
Property: tiff.ResolutionUnit, value: inch

Opening Slide #17: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
5-TCGA-02-0026-01B-01-TS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
15-TCGA-02-0026-01B-01-TS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
Level count: 3
Level dimensions: ((27965, 43300), (6991, 10825), (1747, 2706))
```

```
Level downsamples: (1.0, 4.000071520526391, 16.004459762295493)
Dimensions: (27965, 43300)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
550>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A940>
   thumbnail: <PIL.Image.Image image mode=RGBA size=496x768 at 0x7F94A
437A550>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 01/14/08
   Property: aperio.Filename, value: 2677
   Property: aperio.ImageID, value: 2677
   Property: aperio.Left, value: 37.230774
   Property: aperio.LineAreaXOffset, value: 0.012096
   Property: aperio.LineAreaYOffset, value: -0.021773
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5001
   Property: aperio.OriginalWidth, value: 28560
   Property: aperio.Originalheight, value: 43350
   Property: aperio.ScanScope ID, value: SS1258
   Property: aperio.StripeWidth, value: 2034
   Property: aperio.Time, value: 05:58:21
   Property: aperio.Title, value: none
   Property: aperio.Top, value: 22.674824
   Property: aperio.User, value: a0092174-b177-4951-9d13-364d96b5c0be
   Property: openslide.comment, value: Aperio Image Library v8.2.43
28560x43350 [0,0 27965x43300] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2677|Title = none|Da
te = 01/14/08|Time = 05:58:21|User = a0092174-b177-4951-9d13-364d96b5
c0be|MPP = 0.5001|Left = 37.230774|Top = 22.674824|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2677|OriginalWidth = 28560|Originalheight
 = 43350
   Property: openslide.level-count, value: 3
   Property: openslide.level[0].downsample, value: 1
   Property: openslide.level[0].height, value: 43300
   Property: openslide.level[0].tile-height, value: 240
   Property: openslide.level[0].tile-width, value: 240
   Property: openslide.level[0].width, value: 27965
   Property: openslide.level[1].downsample, value: 4.000071520526391
   Property: openslide.level[1].height, value: 10825
   Property: openslide.level[1].tile-height, value: 240
   Property: openslide.level[1].tile-width, value: 240
   Property: openslide.level[1].width, value: 6991
   Property: openslide.level[2].downsample, value: 16.004459762295493
   Property: openslide.level[2].height, value: 2706
   Property: openslide.level[2].tile-height, value: 240
   Property: openslide.level[2].tile-width, value: 240
   Property: openslide.level[2].width, value: 1747
   Property: openslide.mpp-x, value: 0.50009999999999999
   Property: openslide.mpp-y, value: 0.50009999999999999
   Property: openslide.objective-power, value: 20
```

```
    Property: openslide.quickhash-1, value: 2a0cb61b29d624b4d8d0d9702a4
a2fba5a3aecfe718ab4592223104b466a98b4
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
28560x43350 [0,0 27965x43300] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2677|Title = none|Da
te = 01/14/08|Time = 05:58:21|User = a0092174-b177-4951-9d13-364d96b5
c0be|MPP = 0.5001|Left = 37.230774|Top = 22.674824|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2677|OriginalWidth = 28560|Originalheight
 = 43350
    Property: tiff.ResolutionUnit, value: inch


Opening Slide #18: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
5-TCGA-02-0010-01Z-00-DX1.b53f8c4e-6e10-4684-b7fc-fd9e0b9d6c01.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
45-TCGA-02-0010-01Z-00-DX1.b53f8c4e-6e10-4684-b7fc-fd9e0b9d6c01.svs
Level count: 3
Level dimensions: ((36001, 25891), (9000, 6472), (2250, 1618))
Level downsamples: (1.0, 4.0002873231698945, 16.001149292679578)
Dimensions: (36001, 25891)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A437A
1D0>
    macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A437
AA90>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x736 at 0x7F94
A437A1D0>
Format: aperio
Properties:
    Property: aperio.AppMag, value: 20
    Property: aperio.DSR ID, value: AP1258-DSR
    Property: aperio.Date, value: 01/20/09
    Property: aperio.Filename, value: 7541
    Property: aperio.Filtered, value: 5
    Property: aperio.ICC Profile, value: ScanScope v1
    Property: aperio.ImageID, value: 7541
    Property: aperio.Left, value: 28.773401
    Property: aperio.LineAreaXOffset, value: 0.021368
    Property: aperio.LineAreaYOffset, value: -0.005374
    Property: aperio.LineCameraSkew, value: -0.000389
    Property: aperio.MPP, value: 0.5015
    Property: aperio.OriginalWidth, value: 36720
    Property: aperio.Originalheight, value: 25991
    Property: aperio.ScanScope ID, value: SS1302
    Property: aperio.StripeWidth, value: 2040
    Property: aperio.Time, value: 16:50:52
    Property: aperio.Title, value: none
    Property: aperio.Top, value: 19.213243
    Property: aperio.User, value: 766babaf-53b7-4270-acab-9f57558d4e14
    Property: openslide.comment, value: Aperio Image Library v9.0.22
36720x25991 [0,100 36001x25891] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7541|Title = none|
Date = 01/20/09|Time = 16:50:52|User = 766babaf-53b7-4270-acab-9f5755
8d4e14|MPP = 0.5015|Left = 28.773401|Top = 19.213243|LineCameraSkew =
```

```
                -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
               ID = AP1258-DSR|ImageID = 7541|OriginalWidth = 36720|Originalheight
               = 25991|Filtered = 5|ICC Profile = ScanScope v1
                 Property: openslide.level-count, value: 3
                 Property: openslide.level[0].downsample, value: 1
                 Property: openslide.level[0].height, value: 25891
                 Property: openslide.level[0].tile-height, value: 240
                 Property: openslide.level[0].tile-width, value: 240
                 Property: openslide.level[0].width, value: 36001
                 Property: openslide.level[1].downsample, value: 4.0002873231698945
                 Property: openslide.level[1].height, value: 6472
                 Property: openslide.level[1].tile-height, value: 240
                 Property: openslide.level[1].tile-width, value: 240
                 Property: openslide.level[1].width, value: 9000
                 Property: openslide.level[2].downsample, value: 16.001149292679578
                 Property: openslide.level[2].height, value: 1618
                 Property: openslide.level[2].tile-height, value: 240
                 Property: openslide.level[2].tile-width, value: 240
                 Property: openslide.level[2].width, value: 2250
                 Property: openslide.mpp-x, value: 0.50149999999999995
                 Property: openslide.mpp-y, value: 0.50149999999999995
                 Property: openslide.objective-power, value: 20
                 Property: openslide.quickhash-1, value: 70723cae426639131d3fdbfc92e
               6209cb2007a19a5772c0dc5234943674e5d86
                 Property: openslide.vendor, value: aperio
                 Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
               2
               36720x25991 [0,100 36001x25891] (240x240) JPEG/RGB Q=70|AppMag = 20|S
               tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7541|Title = none|
               Date = 01/20/09|Time = 16:50:52|User = 766babaf-53b7-4270-acab-9f5755
               8d4e14|MPP = 0.5015|Left = 28.773401|Top = 19.213243|LineCameraSkew =
                -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
                ID = AP1258-DSR|ImageID = 7541|OriginalWidth = 36720|Originalheight
                = 25991|Filtered = 5|ICC Profile = ScanScope v1
                 Property: tiff.ResolutionUnit, value: inch

               Opening Slide #19: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
               9-TCGA-02-0028-01A-01-TS2.d9b3c085-9d7f-4b74-a7fc-b30bca81b178.svs
               got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
               59-TCGA-02-0028-01A-01-TS2.d9b3c085-9d7f-4b74-a7fc-b30bca81b178.svs
               Level count: 3
               Level dimensions: ((67917, 38688), (16979, 9672), (4244, 2418))
               Level downsamples: (1.0, 4.000029448141822, 16.001531573986803)
               Dimensions: (67917, 38688)
               Objective power: 20
               Associated images:
                 label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
               128>
                 macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
               A940>
                 thumbnail: <PIL.Image.Image image mode=RGBA size=1024x583 at 0x7F94
               A437A128>
               Format: aperio
               Properties:
                 Property: aperio.AppMag, value: 20
                 Property: aperio.DSR ID, value: ap1258-dsr
                 Property: aperio.Date, value: 01/11/08
```

```
Property: aperio.Filename, value: 2576
Property: aperio.ImageID, value: 2576
Property: aperio.Left, value: 18.212590
Property: aperio.LineAreaXOffset, value: 0.012096
Property: aperio.LineAreaYOffset, value: -0.021773
Property: aperio.LineCameraSkew, value: 0.000989
Property: aperio.MPP, value: 0.5001
Property: aperio.OriginalWidth, value: 69360
Property: aperio.Originalheight, value: 38738
Property: aperio.ScanScope ID, value: SS1258
Property: aperio.StripeWidth, value: 2034
Property: aperio.Time, value: 06:28:23
Property: aperio.Title, value: none
Property: aperio.Top, value: 20.375598
Property: aperio.User, value: 81cbf3e8-d31e-4c48-bb52-bb47e6745daa
Property: openslide.comment, value: Aperio Image Library v8.2.43
69360x38738 [0,0 67917x38688] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2576|Title = none|Da
te = 01/11/08|Time = 06:28:23|User = 81cbf3e8-d31e-4c48-bb52-bb47e674
5daa|MPP = 0.5001|Left = 18.212590|Top = 20.375598|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2576|OriginalWidth = 69360|Originalheight
 = 38738
Property: openslide.level-count, value: 3
Property: openslide.level[0].downsample, value: 1
Property: openslide.level[0].height, value: 38688
Property: openslide.level[0].tile-height, value: 240
Property: openslide.level[0].tile-width, value: 240
Property: openslide.level[0].width, value: 67917
Property: openslide.level[1].downsample, value: 4.0000294481418219
Property: openslide.level[1].height, value: 9672
Property: openslide.level[1].tile-height, value: 240
Property: openslide.level[1].tile-width, value: 240
Property: openslide.level[1].width, value: 16979
Property: openslide.level[2].downsample, value: 16.001531573986803
Property: openslide.level[2].height, value: 2418
Property: openslide.level[2].tile-height, value: 240
Property: openslide.level[2].tile-width, value: 240
Property: openslide.level[2].width, value: 4244
Property: openslide.mpp-x, value: 0.50009999999999999
Property: openslide.mpp-y, value: 0.50009999999999999
Property: openslide.objective-power, value: 20
Property: openslide.vendor, value: aperio
Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
69360x38738 [0,0 67917x38688] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2576|Title = none|Da
te = 01/11/08|Time = 06:28:23|User = 81cbf3e8-d31e-4c48-bb52-bb47e674
5daa|MPP = 0.5001|Left = 18.212590|Top = 20.375598|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2576|OriginalWidth = 69360|Originalheight
 = 38738
Property: tiff.ResolutionUnit, value: inch

Opening Slide #20: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
6-TCGA-02-0033-01Z-00-DX1.3c22d6a0-8b25-4f00-a499-b610d0f3c9a0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
```

```
06-TCGA-02-0033-01Z-00-DX1.3c22d6a0-8b25-4f00-a499-b610d0f3c9a0.svs
Level count: 3
Level dimensions: ((60002, 41413), (15000, 10353), (3750, 2588))
Level downsamples: (1.0, 4.0001149618468075, 16.00123266357548)
Dimensions: (60002, 41413)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A437A
5C0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A437
AA90>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x706 at 0x7F94
A437A5C0>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: AP1258-DSR
  Property: aperio.Date, value: 01/20/09
  Property: aperio.Filename, value: 7511
  Property: aperio.Filtered, value: 5
  Property: aperio.ICC Profile, value: ScanScope v1
  Property: aperio.ImageID, value: 7511
  Property: aperio.Left, value: 20.208742
  Property: aperio.LineAreaXOffset, value: 0.021368
  Property: aperio.LineAreaYOffset, value: -0.005374
  Property: aperio.LineCameraSkew, value: -0.000389
  Property: aperio.MPP, value: 0.5015
  Property: aperio.OriginalWidth, value: 61200
  Property: aperio.Originalheight, value: 41513
  Property: aperio.ScanScope ID, value: SS1302
  Property: aperio.StripeWidth, value: 2040
  Property: aperio.Time, value: 14:25:14
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 22.111656
  Property: aperio.User, value: 766babaf-53b7-4270-acab-9f57558d4e14
  Property: openslide.comment, value: Aperio Image Library v9.0.22
61200x41513 [0,100 60002x41413] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7511|Title = none|
Date = 01/20/09|Time = 14:25:14|User = 766babaf-53b7-4270-acab-9f5755
8d4e14|MPP = 0.5015|Left = 20.208742|Top = 22.111656|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7511|OriginalWidth = 61200|Originalheight
 = 41513|Filtered = 5|ICC Profile = ScanScope v1
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 41413
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 60002
  Property: openslide.level[1].downsample, value: 4.0001149618468075
  Property: openslide.level[1].height, value: 10353
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 15000
  Property: openslide.level[2].downsample, value: 16.001232663575479
  Property: openslide.level[2].height, value: 2588
  Property: openslide.level[2].tile-height, value: 240
```

```
        Property: openslide.level[2].tile-width, value: 240
        Property: openslide.level[2].width, value: 3750
        Property: openslide.mpp-x, value: 0.50149999999999995
        Property: openslide.mpp-y, value: 0.50149999999999995
        Property: openslide.objective-power, value: 20
        Property: openslide.vendor, value: aperio
        Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
61200x41513 [0,100 60002x41413] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7511|Title = none|
Date = 01/20/09|Time = 14:25:14|User = 766babaf-53b7-4270-acab-9f5755
8d4e14|MPP = 0.5015|Left = 20.208742|Top = 22.111656|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7511|OriginalWidth = 61200|Originalheight
 = 41513|Filtered = 5|ICC Profile = ScanScope v1
        Property: tiff.ResolutionUnit, value: inch


Opening Slide #21: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-06
0-TCGA-02-0025-01A-01-TS1.9146b647-aed2-4d31-b8f5-2750c028a356.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
60-TCGA-02-0025-01A-01-TS1.9146b647-aed2-4d31-b8f5-2750c028a356.svs
Level count: 3
Level dimensions: ((69062, 30201), (17265, 7550), (4316, 1887))
Level downsamples: (1.0, 4.000124145814274, 16.00307982572334)
Dimensions: (69062, 30201)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
4E0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A940>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x447 at 0x7F94
A437A4E0>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 02/22/08
  Property: aperio.Filename, value: 3766
  Property: aperio.ICC Profile, value: ScanScope v1
  Property: aperio.ImageID, value: 3766
  Property: aperio.Left, value: 28.185274
  Property: aperio.LineAreaXOffset, value: 0.000000
  Property: aperio.LineAreaYOffset, value: 0.000000
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5025
  Property: aperio.OriginalWidth, value: 72000
  Property: aperio.Originalheight, value: 30251
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 1000
  Property: aperio.Time, value: 09:15:19
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 17.761501
  Property: aperio.User, value: b9de16df-c4e3-4cef-9a9e-3ba49decce94
  Property: openslide.comment, value: Aperio Image Library v9.0.22
72000x30251 [0,0 69062x30201] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3766|Title = none|Da
```

```
te = 02/22/08|Time = 09:15:19|User = b9de16df-c4e3-4cef-9a9e-3ba49dec
ce94|MPP = 0.5025|Left = 28.185274|Top = 17.761501|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3766|OriginalWidth = 72000|Originalheight =
 30251|ICC Profile = ScanScope v1
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 30201
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 69062
  Property: openslide.level[1].downsample, value: 4.000124145814274
  Property: openslide.level[1].height, value: 7550
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 17265
  Property: openslide.level[2].downsample, value: 16.00307982572334
  Property: openslide.level[2].height, value: 1887
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 4316
  Property: openslide.mpp-x, value: 0.50249999999999995
  Property: openslide.mpp-y, value: 0.50249999999999995
  Property: openslide.objective-power, value: 20
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
72000x30251 [0,0 69062x30201] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3766|Title = none|Da
te = 02/22/08|Time = 09:15:19|User = b9de16df-c4e3-4cef-9a9e-3ba49dec
ce94|MPP = 0.5025|Left = 28.185274|Top = 17.761501|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3766|OriginalWidth = 72000|Originalheight =
 30251|ICC Profile = ScanScope v1
  Property: tiff.ResolutionUnit, value: inch


Opening Slide #22: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
3-TCGA-02-0023-01Z-00-DX1.69f7c0c4-ff59-4100-94c3-86b7bf2c27c8.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
43-TCGA-02-0023-01Z-00-DX1.69f7c0c4-ff59-4100-94c3-86b7bf2c27c8.svs
Level count: 3
Level dimensions: ((32612, 27027), (8153, 6756), (2038, 1689))
Level downsamples: (1.0, 4.000222024866785, 16.00186945373603)
Dimensions: (32612, 27027)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
470>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
AA90>
  thumbnail: <PIL.Image.Image image mode=RGBA size=926x768 at 0x7F94A
437A470>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 05/15/08
```

```
Property: aperio.Filename, value: 4419
Property: aperio.Filtered, value: 5
Property: aperio.ICC Profile, value: ScanScope v1
Property: aperio.ImageID, value: 4419
Property: aperio.Left, value: 39.168331
Property: aperio.LineAreaXOffset, value: 0.000000
Property: aperio.LineAreaYOffset, value: 0.000000
Property: aperio.LineCameraSkew, value: 0.000989
Property: aperio.MPP, value: 0.5025
Property: aperio.OriginalWidth, value: 34000
Property: aperio.Originalheight, value: 27077
Property: aperio.ScanScope ID, value: SS1258
Property: aperio.StripeWidth, value: 1000
Property: aperio.Time, value: 13:57:41
Property: aperio.Title, value: none
Property: aperio.Top, value: 18.953220
Property: aperio.User, value: a8b14c91-c65f-42e2-b8b8-3f4efb120796
Property: openslide.comment, value: Aperio Image Library v9.0.22
34000x27077 [0,0 32612x27027] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 4419|Title = none|Da
te = 05/15/08|Time = 13:57:41|User = a8b14c91-c65f-42e2-b8b8-3f4efb12
0796|MPP = 0.5025|Left = 39.168331|Top = 18.953220|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 4419|OriginalWidth = 34000|Originalheight =
 27077|Filtered = 5|ICC Profile = ScanScope v1
Property: openslide.level-count, value: 3
Property: openslide.level[0].downsample, value: 1
Property: openslide.level[0].height, value: 27027
Property: openslide.level[0].tile-height, value: 240
Property: openslide.level[0].tile-width, value: 240
Property: openslide.level[0].width, value: 32612
Property: openslide.level[1].downsample, value: 4.000222024866785
Property: openslide.level[1].height, value: 6756
Property: openslide.level[1].tile-height, value: 240
Property: openslide.level[1].tile-width, value: 240
Property: openslide.level[1].width, value: 8153
Property: openslide.level[2].downsample, value: 16.001869453736031
Property: openslide.level[2].height, value: 1689
Property: openslide.level[2].tile-height, value: 240
Property: openslide.level[2].tile-width, value: 240
Property: openslide.level[2].width, value: 2038
Property: openslide.mpp-x, value: 0.50249999999999995
Property: openslide.mpp-y, value: 0.50249999999999995
Property: openslide.objective-power, value: 20
Property: openslide.quickhash-1, value: 79a481747be4f1f487e3e2446cc
01dcf9fc9cb6f67ac896544d192f7eaf3d9f3
Property: openslide.vendor, value: aperio
Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
34000x27077 [0,0 32612x27027] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 4419|Title = none|Da
te = 05/15/08|Time = 13:57:41|User = a8b14c91-c65f-42e2-b8b8-3f4efb12
0796|MPP = 0.5025|Left = 39.168331|Top = 18.953220|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 4419|OriginalWidth = 34000|Originalheight =
 27077|Filtered = 5|ICC Profile = ScanScope v1
Property: tiff.ResolutionUnit, value: inch
```

```
Opening Slide #23: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
7-TCGA-02-0009-01A-01-BS1.dfcc32a1-9a93-4b65-adb6-9ef510994f07.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
57-TCGA-02-0009-01A-01-BS1.dfcc32a1-9a93-4b65-adb6-9ef510994f07.svs
Level count: 2
Level dimensions: ((19975, 12691), (4993, 3172))
Level downsamples: (1.0, 4.000773308356794)
Dimensions: (19975, 12691)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
358>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A940>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x650 at 0x7F94
A437A358>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 01/11/08
  Property: aperio.Filename, value: 2574
  Property: aperio.ImageID, value: 2574
  Property: aperio.Left, value: 19.870572
  Property: aperio.LineAreaXOffset, value: 0.012096
  Property: aperio.LineAreaYOffset, value: -0.021773
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5001
  Property: aperio.OriginalWidth, value: 20400
  Property: aperio.Originalheight, value: 12741
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 2034
  Property: aperio.Time, value: 06:24:06
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 14.219352
  Property: aperio.User, value: 81cbf3e8-d31e-4c48-bb52-bb47e6745daa
  Property: openslide.comment, value: Aperio Image Library v8.2.43
20400x12741 [0,0 19975x12691] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2574|Title = none|Da
te = 01/11/08|Time = 06:24:06|User = 81cbf3e8-d31e-4c48-bb52-bb47e674
5daa|MPP = 0.5001|Left = 19.870572|Top = 14.219352|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2574|OriginalWidth = 20400|Originalheight
 = 12741
  Property: openslide.level-count, value: 2
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 12691
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 19975
  Property: openslide.level[1].downsample, value: 4.000773308356794
  Property: openslide.level[1].height, value: 3172
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 4993
  Property: openslide.mpp-x, value: 0.50009999999999999
```

         Property: openslide.mpp-y, value: 0.50009999999999999
         Property: openslide.objective-power, value: 20
         Property: openslide.vendor, value: aperio
         Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
20400x12741 [0,0 19975x12691] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2574|Title = none|Da
te = 01/11/08|Time = 06:24:06|User = 81cbf3e8-d31e-4c48-bb52-bb47e674
5daa|MPP = 0.5001|Left = 19.870572|Top = 14.219352|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2574|OriginalWidth = 20400|Originalheight
 = 12741
         Property: tiff.ResolutionUnit, value: inch

Opening Slide #24: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
9-TCGA-02-0010-01A-01-TS2.dabc8968-8590-40e9-9916-6bc523a85bb4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
49-TCGA-02-0010-01A-01-TS2.dabc8968-8590-40e9-9916-6bc523a85bb4.svs
Level count: 3
Level dimensions: ((81900, 40437), (20475, 10109), (5118, 2527))
Level downsamples: (1.0, 4.000049460876447, 16.002161648336305)
Dimensions: (81900, 40437)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
390>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
AA90>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x505 at 0x7F94
A437A390>
Format: aperio
Properties:
    Property: aperio.AppMag, value: 20
    Property: aperio.DSR ID, value: ap1258-dsr
    Property: aperio.Date, value: 01/09/08
    Property: aperio.Filename, value: 2345
    Property: aperio.ImageID, value: 2345
    Property: aperio.Left, value: 18.046440
    Property: aperio.LineAreaXOffset, value: 0.012096
    Property: aperio.LineAreaYOffset, value: -0.021773
    Property: aperio.LineCameraSkew, value: 0.000989
    Property: aperio.MPP, value: 0.5001
    Property: aperio.OriginalWidth, value: 83640
    Property: aperio.Originalheight, value: 40487
    Property: aperio.ScanScope ID, value: SS1258
    Property: aperio.StripeWidth, value: 2034
    Property: aperio.Time, value: 08:36:02
    Property: aperio.Title, value: none
    Property: aperio.Top, value: 20.708295
    Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
    Property: openslide.comment, value: Aperio Image Library v8.2.43
83640x40487 [0,0 81900x40437] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2345|Title = none|Da
te = 01/09/08|Time = 08:36:02|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 18.046440|Top = 20.708295|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2345|OriginalWidth = 83640|Originalheight

```
= 40487
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 40437
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 81900
  Property: openslide.level[1].downsample, value: 4.000049460876447
  Property: openslide.level[1].height, value: 10109
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 20475
  Property: openslide.level[2].downsample, value: 16.002161648336305
  Property: openslide.level[2].height, value: 2527
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 5118
  Property: openslide.mpp-x, value: 0.50009999999999999
  Property: openslide.mpp-y, value: 0.50009999999999999
  Property: openslide.objective-power, value: 20
  Property: openslide.quickhash-1, value: 854fa7dbc1fa2b6d165067a282c
c22523cd4f0861fb745b0096aad03458cca79
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
83640x40487 [0,0 81900x40437] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2345|Title = none|Da
te = 01/09/08|Time = 08:36:02|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 18.046440|Top = 20.708295|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2345|OriginalWidth = 83640|Originalheight
 = 40487
  Property: tiff.ResolutionUnit, value: inch


Opening Slide #25: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
4-TCGA-02-0010-01A-01-BS1.37c68e18-09f3-429d-80d9-9f1ffb51ac2e.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
54-TCGA-02-0010-01A-01-BS1.37c68e18-09f3-429d-80d9-9f1ffb51ac2e.svs
Level count: 4
Level dimensions: ((87893, 42768), (21973, 10692), (5493, 2673), (274
6, 1336))
Level downsamples: (1.0, 4.000022755199563, 16.000455124704168, 32.00
9811767579194)
Dimensions: (87893, 42768)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
198>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A940>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x498 at 0x7F94
A437A198>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 01/09/08
```

```
    Property: aperio.Filename, value: 2346
    Property: aperio.ImageID, value: 2346
    Property: aperio.Left, value: 12.227448
    Property: aperio.LineAreaXOffset, value: 0.012096
    Property: aperio.LineAreaYOffset, value: -0.021773
    Property: aperio.LineCameraSkew, value: 0.000989
    Property: aperio.MPP, value: 0.5001
    Property: aperio.OriginalWidth, value: 89760
    Property: aperio.Originalheight, value: 42818
    Property: aperio.ScanScope ID, value: SS1258
    Property: aperio.StripeWidth, value: 2034
    Property: aperio.Time, value: 08:42:39
    Property: aperio.Title, value: none
    Property: aperio.Top, value: 21.878080
    Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
    Property: openslide.comment, value: Aperio Image Library v8.2.43
89760x42818 [0,0 87893x42768] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2346|Title = none|Da
te = 01/09/08|Time = 08:42:39|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 12.227448|Top = 21.878080|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2346|OriginalWidth = 89760|Originalheight
 = 42818
    Property: openslide.level-count, value: 4
    Property: openslide.level[0].downsample, value: 1
    Property: openslide.level[0].height, value: 42768
    Property: openslide.level[0].tile-height, value: 240
    Property: openslide.level[0].tile-width, value: 240
    Property: openslide.level[0].width, value: 87893
    Property: openslide.level[1].downsample, value: 4.0000227551995629
    Property: openslide.level[1].height, value: 10692
    Property: openslide.level[1].tile-height, value: 240
    Property: openslide.level[1].tile-width, value: 240
    Property: openslide.level[1].width, value: 21973
    Property: openslide.level[2].downsample, value: 16.000455124704168
    Property: openslide.level[2].height, value: 2673
    Property: openslide.level[2].tile-height, value: 240
    Property: openslide.level[2].tile-width, value: 240
    Property: openslide.level[2].width, value: 5493
    Property: openslide.level[3].downsample, value: 32.009811767579194
    Property: openslide.level[3].height, value: 1336
    Property: openslide.level[3].tile-height, value: 240
    Property: openslide.level[3].tile-width, value: 240
    Property: openslide.level[3].width, value: 2746
    Property: openslide.mpp-x, value: 0.50009999999999999
    Property: openslide.mpp-y, value: 0.50009999999999999
    Property: openslide.objective-power, value: 20
    Property: openslide.quickhash-1, value: e36204990e539adcff83fc23bce
54855a3d1bb479138b928764b83df5886a0b6
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
89760x42818 [0,0 87893x42768] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2346|Title = none|Da
te = 01/09/08|Time = 08:42:39|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 12.227448|Top = 21.878080|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
```

```
ID = ap1258-dsr|ImageID = 2346|OriginalWidth = 89760|Originalheight
= 42818
  Property: tiff.ResolutionUnit, value: inch


Opening Slide #26: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
4-TCGA-02-0001-01Z-00-DX2.b521a862-280c-4251-ab54-5636f20605d0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
04-TCGA-02-0001-01Z-00-DX2.b521a862-280c-4251-ab54-5636f20605d0.svs
Level count: 3
Level dimensions: ((54002, 41831), (13500, 10457), (3375, 2614))
Level downsamples: (1.0, 4.00021751865665, 16.0016352404432)
Dimensions: (54002, 41831)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A437A
940>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A437
A198>
  thumbnail: <PIL.Image.Image image mode=RGBA size=991x768 at 0x7F94A
438BAC8>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: AP1258-DSR
  Property: aperio.Date, value: 01/22/09
  Property: aperio.Filename, value: 7571
  Property: aperio.Filtered, value: 5
  Property: aperio.ICC Profile, value: ScanScope v1
  Property: aperio.ImageID, value: 7571
  Property: aperio.Left, value: 24.758553
  Property: aperio.LineAreaXOffset, value: 0.021368
  Property: aperio.LineAreaYOffset, value: -0.005374
  Property: aperio.LineCameraSkew, value: -0.000389
  Property: aperio.MPP, value: 0.5015
  Property: aperio.OriginalWidth, value: 55080
  Property: aperio.Originalheight, value: 41931
  Property: aperio.ScanScope ID, value: SS1302
  Property: aperio.StripeWidth, value: 2040
  Property: aperio.Time, value: 08:48:18
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 21.862225
  Property: aperio.User, value: 1aa0eb01-efc1-4da4-8a7f-291417d9b879
  Property: openslide.comment, value: Aperio Image Library v9.0.22
55080x41931 [0,100 54002x41831] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7571|Title = none|
Date = 01/22/09|Time = 08:48:18|User = 1aa0eb01-efc1-4da4-8a7f-291417
d9b879|MPP = 0.5015|Left = 24.758553|Top = 21.862225|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7571|OriginalWidth = 55080|Originalheight
 = 41931|Filtered = 5|ICC Profile = ScanScope v1
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 41831
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 54002
  Property: openslide.level[1].downsample, value: 4.0002175186566502
```

```
      Property: openslide.level[1].height, value: 10457
      Property: openslide.level[1].tile-height, value: 240
      Property: openslide.level[1].tile-width, value: 240
      Property: openslide.level[1].width, value: 13500
      Property: openslide.level[2].downsample, value: 16.0016352404432
      Property: openslide.level[2].height, value: 2614
      Property: openslide.level[2].tile-height, value: 240
      Property: openslide.level[2].tile-width, value: 240
      Property: openslide.level[2].width, value: 3375
      Property: openslide.mpp-x, value: 0.50149999999999995
      Property: openslide.mpp-y, value: 0.50149999999999995
      Property: openslide.objective-power, value: 20
      Property: openslide.vendor, value: aperio
      Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
55080x41931 [0,100 54002x41831] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7571|Title = none|
Date = 01/22/09|Time = 08:48:18|User = 1aa0eb01-efc1-4da4-8a7f-291417
d9b879|MPP = 0.5015|Left = 24.758553|Top = 21.862225|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7571|OriginalWidth = 55080|Originalheight
 = 41931|Filtered = 5|ICC Profile = ScanScope v1
      Property: tiff.ResolutionUnit, value: inch

Opening Slide #27: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
1-TCGA-02-0009-01A-01-TS1.f7c6584a-198d-451e-a91c-59b3f40fe0ca.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
51-TCGA-02-0009-01A-01-TS1.f7c6584a-198d-451e-a91c-59b3f40fe0ca.svs
Level count: 3
Level dimensions: ((20143, 30114), (5035, 7528), (1258, 1882))
Level downsamples: (1.0, 4.00043075200483, 16.006493193825193)
Dimensions: (20143, 30114)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
A90>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A390>
    thumbnail: <PIL.Image.Image image mode=RGBA size=513x768 at 0x7F94A
437A198>
Format: aperio
Properties:
    Property: aperio.AppMag, value: 20
    Property: aperio.DSR ID, value: ap1258-dsr
    Property: aperio.Date, value: 02/15/08
    Property: aperio.Filename, value: 3514
    Property: aperio.ICC Profile, value: ScanScope v1
    Property: aperio.ImageID, value: 3514
    Property: aperio.Left, value: 31.126713
    Property: aperio.LineAreaXOffset, value: 0.000000
    Property: aperio.LineAreaYOffset, value: 0.000000
    Property: aperio.LineCameraSkew, value: 0.000989
    Property: aperio.MPP, value: 0.5025
    Property: aperio.OriginalWidth, value: 21000
    Property: aperio.Originalheight, value: 30164
    Property: aperio.ScanScope ID, value: SS1258
    Property: aperio.StripeWidth, value: 1000
```

```
 Property: aperio.Time, value: 08:25:29
 Property: aperio.Title, value: none
 Property: aperio.Top, value: 18.307253
 Property: aperio.User, value: 146d3321-ee94-4e53-9d5e-d8e6cc5a5745
 Property: openslide.comment, value: Aperio Image Library v9.0.22
21000x30164 [0,0 20143x30114] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3514|Title = none|Da
te = 02/15/08|Time = 08:25:29|User = 146d3321-ee94-4e53-9d5e-d8e6cc5a
5745|MPP = 0.5025|Left = 31.126713|Top = 18.307253|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3514|OriginalWidth = 21000|Originalheight =
 30164|ICC Profile = ScanScope v1
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 30114
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 20143
  Property: openslide.level[1].downsample, value: 4.0004307520048297
  Property: openslide.level[1].height, value: 7528
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 5035
  Property: openslide.level[2].downsample, value: 16.006493193825193
  Property: openslide.level[2].height, value: 1882
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 1258
  Property: openslide.mpp-x, value: 0.50249999999999995
  Property: openslide.mpp-y, value: 0.50249999999999995
  Property: openslide.objective-power, value: 20
  Property: openslide.quickhash-1, value: 39e4748c3a4323b3dfbfe12219d
444380eabacf1bd40963b900fab8c3601b9e9
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
21000x30164 [0,0 20143x30114] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3514|Title = none|Da
te = 02/15/08|Time = 08:25:29|User = 146d3321-ee94-4e53-9d5e-d8e6cc5a
5745|MPP = 0.5025|Left = 31.126713|Top = 18.307253|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3514|OriginalWidth = 21000|Originalheight =
 30164|ICC Profile = ScanScope v1
  Property: tiff.ResolutionUnit, value: inch

Opening Slide #28: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
6-TCGA-02-0015-01A-01-BS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
16-TCGA-02-0015-01A-01-BS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
Level count: 3
Level dimensions: ((79902, 28445), (19975, 7111), (4993, 1777))
Level downsamples: (1.0, 4.0001203761768735, 16.005059813057358)
Dimensions: (79902, 28445)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
390>
```

```
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A198>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x364 at 0x7F94
A438BAC8>
Format: aperio
Properties:
    Property: aperio.AppMag, value: 20
    Property: aperio.DSR ID, value: ap1258-dsr
    Property: aperio.Date, value: 01/11/08
    Property: aperio.Filename, value: 2661
    Property: aperio.ImageID, value: 2661
    Property: aperio.Left, value: 15.051311
    Property: aperio.LineAreaXOffset, value: 0.012096
    Property: aperio.LineAreaYOffset, value: -0.021773
    Property: aperio.LineCameraSkew, value: 0.000989
    Property: aperio.MPP, value: 0.5001
    Property: aperio.OriginalWidth, value: 81600
    Property: aperio.Originalheight, value: 28495
    Property: aperio.ScanScope ID, value: SS1258
    Property: aperio.StripeWidth, value: 2034
    Property: aperio.Time, value: 14:14:35
    Property: aperio.Title, value: none
    Property: aperio.Top, value: 19.653088
    Property: aperio.User, value: 7f4f719a-aa15-40ea-920b-aee5b1edac78
    Property: openslide.comment, value: Aperio Image Library v8.2.43
81600x28495 [0,0 79902x28445] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2661|Title = none|Da
te = 01/11/08|Time = 14:14:35|User = 7f4f719a-aa15-40ea-920b-aee5b1ed
ac78|MPP = 0.5001|Left = 15.051311|Top = 19.653088|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2661|OriginalWidth = 81600|Originalheight
 = 28495
    Property: openslide.level-count, value: 3
    Property: openslide.level[0].downsample, value: 1
    Property: openslide.level[0].height, value: 28445
    Property: openslide.level[0].tile-height, value: 240
    Property: openslide.level[0].tile-width, value: 240
    Property: openslide.level[0].width, value: 79902
    Property: openslide.level[1].downsample, value: 4.0001203761768735
    Property: openslide.level[1].height, value: 7111
    Property: openslide.level[1].tile-height, value: 240
    Property: openslide.level[1].tile-width, value: 240
    Property: openslide.level[1].width, value: 19975
    Property: openslide.level[2].downsample, value: 16.005059813057358
    Property: openslide.level[2].height, value: 1777
    Property: openslide.level[2].tile-height, value: 240
    Property: openslide.level[2].tile-width, value: 240
    Property: openslide.level[2].width, value: 4993
    Property: openslide.mpp-x, value: 0.50009999999999999
    Property: openslide.mpp-y, value: 0.50009999999999999
    Property: openslide.objective-power, value: 20
    Property: openslide.quickhash-1, value: 7d14e9f7bfe2e53a0249ac24606
3b3ffd1166ae487fedcae229bafcffbe38577
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
81600x28495 [0,0 79902x28445] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
```

```
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2661|Title = none|Da
te = 01/11/08|Time = 14:14:35|User = 7f4f719a-aa15-40ea-920b-aee5b1ed
ac78|MPP = 0.5001|Left = 15.051311|Top = 19.653088|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2661|OriginalWidth = 81600|Originalheight
 = 28495
   Property: tiff.ResolutionUnit, value: inch


Opening Slide #29: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
3-TCGA-02-0024-01B-01-TS1.ab1c5ed9-9f8e-4160-942f-84fb74fe7daa.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
03-TCGA-02-0024-01B-01-TS1.ab1c5ed9-9f8e-4160-942f-84fb74fe7daa.svs
Level count: 4
Level dimensions: ((93885, 40560), (23471, 10140), (5867, 2535), (293
3, 1267))
Level downsamples: (1.0, 4.000021302884411, 16.001107891597066, 32.01
125787146832)
Dimensions: (93885, 40560)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
AC8>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
BAC8>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x442 at 0x7F94
A43EECF8>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 01/09/08
   Property: aperio.Filename, value: 2351
   Property: aperio.ImageID, value: 2351
   Property: aperio.Left, value: 12.226596
   Property: aperio.LineAreaXOffset, value: 0.012096
   Property: aperio.LineAreaYOffset, value: -0.021773
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5001
   Property: aperio.OriginalWidth, value: 95880
   Property: aperio.Originalheight, value: 40610
   Property: aperio.ScanScope ID, value: SS1258
   Property: aperio.StripeWidth, value: 2034
   Property: aperio.Time, value: 09:11:17
   Property: aperio.Title, value: none
   Property: aperio.Top, value: 21.101536
   Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
   Property: openslide.comment, value: Aperio Image Library v8.2.43
95880x40610 [0,0 93885x40560] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2351|Title = none|Da
te = 01/09/08|Time = 09:11:17|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 12.226596|Top = 21.101536|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2351|OriginalWidth = 95880|Originalheight
 = 40610
   Property: openslide.level-count, value: 4
   Property: openslide.level[0].downsample, value: 1
   Property: openslide.level[0].height, value: 40560
```

```
   Property: openslide.level[0].tile-height, value: 240
   Property: openslide.level[0].tile-width, value: 240
   Property: openslide.level[0].width, value: 93885
   Property: openslide.level[1].downsample, value: 4.0000213028844112
   Property: openslide.level[1].height, value: 10140
   Property: openslide.level[1].tile-height, value: 240
   Property: openslide.level[1].tile-width, value: 240
   Property: openslide.level[1].width, value: 23471
   Property: openslide.level[2].downsample, value: 16.001107891597066
   Property: openslide.level[2].height, value: 2535
   Property: openslide.level[2].tile-height, value: 240
   Property: openslide.level[2].tile-width, value: 240
   Property: openslide.level[2].width, value: 5867
   Property: openslide.level[3].downsample, value: 32.011257871468317
   Property: openslide.level[3].height, value: 1267
   Property: openslide.level[3].tile-height, value: 240
   Property: openslide.level[3].tile-width, value: 240
   Property: openslide.level[3].width, value: 2933
   Property: openslide.mpp-x, value: 0.50009999999999999
   Property: openslide.mpp-y, value: 0.50009999999999999
   Property: openslide.objective-power, value: 20
   Property: openslide.quickhash-1, value: 89138a3d53034c5017dec427135
78c47d8f9a32b31b1da48bd0cb57df83a9609
   Property: openslide.vendor, value: aperio
   Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
95880x40610 [0,0 93885x40560] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2351|Title = none|Da
te = 01/09/08|Time = 09:11:17|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 12.226596|Top = 21.101536|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2351|OriginalWidth = 95880|Originalheight
 = 40610
   Property: tiff.ResolutionUnit, value: inch


Opening Slide #30: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
8-TCGA-02-0010-01Z-00-DX2.5334831b-8e1f-4b61-bbf6-0f6e950a1b2f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
38-TCGA-02-0010-01Z-00-DX2.5334831b-8e1f-4b61-bbf6-0f6e950a1b2f.svs
Level count: 3
Level dimensions: ((54002, 40857), (13500, 10214), (3375, 2553))
Level downsamples: (1.0, 4.000123026492323, 16.00205892849371)
Dimensions: (54002, 40857)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A438B
080>
   macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A438
B080>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1015x768 at 0x7F94
A438BA90>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: AP1258-DSR
   Property: aperio.Date, value: 01/21/09
   Property: aperio.Filename, value: 7563
```

```
Property: aperio.Filtered, value: 5
Property: aperio.ICC Profile, value: ScanScope v1
Property: aperio.ImageID, value: 7563
Property: aperio.Left, value: 29.617723
Property: aperio.LineAreaXOffset, value: 0.021368
Property: aperio.LineAreaYOffset, value: -0.005374
Property: aperio.LineCameraSkew, value: -0.000389
Property: aperio.MPP, value: 0.5015
Property: aperio.OriginalWidth, value: 55080
Property: aperio.Originalheight, value: 40957
Property: aperio.ScanScope ID, value: SS1302
Property: aperio.StripeWidth, value: 2040
Property: aperio.Time, value: 14:03:30
Property: aperio.Title, value: none
Property: aperio.Top, value: 21.890732
Property: aperio.User, value: d7f93a12-41d0-44e0-b08e-c73b751a2d26
Property: openslide.comment, value: Aperio Image Library v9.0.22
55080x40957 [0,100 54002x40857] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7563|Title = none|
Date = 01/21/09|Time = 14:03:30|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 29.617723|Top = 21.890732|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7563|OriginalWidth = 55080|Originalheight
 = 40957|Filtered = 5|ICC Profile = ScanScope v1
Property: openslide.level-count, value: 3
Property: openslide.level[0].downsample, value: 1
Property: openslide.level[0].height, value: 40857
Property: openslide.level[0].tile-height, value: 240
Property: openslide.level[0].tile-width, value: 240
Property: openslide.level[0].width, value: 54002
Property: openslide.level[1].downsample, value: 4.0001230264923233
Property: openslide.level[1].height, value: 10214
Property: openslide.level[1].tile-height, value: 240
Property: openslide.level[1].tile-width, value: 240
Property: openslide.level[1].width, value: 13500
Property: openslide.level[2].downsample, value: 16.00205892849371
Property: openslide.level[2].height, value: 2553
Property: openslide.level[2].tile-height, value: 240
Property: openslide.level[2].tile-width, value: 240
Property: openslide.level[2].width, value: 3375
Property: openslide.mpp-x, value: 0.50149999999999995
Property: openslide.mpp-y, value: 0.50149999999999995
Property: openslide.objective-power, value: 20
Property: openslide.vendor, value: aperio
Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
55080x40957 [0,100 54002x40857] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7563|Title = none|
Date = 01/21/09|Time = 14:03:30|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 29.617723|Top = 21.890732|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7563|OriginalWidth = 55080|Originalheight
 = 40957|Filtered = 5|ICC Profile = ScanScope v1
Property: tiff.ResolutionUnit, value: inch

Opening Slide #31: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
1-TCGA-02-0006-01B-01-TS2.15b581bb-b760-46b4-b8ae-79c1fcd17d67.svs
```

```
          got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
          41-TCGA-02-0006-01B-01-TS2.15b581bb-b760-46b4-b8ae-79c1fcd17d67.svs
          Level count: 4
          Level dimensions: ((95883, 42779), (23970, 10694), (5992, 2673), (299
          6, 1336))
          Level downsamples: (1.0, 4.000202843792256, 16.00297550368942, 32.011
          940571460556)
          Dimensions: (95883, 42779)
          Objective power: 20
          Associated images:
            label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
          A90>
            macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
          BA90>
            thumbnail: <PIL.Image.Image image mode=RGBA size=1024x456 at 0x7F94
          A438B128>
          Format: aperio
          Properties:
            Property: aperio.AppMag, value: 20
            Property: aperio.DSR ID, value: ap1258-dsr
            Property: aperio.Date, value: 01/09/08
            Property: aperio.Filename, value: 2339
            Property: aperio.ImageID, value: 2339
            Property: aperio.Left, value: 12.227448
            Property: aperio.LineAreaXOffset, value: 0.012096
            Property: aperio.LineAreaYOffset, value: -0.021773
            Property: aperio.LineCameraSkew, value: 0.000989
            Property: aperio.MPP, value: 0.5001
            Property: aperio.OriginalWidth, value: 97920
            Property: aperio.Originalheight, value: 42829
            Property: aperio.ScanScope ID, value: SS1258
            Property: aperio.StripeWidth, value: 2034
            Property: aperio.Time, value: 07:59:04
            Property: aperio.Title, value: none
            Property: aperio.Top, value: 21.878080
            Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
            Property: openslide.comment, value: Aperio Image Library v8.2.43
          97920x42829 [0,0 95883x42779] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
          ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2339|Title = none|Da
          te = 01/09/08|Time = 07:59:04|User = 62b4f535-7795-449b-9333-19179be0
          1318|MPP = 0.5001|Left = 12.227448|Top = 21.878080|LineCameraSkew =
           0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
           ID = ap1258-dsr|ImageID = 2339|OriginalWidth = 97920|Originalheight
           = 42829
            Property: openslide.level-count, value: 4
            Property: openslide.level[0].downsample, value: 1
            Property: openslide.level[0].height, value: 42779
            Property: openslide.level[0].tile-height, value: 240
            Property: openslide.level[0].tile-width, value: 240
            Property: openslide.level[0].width, value: 95883
            Property: openslide.level[1].downsample, value: 4.0002028437922563
            Property: openslide.level[1].height, value: 10694
            Property: openslide.level[1].tile-height, value: 240
            Property: openslide.level[1].tile-width, value: 240
            Property: openslide.level[1].width, value: 23970
            Property: openslide.level[2].downsample, value: 16.00297550368942
            Property: openslide.level[2].height, value: 2673
```

```
      Property: openslide.level[2].tile-height, value: 240
      Property: openslide.level[2].tile-width, value: 240
      Property: openslide.level[2].width, value: 5992
      Property: openslide.level[3].downsample, value: 32.011940571460556
      Property: openslide.level[3].height, value: 1336
      Property: openslide.level[3].tile-height, value: 240
      Property: openslide.level[3].tile-width, value: 240
      Property: openslide.level[3].width, value: 2996
      Property: openslide.mpp-x, value: 0.50009999999999999
      Property: openslide.mpp-y, value: 0.50009999999999999
      Property: openslide.objective-power, value: 20
      Property: openslide.quickhash-1, value: 64a72bd28978cd2e80fd82c6a8d
39310a8216729ed77168def0043b6d464d4ac
      Property: openslide.vendor, value: aperio
      Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
97920x42829 [0,0 95883x42779] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2339|Title = none|Da
te = 01/09/08|Time = 07:59:04|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 12.227448|Top = 21.878080|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2339|OriginalWidth = 97920|Originalheight
 = 42829
      Property: tiff.ResolutionUnit, value: inch


Opening Slide #32: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
5-TCGA-02-0006-01B-01-BS1.e426e878-9367-482d-8cd9-2f389aa96dfe.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
35-TCGA-02-0006-01B-01-BS1.e426e878-9367-482d-8cd9-2f389aa96dfe.svs
Level count: 3
Level dimensions: ((69914, 38139), (17478, 9534), (4369, 2383))
Level downsamples: (1.0, 4.0002145464394285, 16.00345244174926)
Dimensions: (69914, 38139)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
128>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B128>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x558 at 0x7F94
A438BA58>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 01/11/08
  Property: aperio.Filename, value: 2573
  Property: aperio.ImageID, value: 2573
  Property: aperio.Left, value: 16.160594
  Property: aperio.LineAreaXOffset, value: 0.012096
  Property: aperio.LineAreaYOffset, value: -0.021773
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5001
  Property: aperio.OriginalWidth, value: 71400
  Property: aperio.Originalheight, value: 38189
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 2034
```

```
  Property: aperio.Time, value: 06:18:58
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 20.650172
  Property: aperio.User, value: 81cbf3e8-d31e-4c48-bb52-bb47e6745daa
  Property: openslide.comment, value: Aperio Image Library v8.2.43
71400x38189 [0,0 69914x38139] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2573|Title = none|Da
te = 01/11/08|Time = 06:18:58|User = 81cbf3e8-d31e-4c48-bb52-bb47e674
5daa|MPP = 0.5001|Left = 16.160594|Top = 20.650172|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2573|OriginalWidth = 71400|Originalheight
 = 38189
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 38139
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 69914
  Property: openslide.level[1].downsample, value: 4.0002145464394285
  Property: openslide.level[1].height, value: 9534
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 17478
  Property: openslide.level[2].downsample, value: 16.003452441749261
  Property: openslide.level[2].height, value: 2383
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 4369
  Property: openslide.mpp-x, value: 0.50009999999999999
  Property: openslide.mpp-y, value: 0.50009999999999999
  Property: openslide.objective-power, value: 20
  Property: openslide.quickhash-1, value: 28f01bd3c6cdb5d7a1fd0222f80
e5e93361f6313b0aea80eb34f0a4b082ca766
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
71400x38189 [0,0 69914x38139] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2573|Title = none|Da
te = 01/11/08|Time = 06:18:58|User = 81cbf3e8-d31e-4c48-bb52-bb47e674
5daa|MPP = 0.5001|Left = 16.160594|Top = 20.650172|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2573|OriginalWidth = 71400|Originalheight
 = 38189
  Property: tiff.ResolutionUnit, value: inch

Opening Slide #33: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
3-TCGA-02-0007-01A-01-TS2.b97b0953-afe4-4c7a-98d7-921d12e26887.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
23-TCGA-02-0007-01A-01-TS2.b97b0953-afe4-4c7a-98d7-921d12e26887.svs
Level count: 3
Level dimensions: ((81900, 39098), (20475, 9774), (5118, 2443))
Level downsamples: (1.0, 4.000102312257008, 16.003218996880335)
Dimensions: (81900, 39098)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
A58>
```

```
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
BA58>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x488 at 0x7F94
A438BA20>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 01/09/08
   Property: aperio.Filename, value: 2341
   Property: aperio.ImageID, value: 2341
   Property: aperio.Left, value: 16.437470
   Property: aperio.LineAreaXOffset, value: 0.012096
   Property: aperio.LineAreaYOffset, value: -0.021773
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5001
   Property: aperio.OriginalWidth, value: 83640
   Property: aperio.Originalheight, value: 39148
   Property: aperio.ScanScope ID, value: SS1258
   Property: aperio.StripeWidth, value: 2034
   Property: aperio.Time, value: 08:14:30
   Property: aperio.Title, value: none
   Property: aperio.Top, value: 20.040188
   Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
   Property: openslide.comment, value: Aperio Image Library v8.2.43
83640x39148 [0,0 81900x39098] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2341|Title = none|Da
te = 01/09/08|Time = 08:14:30|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 16.437470|Top = 20.040188|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2341|OriginalWidth = 83640|Originalheight
 = 39148
   Property: openslide.level-count, value: 3
   Property: openslide.level[0].downsample, value: 1
   Property: openslide.level[0].height, value: 39098
   Property: openslide.level[0].tile-height, value: 240
   Property: openslide.level[0].tile-width, value: 240
   Property: openslide.level[0].width, value: 81900
   Property: openslide.level[1].downsample, value: 4.0001023122570079
   Property: openslide.level[1].height, value: 9774
   Property: openslide.level[1].tile-height, value: 240
   Property: openslide.level[1].tile-width, value: 240
   Property: openslide.level[1].width, value: 20475
   Property: openslide.level[2].downsample, value: 16.003218996880335
   Property: openslide.level[2].height, value: 2443
   Property: openslide.level[2].tile-height, value: 240
   Property: openslide.level[2].tile-width, value: 240
   Property: openslide.level[2].width, value: 5118
   Property: openslide.mpp-x, value: 0.50009999999999999
   Property: openslide.mpp-y, value: 0.50009999999999999
   Property: openslide.objective-power, value: 20
   Property: openslide.quickhash-1, value: 8e6dd505b807a1d121781c436bc
a83830d5e32ee4daa6900b8ad8a5c997f0d81
   Property: openslide.vendor, value: aperio
   Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
83640x39148 [0,0 81900x39098] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
```

ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2341|Title = none|Da
te = 01/09/08|Time = 08:14:30|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 16.437470|Top = 20.040188|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2341|OriginalWidth = 83640|Originalheight
 = 39148
  Property: tiff.ResolutionUnit, value: inch

Opening Slide #34: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
1-TCGA-02-0014-01A-01-TS2.3c136536-3c20-4da2-a41b-a4221137ad23.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
31-TCGA-02-0014-01A-01-TS2.3c136536-3c20-4da2-a41b-a4221137ad23.svs
Level count: 3
Level dimensions: ((63922, 36365), (15980, 9091), (3995, 2272))
Level downsamples: (1.0, 4.000117577672784, 16.00311122838407)
Dimensions: (63922, 36365)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
A20>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
BA20>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x582 at 0x7F94
A438B9B0>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 01/16/08
  Property: aperio.Filename, value: 2850
  Property: aperio.ImageID, value: 2850
  Property: aperio.Left, value: 19.377930
  Property: aperio.LineAreaXOffset, value: 0.012096
  Property: aperio.LineAreaYOffset, value: -0.021773
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5001
  Property: aperio.OriginalWidth, value: 65280
  Property: aperio.Originalheight, value: 36415
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 2034
  Property: aperio.Time, value: 13:10:10
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 21.374817
  Property: aperio.User, value: 62baa7db-05d2-4095-af72-360247869bf9
  Property: openslide.comment, value: Aperio Image Library v8.2.43
65280x36415 [0,0 63922x36365] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2850|Title = none|Da
te = 01/16/08|Time = 13:10:10|User = 62baa7db-05d2-4095-af72-36024786
9bf9|MPP = 0.5001|Left = 19.377930|Top = 21.374817|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2850|OriginalWidth = 65280|Originalheight
 = 36415
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 36365
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240

```
     Property: openslide.level[0].width, value: 63922
     Property: openslide.level[1].downsample, value: 4.0001175776727838
     Property: openslide.level[1].height, value: 9091
     Property: openslide.level[1].tile-height, value: 240
     Property: openslide.level[1].tile-width, value: 240
     Property: openslide.level[1].width, value: 15980
     Property: openslide.level[2].downsample, value: 16.003111228384071
     Property: openslide.level[2].height, value: 2272
     Property: openslide.level[2].tile-height, value: 240
     Property: openslide.level[2].tile-width, value: 240
     Property: openslide.level[2].width, value: 3995
     Property: openslide.mpp-x, value: 0.50009999999999999
     Property: openslide.mpp-y, value: 0.50009999999999999
     Property: openslide.objective-power, value: 20
     Property: openslide.quickhash-1, value: 1a4bdc37c04a3df1340dc9c823a
63aad62651d78a5772619308c674f6044df26
   Property: openslide.vendor, value: aperio
   Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
65280x36415 [0,0 63922x36365] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2850|Title = none|Da
te = 01/16/08|Time = 13:10:10|User = 62baa7db-05d2-4095-af72-36024786
9bf9|MPP = 0.5001|Left = 19.377930|Top = 21.374817|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2850|OriginalWidth = 65280|Originalheight
 = 36415
   Property: tiff.ResolutionUnit, value: inch


Opening Slide #35: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
1-TCGA-02-0011-01B-01-TS1.e0250635-3446-4c9e-a271-ac25428fc090.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
11-TCGA-02-0011-01B-01-TS1.e0250635-3446-4c9e-a271-ac25428fc090.svs
Level count: 3
Level dimensions: ((27965, 19190), (6991, 4797), (3495, 2398))
Level downsamples: (1.0, 4.000279984149489, 8.001966350117707)
Dimensions: (27965, 19190)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
9B0>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B9B0>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x702 at 0x7F94
A438B9E8>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 01/09/08
   Property: aperio.Filename, value: 2347
   Property: aperio.ImageID, value: 2347
   Property: aperio.Left, value: 15.545643
   Property: aperio.LineAreaXOffset, value: 0.012096
   Property: aperio.LineAreaYOffset, value: -0.021773
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5001
   Property: aperio.OriginalWidth, value: 28560
```

```
     Property: aperio.Originalheight, value: 19240
     Property: aperio.ScanScope ID, value: SS1258
     Property: aperio.StripeWidth, value: 2034
     Property: aperio.Time, value: 08:49:22
     Property: aperio.Title, value: none
     Property: aperio.Top, value: 13.603798
     Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
     Property: openslide.comment, value: Aperio Image Library v8.2.43
28560x19240 [0,0 27965x19190] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2347|Title = none|Da
te = 01/09/08|Time = 08:49:22|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 15.545643|Top = 13.603798|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2347|OriginalWidth = 28560|Originalheight
 = 19240
     Property: openslide.level-count, value: 3
     Property: openslide.level[0].downsample, value: 1
     Property: openslide.level[0].height, value: 19190
     Property: openslide.level[0].tile-height, value: 240
     Property: openslide.level[0].tile-width, value: 240
     Property: openslide.level[0].width, value: 27965
     Property: openslide.level[1].downsample, value: 4.0002799841494889
     Property: openslide.level[1].height, value: 4797
     Property: openslide.level[1].tile-height, value: 240
     Property: openslide.level[1].tile-width, value: 240
     Property: openslide.level[1].width, value: 6991
     Property: openslide.level[2].downsample, value: 8.0019663501177067
     Property: openslide.level[2].height, value: 2398
     Property: openslide.level[2].tile-height, value: 240
     Property: openslide.level[2].tile-width, value: 240
     Property: openslide.level[2].width, value: 3495
     Property: openslide.mpp-x, value: 0.50009999999999999
     Property: openslide.mpp-y, value: 0.50009999999999999
     Property: openslide.objective-power, value: 20
     Property: openslide.quickhash-1, value: 3ad9c8de5d0aab90a34c696d440
e95b064ba372ffcba8c8b771a10c9447f37fd
     Property: openslide.vendor, value: aperio
     Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
28560x19240 [0,0 27965x19190] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2347|Title = none|Da
te = 01/09/08|Time = 08:49:22|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 15.545643|Top = 13.603798|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2347|OriginalWidth = 28560|Originalheight
 = 19240
     Property: tiff.ResolutionUnit, value: inch

Opening Slide #36: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
6-TCGA-02-0011-01B-01-BS1.90348ecd-40b3-477c-8888-076f5f8f8a98.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
56-TCGA-02-0011-01B-01-BS1.90348ecd-40b3-477c-8888-076f5f8f8a98.svs
Level count: 3
Level dimensions: ((75907, 25348), (18976, 6337), (4744, 1584))
Level downsamples: (1.0, 4.000079047217538, 16.001578815132778)
Dimensions: (75907, 25348)
Objective power: 20
```

Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
9E8>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B9E8>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x341 at 0x7F94
A438B978>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 01/09/08
  Property: aperio.Filename, value: 2348
  Property: aperio.ImageID, value: 2348
  Property: aperio.Left, value: 19.374250
  Property: aperio.LineAreaXOffset, value: 0.012096
  Property: aperio.LineAreaYOffset, value: -0.021773
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5001
  Property: aperio.OriginalWidth, value: 77520
  Property: aperio.Originalheight, value: 25398
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 2034
  Property: aperio.Time, value: 08:51:24
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 16.160112
  Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
  Property: openslide.comment, value: Aperio Image Library v8.2.43
77520x25398 [0,0 75907x25348] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2348|Title = none|Da
te = 01/09/08|Time = 08:51:24|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 19.374250|Top = 16.160112|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2348|OriginalWidth = 77520|Originalheight
 = 25398
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 25348
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 75907
  Property: openslide.level[1].downsample, value: 4.0000790472175378
  Property: openslide.level[1].height, value: 6337
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 18976
  Property: openslide.level[2].downsample, value: 16.001578815132778
  Property: openslide.level[2].height, value: 1584
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 4744
  Property: openslide.mpp-x, value: 0.50009999999999999
  Property: openslide.mpp-y, value: 0.50009999999999999
  Property: openslide.objective-power, value: 20
  Property: openslide.quickhash-1, value: 855b5efed0d42fd3a36df1c16e2
68eba8986e714e9f5522587e2c31a235e5f66
  Property: openslide.vendor, value: aperio

```
      Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
77520x25398 [0,0 75907x25348] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2348|Title = none|Da
te = 01/09/08|Time = 08:51:24|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 19.374250|Top = 16.160112|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2348|OriginalWidth = 77520|Originalheight
 = 25398
      Property: tiff.ResolutionUnit, value: inch

Opening Slide #37: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
6-TCGA-02-0027-01A-01-TS1.f7418da1-4691-4dd3-acb0-8fc3e4d737da.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
36-TCGA-02-0027-01A-01-TS1.f7418da1-4691-4dd3-acb0-8fc3e4d737da.svs
Level count: 4
Level dimensions: ((82491, 44547), (20622, 11136), (5155, 2784), (257
7, 1392))
Level downsamples: (1.0, 4.00020743612864, 16.001605718418677, 32.006
316235799446)
Dimensions: (82491, 44547)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
978>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B978>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x552 at 0x7F94
A438B908>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 02/15/08
  Property: aperio.Filename, value: 3516
  Property: aperio.ICC Profile, value: ScanScope v1
  Property: aperio.ImageID, value: 3516
  Property: aperio.Left, value: 17.437618
  Property: aperio.LineAreaXOffset, value: 0.000000
  Property: aperio.LineAreaYOffset, value: 0.000000
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5025
  Property: aperio.OriginalWidth, value: 86000
  Property: aperio.Originalheight, value: 44597
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 1000
  Property: aperio.Time, value: 08:43:44
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 22.814011
  Property: aperio.User, value: 146d3321-ee94-4e53-9d5e-d8e6cc5a5745
  Property: openslide.comment, value: Aperio Image Library v9.0.22
86000x44597 [0,0 82491x44547] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3516|Title = none|Da
te = 02/15/08|Time = 08:43:44|User = 146d3321-ee94-4e53-9d5e-d8e6cc5a
5745|MPP = 0.5025|Left = 17.437618|Top = 22.814011|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3516|OriginalWidth = 86000|Originalheight =
```

```
  44597|ICC Profile = ScanScope v1
   Property: openslide.level-count, value: 4
   Property: openslide.level[0].downsample, value: 1
   Property: openslide.level[0].height, value: 44547
   Property: openslide.level[0].tile-height, value: 240
   Property: openslide.level[0].tile-width, value: 240
   Property: openslide.level[0].width, value: 82491
   Property: openslide.level[1].downsample, value: 4.0002074361286404
   Property: openslide.level[1].height, value: 11136
   Property: openslide.level[1].tile-height, value: 240
   Property: openslide.level[1].tile-width, value: 240
   Property: openslide.level[1].width, value: 20622
   Property: openslide.level[2].downsample, value: 16.001605718418677
   Property: openslide.level[2].height, value: 2784
   Property: openslide.level[2].tile-height, value: 240
   Property: openslide.level[2].tile-width, value: 240
   Property: openslide.level[2].width, value: 5155
   Property: openslide.level[3].downsample, value: 32.006316235799446
   Property: openslide.level[3].height, value: 1392
   Property: openslide.level[3].tile-height, value: 240
   Property: openslide.level[3].tile-width, value: 240
   Property: openslide.level[3].width, value: 2577
   Property: openslide.mpp-x, value: 0.50249999999999995
   Property: openslide.mpp-y, value: 0.50249999999999995
   Property: openslide.objective-power, value: 20
   Property: openslide.quickhash-1, value: 72d17269d81391c831e579246b7
baf63bd3ac040214873e2d8d7b6d52afec21f
   Property: openslide.vendor, value: aperio
   Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
86000x44597 [0,0 82491x44547] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3516|Title = none|Da
te = 02/15/08|Time = 08:43:44|User = 146d3321-ee94-4e53-9d5e-d8e6cc5a
5745|MPP = 0.5025|Left = 17.437618|Top = 22.814011|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3516|OriginalWidth = 86000|Originalheight =
 44597|ICC Profile = ScanScope v1
   Property: tiff.ResolutionUnit, value: inch


Opening Slide #38: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
4-TCGA-02-0006-01Z-00-DX1.a37df719-8b93-4245-ae49-67eb1114253a.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
44-TCGA-02-0006-01Z-00-DX1.a37df719-8b93-4245-ae49-67eb1114253a.svs
Level count: 3
Level dimensions: ((40001, 31019), (10000, 7754), (2500, 1938))
Level downsamples: (1.0, 4.000243448542688, 16.00303797729618)
Dimensions: (40001, 31019)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A438B
908>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A438
B908>
  thumbnail: <PIL.Image.Image image mode=RGBA size=990x768 at 0x7F94A
438B898>
Format: aperio
Properties:
```

```
          Property: aperio.AppMag, value: 20
          Property: aperio.DSR ID, value: AP1258-DSR
          Property: aperio.Date, value: 01/20/09
          Property: aperio.Filename, value: 7538
          Property: aperio.Filtered, value: 5
          Property: aperio.ICC Profile, value: ScanScope v1
          Property: aperio.ImageID, value: 7538
          Property: aperio.Left, value: 23.085964
          Property: aperio.LineAreaXOffset, value: 0.021368
          Property: aperio.LineAreaYOffset, value: -0.005374
          Property: aperio.LineCameraSkew, value: -0.000389
          Property: aperio.MPP, value: 0.5015
          Property: aperio.OriginalWidth, value: 40800
          Property: aperio.Originalheight, value: 31119
          Property: aperio.ScanScope ID, value: SS1302
          Property: aperio.StripeWidth, value: 2040
          Property: aperio.Time, value: 16:39:38
          Property: aperio.Title, value: none
          Property: aperio.Top, value: 19.576641
          Property: aperio.User, value: 766babaf-53b7-4270-acab-9f57558d4e14
          Property: openslide.comment, value: Aperio Image Library v9.0.22
40800x31119 [0,100 40001x31019] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7538|Title = none|
Date = 01/20/09|Time = 16:39:38|User = 766babaf-53b7-4270-acab-9f5755
8d4e14|MPP = 0.5015|Left = 23.085964|Top = 19.576641|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7538|OriginalWidth = 40800|Originalheight
 = 31119|Filtered = 5|ICC Profile = ScanScope v1
          Property: openslide.level-count, value: 3
          Property: openslide.level[0].downsample, value: 1
          Property: openslide.level[0].height, value: 31019
          Property: openslide.level[0].tile-height, value: 240
          Property: openslide.level[0].tile-width, value: 240
          Property: openslide.level[0].width, value: 40001
          Property: openslide.level[1].downsample, value: 4.0002434485426877
          Property: openslide.level[1].height, value: 7754
          Property: openslide.level[1].tile-height, value: 240
          Property: openslide.level[1].tile-width, value: 240
          Property: openslide.level[1].width, value: 10000
          Property: openslide.level[2].downsample, value: 16.003037977296181
          Property: openslide.level[2].height, value: 1938
          Property: openslide.level[2].tile-height, value: 240
          Property: openslide.level[2].tile-width, value: 240
          Property: openslide.level[2].width, value: 2500
          Property: openslide.mpp-x, value: 0.50149999999999995
          Property: openslide.mpp-y, value: 0.50149999999999995
          Property: openslide.objective-power, value: 20
          Property: openslide.quickhash-1, value: cc48fdde5f5f3bb8a11615d709e
3ed0cf4605c009f37dc3a12bdc13d186f565e
          Property: openslide.vendor, value: aperio
          Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
40800x31119 [0,100 40001x31019] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7538|Title = none|
Date = 01/20/09|Time = 16:39:38|User = 766babaf-53b7-4270-acab-9f5755
8d4e14|MPP = 0.5015|Left = 23.085964|Top = 19.576641|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
```

```
ID = AP1258-DSR|ImageID = 7538|OriginalWidth = 40800|Originalheight
= 31119|Filtered = 5|ICC Profile = ScanScope v1
  Property: tiff.ResolutionUnit, value: inch


Opening Slide #39: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
4-TCGA-02-0014-01A-01-BS1.c0d26a6a-e351-46c2-bce4-7ea67c1007dd.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
24-TCGA-02-0014-01A-01-BS1.c0d26a6a-e351-46c2-bce4-7ea67c1007dd.svs
Level count: 3
Level dimensions: ((59927, 29451), (14981, 7362), (3745, 1840))
Level downsamples: (1.0, 4.000303875808569, 16.003923709874037)
Dimensions: (59927, 29451)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
898>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B898>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x503 at 0x7F94
A438B7F0>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 01/16/08
  Property: aperio.Filename, value: 2821
  Property: aperio.ImageID, value: 2821
  Property: aperio.Left, value: 23.424777
  Property: aperio.LineAreaXOffset, value: 0.012096
  Property: aperio.LineAreaYOffset, value: -0.021773
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5001
  Property: aperio.OriginalWidth, value: 61200
  Property: aperio.Originalheight, value: 29501
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 2034
  Property: aperio.Time, value: 09:16:54
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 19.985631
  Property: aperio.User, value: 7cb07d2b-58f7-4a8d-bcec-74650c6eaa52
  Property: openslide.comment, value: Aperio Image Library v8.2.43
61200x29501 [0,0 59927x29451] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2821|Title = none|Da
te = 01/16/08|Time = 09:16:54|User = 7cb07d2b-58f7-4a8d-bcec-74650c6e
aa52|MPP = 0.5001|Left = 23.424777|Top = 19.985631|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2821|OriginalWidth = 61200|Originalheight
 = 29501
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 29451
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 59927
  Property: openslide.level[1].downsample, value: 4.0003038758085694
  Property: openslide.level[1].height, value: 7362
  Property: openslide.level[1].tile-height, value: 240
```

```
   Property: openslide.level[1].tile-width, value: 240
   Property: openslide.level[1].width, value: 14981
   Property: openslide.level[2].downsample, value: 16.003923709874037
   Property: openslide.level[2].height, value: 1840
   Property: openslide.level[2].tile-height, value: 240
   Property: openslide.level[2].tile-width, value: 240
   Property: openslide.level[2].width, value: 3745
   Property: openslide.mpp-x, value: 0.50009999999999999
   Property: openslide.mpp-y, value: 0.50009999999999999
   Property: openslide.objective-power, value: 20
   Property: openslide.quickhash-1, value: e942598fcc83ba1194bcb3dc653
0335cd49fb2641c7be6562124777dcb5e2b22
   Property: openslide.vendor, value: aperio
   Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
61200x29501 [0,0 59927x29451] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2821|Title = none|Da
te = 01/16/08|Time = 09:16:54|User = 7cb07d2b-58f7-4a8d-bcec-74650c6e
aa52|MPP = 0.5001|Left = 23.424777|Top = 19.985631|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2821|OriginalWidth = 61200|Originalheight
 = 29501
   Property: tiff.ResolutionUnit, value: inch

Opening Slide #40: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
8-TCGA-02-0001-01Z-00-DX3.2836ce55-491f-4d86-99b1-668946927af8.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
28-TCGA-02-0001-01Z-00-DX3.2836ce55-491f-4d86-99b1-668946927af8.svs
Level count: 3
Level dimensions: ((52002, 34553), (13000, 8638), (3250, 2159))
Level downsamples: (1.0, 4.000134806846313, 16.002391990593935)
Dimensions: (52002, 34553)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A438B
7F0>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A438
B7F0>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x680 at 0x7F94
A438B860>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: AP1258-DSR
  Property: aperio.Date, value: 01/21/09
  Property: aperio.Filename, value: 7564
  Property: aperio.Filtered, value: 5
  Property: aperio.ICC Profile, value: ScanScope v1
  Property: aperio.ImageID, value: 7564
  Property: aperio.Left, value: 24.559761
  Property: aperio.LineAreaXOffset, value: 0.021368
  Property: aperio.LineAreaYOffset, value: -0.005374
  Property: aperio.LineCameraSkew, value: -0.000389
  Property: aperio.MPP, value: 0.5015
  Property: aperio.OriginalWidth, value: 53040
  Property: aperio.Originalheight, value: 34653
  Property: aperio.ScanScope ID, value: SS1302
```

```
      Property: aperio.StripeWidth, value: 2040
      Property: aperio.Time, value: 14:16:41
      Property: aperio.Title, value: none
      Property: aperio.Top, value: 20.586044
      Property: aperio.User, value: d7f93a12-41d0-44e0-b08e-c73b751a2d26
      Property: openslide.comment, value: Aperio Image Library v9.0.22
53040x34653 [0,100 52002x34553] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7564|Title = none|
Date = 01/21/09|Time = 14:16:41|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 24.559761|Top = 20.586044|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7564|OriginalWidth = 53040|Originalheight
 = 34653|Filtered = 5|ICC Profile = ScanScope v1
      Property: openslide.level-count, value: 3
      Property: openslide.level[0].downsample, value: 1
      Property: openslide.level[0].height, value: 34553
      Property: openslide.level[0].tile-height, value: 240
      Property: openslide.level[0].tile-width, value: 240
      Property: openslide.level[0].width, value: 52002
      Property: openslide.level[1].downsample, value: 4.00001348068463134
      Property: openslide.level[1].height, value: 8638
      Property: openslide.level[1].tile-height, value: 240
      Property: openslide.level[1].tile-width, value: 240
      Property: openslide.level[1].width, value: 13000
      Property: openslide.level[2].downsample, value: 16.002391990593935
      Property: openslide.level[2].height, value: 2159
      Property: openslide.level[2].tile-height, value: 240
      Property: openslide.level[2].tile-width, value: 240
      Property: openslide.level[2].width, value: 3250
      Property: openslide.mpp-x, value: 0.50149999999999995
      Property: openslide.mpp-y, value: 0.50149999999999995
      Property: openslide.objective-power, value: 20
      Property: openslide.vendor, value: aperio
      Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
53040x34653 [0,100 52002x34553] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7564|Title = none|
Date = 01/21/09|Time = 14:16:41|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 24.559761|Top = 20.586044|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7564|OriginalWidth = 53040|Originalheight
 = 34653|Filtered = 5|ICC Profile = ScanScope v1
      Property: tiff.ResolutionUnit, value: inch

Opening Slide #41: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
0-TCGA-02-0016-01A-01-BS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
30-TCGA-02-0016-01A-01-BS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
Level count: 3
Level dimensions: ((67917, 37008), (16979, 9252), (4244, 2313))
Level downsamples: (1.0, 4.000029448141822, 16.001531573986803)
Dimensions: (67917, 37008)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
860>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
```

```
                              B860>
                                thumbnail: <PIL.Image.Image image mode=RGBA size=1024x557 at 0x7F94
                              A438B208>
                              Format: aperio
                              Properties:
                                Property: aperio.AppMag, value: 20
                                Property: aperio.DSR ID, value: ap1258-dsr
                                Property: aperio.Date, value: 01/11/08
                                Property: aperio.Filename, value: 2663
                                Property: aperio.ImageID, value: 2663
                                Property: aperio.Left, value: 17.824295
                                Property: aperio.LineAreaXOffset, value: 0.012096
                                Property: aperio.LineAreaYOffset, value: -0.021773
                                Property: aperio.LineCameraSkew, value: 0.000989
                                Property: aperio.MPP, value: 0.5001
                                Property: aperio.OriginalWidth, value: 69360
                                Property: aperio.Originalheight, value: 37058
                                Property: aperio.ScanScope ID, value: SS1258
                                Property: aperio.StripeWidth, value: 2034
                                Property: aperio.Time, value: 14:21:40
                                Property: aperio.Title, value: none
                                Property: aperio.Top, value: 20.319567
                                Property: aperio.User, value: 7f4f719a-aa15-40ea-920b-aee5b1edac78
                                Property: openslide.comment, value: Aperio Image Library v8.2.43
                              69360x37058 [0,0 67917x37008] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
                              ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2663|Title = none|Da
                              te = 01/11/08|Time = 14:21:40|User = 7f4f719a-aa15-40ea-920b-aee5b1ed
                              ac78|MPP = 0.5001|Left = 17.824295|Top = 20.319567|LineCameraSkew =
                               0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
                               ID = ap1258-dsr|ImageID = 2663|OriginalWidth = 69360|Originalheight
                               = 37058
                                Property: openslide.level-count, value: 3
                                Property: openslide.level[0].downsample, value: 1
                                Property: openslide.level[0].height, value: 37008
                                Property: openslide.level[0].tile-height, value: 240
                                Property: openslide.level[0].tile-width, value: 240
                                Property: openslide.level[0].width, value: 67917
                                Property: openslide.level[1].downsample, value: 4.0000294481418219
                                Property: openslide.level[1].height, value: 9252
                                Property: openslide.level[1].tile-height, value: 240
                                Property: openslide.level[1].tile-width, value: 240
                                Property: openslide.level[1].width, value: 16979
                                Property: openslide.level[2].downsample, value: 16.001531573986803
                                Property: openslide.level[2].height, value: 2313
                                Property: openslide.level[2].tile-height, value: 240
                                Property: openslide.level[2].tile-width, value: 240
                                Property: openslide.level[2].width, value: 4244
                                Property: openslide.mpp-x, value: 0.50009999999999999
                                Property: openslide.mpp-y, value: 0.50009999999999999
                                Property: openslide.objective-power, value: 20
                                Property: openslide.quickhash-1, value: 3718687b4e4f62475938544d7f8
                              737957a379bc4633e97b31d1f879b29fe8cc6
                                Property: openslide.vendor, value: aperio
                                Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
                              3
                              69360x37058 [0,0 67917x37008] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
                              ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2663|Title = none|Da
```

```
te = 01/11/08|Time = 14:21:40|User = 7f4f719a-aa15-40ea-920b-aee5b1ed
ac78|MPP = 0.5001|Left = 17.824295|Top = 20.319567|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2663|OriginalWidth = 69360|Originalheight
 = 37058
   Property: tiff.ResolutionUnit, value: inch


Opening Slide #42: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
2-TCGA-02-0015-01B-01-TS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
22-TCGA-02-0015-01B-01-TS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
Level count: 3
Level dimensions: ((53934, 16596), (13483, 4149), (3370, 1037))
Level downsamples: (1.0, 4.000074167470148, 16.004005791643895)
Dimensions: (53934, 16596)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
208>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
B208>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x315 at 0x7F94
A438B240>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 01/11/08
   Property: aperio.Filename, value: 2662
   Property: aperio.ImageID, value: 2662
   Property: aperio.Left, value: 15.050945
   Property: aperio.LineAreaXOffset, value: 0.012096
   Property: aperio.LineAreaYOffset, value: -0.021773
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5001
   Property: aperio.OriginalWidth, value: 55080
   Property: aperio.Originalheight, value: 16646
   Property: aperio.ScanScope ID, value: SS1258
   Property: aperio.StripeWidth, value: 2034
   Property: aperio.Time, value: 14:19:04
   Property: aperio.Title, value: none
   Property: aperio.Top, value: 19.153697
   Property: aperio.User, value: 7f4f719a-aa15-40ea-920b-aee5b1edac78
   Property: openslide.comment, value: Aperio Image Library v8.2.43
55080x16646 [0,0 53934x16596] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2662|Title = none|Da
te = 01/11/08|Time = 14:19:04|User = 7f4f719a-aa15-40ea-920b-aee5b1ed
ac78|MPP = 0.5001|Left = 15.050945|Top = 19.153697|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2662|OriginalWidth = 55080|Originalheight
 = 16646
   Property: openslide.level-count, value: 3
   Property: openslide.level[0].downsample, value: 1
   Property: openslide.level[0].height, value: 16596
   Property: openslide.level[0].tile-height, value: 240
   Property: openslide.level[0].tile-width, value: 240
   Property: openslide.level[0].width, value: 53934
```

```
  Property: openslide.level[1].downsample, value: 4.0000741674701477
  Property: openslide.level[1].height, value: 4149
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 13483
  Property: openslide.level[2].downsample, value: 16.004005791643895
  Property: openslide.level[2].height, value: 1037
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 3370
  Property: openslide.mpp-x, value: 0.50009999999999999
  Property: openslide.mpp-y, value: 0.50009999999999999
  Property: openslide.objective-power, value: 20
  Property: openslide.quickhash-1, value: 019266e848beb63df8c9a7f05e1
a93d84dfa75ac31bf6f98996ae69547b3a072
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
55080x16646 [0,0 53934x16596] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2662|Title = none|Da
te = 01/11/08|Time = 14:19:04|User = 7f4f719a-aa15-40ea-920b-aee5b1ed
ac78|MPP = 0.5001|Left = 15.050945|Top = 19.153697|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2662|OriginalWidth = 55080|Originalheight
 = 16646
  Property: tiff.ResolutionUnit, value: inch


Opening Slide #43: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
4-TCGA-02-0010-01Z-00-DX4.07de2e55-a8fe-40ee-9e98-bcb78050b9f7.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
14-TCGA-02-0010-01Z-00-DX4.07de2e55-a8fe-40ee-9e98-bcb78050b9f7.svs
Level count: 3
Level dimensions: ((32001, 38474), (8000, 9618), (2000, 2404))
Level downsamples: (1.0, 4.000166471719693, 16.002329866888516)
Dimensions: (32001, 38474)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=472x456 at 0x7F94A438B
240>
  macro: <PIL.Image.Image image mode=RGBA size=1280x431 at 0x7F94A438
B240>
  thumbnail: <PIL.Image.Image image mode=RGBA size=638x768 at 0x7F94A
438B160>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: AP1258-DSR
  Property: aperio.Date, value: 01/21/09
  Property: aperio.Filename, value: 7566
  Property: aperio.Filtered, value: 5
  Property: aperio.ICC Profile, value: ScanScope v1
  Property: aperio.ImageID, value: 7566
  Property: aperio.Left, value: 28.390419
  Property: aperio.LineAreaXOffset, value: 0.021368
  Property: aperio.LineAreaYOffset, value: -0.005374
  Property: aperio.LineCameraSkew, value: -0.000389
  Property: aperio.MPP, value: 0.5015
```

```
          Property: aperio.OriginalWidth, value: 32640
          Property: aperio.Originalheight, value: 38574
          Property: aperio.ScanScope ID, value: SS1302
          Property: aperio.StripeWidth, value: 2040
          Property: aperio.Time, value: 14:38:12
          Property: aperio.Title, value: none
          Property: aperio.Top, value: 20.236197
          Property: aperio.User, value: d7f93a12-41d0-44e0-b08e-c73b751a2d26
          Property: openslide.comment, value: Aperio Image Library v9.0.22
32640x38574 [0,100 32001x38474] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7566|Title = none|
Date = 01/21/09|Time = 14:38:12|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 28.390419|Top = 20.236197|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7566|OriginalWidth = 32640|Originalheight
 = 38574|Filtered = 5|ICC Profile = ScanScope v1
          Property: openslide.level-count, value: 3
          Property: openslide.level[0].downsample, value: 1
          Property: openslide.level[0].height, value: 38474
          Property: openslide.level[0].tile-height, value: 240
          Property: openslide.level[0].tile-width, value: 240
          Property: openslide.level[0].width, value: 32001
          Property: openslide.level[1].downsample, value: 4.0001664717196928
          Property: openslide.level[1].height, value: 9618
          Property: openslide.level[1].tile-height, value: 240
          Property: openslide.level[1].tile-width, value: 240
          Property: openslide.level[1].width, value: 8000
          Property: openslide.level[2].downsample, value: 16.002329866888516
          Property: openslide.level[2].height, value: 2404
          Property: openslide.level[2].tile-height, value: 240
          Property: openslide.level[2].tile-width, value: 240
          Property: openslide.level[2].width, value: 2000
          Property: openslide.mpp-x, value: 0.50149999999999995
          Property: openslide.mpp-y, value: 0.50149999999999995
          Property: openslide.objective-power, value: 20
          Property: openslide.quickhash-1, value: 57de7e1f8ee49f02317d7a85b0c
b82035983e7e47ca1e74290131eb68ed61309
          Property: openslide.vendor, value: aperio
          Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
32640x38574 [0,100 32001x38474] (240x240) JPEG/RGB Q=70|AppMag = 20|S
tripeWidth = 2040|ScanScope ID = SS1302|Filename = 7566|Title = none|
Date = 01/21/09|Time = 14:38:12|User = d7f93a12-41d0-44e0-b08e-c73b75
1a2d26|MPP = 0.5015|Left = 28.390419|Top = 20.236197|LineCameraSkew =
 -0.000389|LineAreaXOffset = 0.021368|LineAreaYOffset = -0.005374|DSR
 ID = AP1258-DSR|ImageID = 7566|OriginalWidth = 32640|Originalheight
 = 38574|Filtered = 5|ICC Profile = ScanScope v1
          Property: tiff.ResolutionUnit, value: inch

Opening Slide #44: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
2-TCGA-02-0028-01A-01-BS1.e447454b-fce4-4791-8526-2387a6be22fe.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
42-TCGA-02-0028-01A-01-BS1.e447454b-fce4-4791-8526-2387a6be22fe.svs
Level count: 4
Level dimensions: ((83897, 38110), (20974, 9527), (5243, 2381), (262
1, 1190))
Level downsamples: (1.0, 4.00012880387559, 16.003798228441305, 32.017
```

```
                374214088534)
                Dimensions: (83897, 38110)
                Objective power: 20
                Associated images:
                  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A438B
                160>
                  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A438
                B160>
                  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x465 at 0x7F94
                A438B2E8>
                Format: aperio
                Properties:
                  Property: aperio.AppMag, value: 20
                  Property: aperio.DSR ID, value: ap1258-dsr
                  Property: aperio.Date, value: 01/09/08
                  Property: aperio.Filename, value: 2356
                  Property: aperio.ImageID, value: 2356
                  Property: aperio.Left, value: 18.213553
                  Property: aperio.LineAreaXOffset, value: 0.012096
                  Property: aperio.LineAreaYOffset, value: -0.021773
                  Property: aperio.LineCameraSkew, value: 0.000989
                  Property: aperio.MPP, value: 0.5001
                  Property: aperio.OriginalWidth, value: 85680
                  Property: aperio.Originalheight, value: 38160
                  Property: aperio.ScanScope ID, value: SS1258
                  Property: aperio.StripeWidth, value: 2034
                  Property: aperio.Time, value: 09:43:02
                  Property: aperio.Title, value: none
                  Property: aperio.Top, value: 21.872723
                  Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
                  Property: openslide.comment, value: Aperio Image Library v8.2.43
                85680x38160 [0,0 83897x38110] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
                ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2356|Title = none|Da
                te = 01/09/08|Time = 09:43:02|User = 62b4f535-7795-449b-9333-19179be0
                1318|MPP = 0.5001|Left = 18.213553|Top = 21.872723|LineCameraSkew =
                 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
                 ID = ap1258-dsr|ImageID = 2356|OriginalWidth = 85680|Originalheight
                 = 38160
                  Property: openslide.level-count, value: 4
                  Property: openslide.level[0].downsample, value: 1
                  Property: openslide.level[0].height, value: 38110
                  Property: openslide.level[0].tile-height, value: 240
                  Property: openslide.level[0].tile-width, value: 240
                  Property: openslide.level[0].width, value: 83897
                  Property: openslide.level[1].downsample, value: 4.0001288038755902
                  Property: openslide.level[1].height, value: 9527
                  Property: openslide.level[1].tile-height, value: 240
                  Property: openslide.level[1].tile-width, value: 240
                  Property: openslide.level[1].width, value: 20974
                  Property: openslide.level[2].downsample, value: 16.003798228441305
                  Property: openslide.level[2].height, value: 2381
                  Property: openslide.level[2].tile-height, value: 240
                  Property: openslide.level[2].tile-width, value: 240
                  Property: openslide.level[2].width, value: 5243
                  Property: openslide.level[3].downsample, value: 32.017374214088534
                  Property: openslide.level[3].height, value: 1190
                  Property: openslide.level[3].tile-height, value: 240
```

```
   Property: openslide.level[3].tile-width, value: 240
   Property: openslide.level[3].width, value: 2621
   Property: openslide.mpp-x, value: 0.50009999999999
   Property: openslide.mpp-y, value: 0.50009999999999
   Property: openslide.objective-power, value: 20
   Property: openslide.quickhash-1, value: 7762a0a2dba28aa9e0e29d87ec9
4df9a9c21c47f29c5660b2039ba14199b8b78
   Property: openslide.vendor, value: aperio
   Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
85680x38160 [0,0 83897x38110] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2356|Title = none|Da
te = 01/09/08|Time = 09:43:02|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 18.213553|Top = 21.872723|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2356|OriginalWidth = 85680|Originalheight
 = 38160
   Property: tiff.ResolutionUnit, value: inch


Opening Slide #45: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
0-TCGA-02-0016-01A-01-TS1.97330d4f-c7ca-44a5-a7e6-7c6bee198110.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
40-TCGA-02-0016-01A-01-TS1.97330d4f-c7ca-44a5-a7e6-7c6bee198110.svs
Level count: 3
Level dimensions: ((81531, 32525), (20382, 8131), (5095, 2032))
Level downsamples: (1.0, 4.000135087399239, 16.004278308593417)
Dimensions: (81531, 32525)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
1D0>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A5C0>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x408 at 0x7F94
A437A1D0>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 02/22/08
   Property: aperio.Filename, value: 3765
   Property: aperio.ICC Profile, value: ScanScope v1
   Property: aperio.ImageID, value: 3765
   Property: aperio.Left, value: 12.115668
   Property: aperio.LineAreaXOffset, value: 0.000000
   Property: aperio.LineAreaYOffset, value: 0.000000
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5025
   Property: aperio.OriginalWidth, value: 85000
   Property: aperio.Originalheight, value: 32575
   Property: aperio.ScanScope ID, value: SS1258
   Property: aperio.StripeWidth, value: 1000
   Property: aperio.Time, value: 09:05:37
   Property: aperio.Title, value: none
   Property: aperio.Top, value: 20.990843
   Property: aperio.User, value: b9de16df-c4e3-4cef-9a9e-3ba49decce94
   Property: openslide.comment, value: Aperio Image Library v9.0.22
```

```
85000x32575 [0,0 81531x32525] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3765|Title = none|Da
te = 02/22/08|Time = 09:05:37|User = b9de16df-c4e3-4cef-9a9e-3ba49dec
ce94|MPP = 0.5025|Left = 12.115668|Top = 20.990843|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3765|OriginalWidth = 85000|Originalheight =
 32575|ICC Profile = ScanScope v1
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 32525
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 81531
  Property: openslide.level[1].downsample, value: 4.0001350873992392
  Property: openslide.level[1].height, value: 8131
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 20382
  Property: openslide.level[2].downsample, value: 16.004278308593417
  Property: openslide.level[2].height, value: 2032
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 5095
  Property: openslide.mpp-x, value: 0.50249999999999995
  Property: openslide.mpp-y, value: 0.50249999999999995
  Property: openslide.objective-power, value: 20
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
85000x32575 [0,0 81531x32525] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3765|Title = none|Da
te = 02/22/08|Time = 09:05:37|User = b9de16df-c4e3-4cef-9a9e-3ba49dec
ce94|MPP = 0.5025|Left = 12.115668|Top = 20.990843|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3765|OriginalWidth = 85000|Originalheight =
 32575|ICC Profile = ScanScope v1
  Property: tiff.ResolutionUnit, value: inch

Opening Slide #46: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
4-TCGA-02-0033-01A-01-BS1.325cc830-c031-4c5e-8d18-2d14eea0be9d.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
34-TCGA-02-0033-01A-01-BS1.325cc830-c031-4c5e-8d18-2d14eea0be9d.svs
Level count: 3
Level dimensions: ((79902, 35432), (19975, 8858), (4993, 2214))
Level downsamples: (1.0, 4.000050062578223, 16.00320864748136)
Dimensions: (79902, 35432)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
898>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A2B0>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x454 at 0x7F94
A437A898>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
```

     Property: aperio.DSR ID, value: ap1258-dsr
     Property: aperio.Date, value: 01/16/08
     Property: aperio.Filename, value: 2852
     Property: aperio.ImageID, value: 2852
     Property: aperio.Left, value: 16.437755
     Property: aperio.LineAreaXOffset, value: 0.012096
     Property: aperio.LineAreaYOffset, value: -0.021773
     Property: aperio.LineCameraSkew, value: 0.000989
     Property: aperio.MPP, value: 0.5001
     Property: aperio.OriginalWidth, value: 81600
     Property: aperio.Originalheight, value: 35482
     Property: aperio.ScanScope ID, value: SS1258
     Property: aperio.StripeWidth, value: 2034
     Property: aperio.Time, value: 13:40:29
     Property: aperio.Title, value: none
     Property: aperio.Top, value: 20.428606
     Property: aperio.User, value: 62baa7db-05d2-4095-af72-360247869bf9
     Property: openslide.comment, value: Aperio Image Library v8.2.43
81600x35482 [0,0 79902x35432] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2852|Title = none|Da
te = 01/16/08|Time = 13:40:29|User = 62baa7db-05d2-4095-af72-36024786
9bf9|MPP = 0.5001|Left = 16.437755|Top = 20.428606|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2852|OriginalWidth = 81600|Originalheight
 = 35482
     Property: openslide.level-count, value: 3
     Property: openslide.level[0].downsample, value: 1
     Property: openslide.level[0].height, value: 35432
     Property: openslide.level[0].tile-height, value: 240
     Property: openslide.level[0].tile-width, value: 240
     Property: openslide.level[0].width, value: 79902
     Property: openslide.level[1].downsample, value: 4.0000500625782234
     Property: openslide.level[1].height, value: 8858
     Property: openslide.level[1].tile-height, value: 240
     Property: openslide.level[1].tile-width, value: 240
     Property: openslide.level[1].width, value: 19975
     Property: openslide.level[2].downsample, value: 16.003208647481362
     Property: openslide.level[2].height, value: 2214
     Property: openslide.level[2].tile-height, value: 240
     Property: openslide.level[2].tile-width, value: 240
     Property: openslide.level[2].width, value: 4993
     Property: openslide.mpp-x, value: 0.50009999999999999
     Property: openslide.mpp-y, value: 0.50009999999999999
     Property: openslide.objective-power, value: 20
     Property: openslide.quickhash-1, value: 858e6010b2b6d52339e50b5f7ea
26d0a5f9fc973911bf920a90474785647ffab
     Property: openslide.vendor, value: aperio
     Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
81600x35482 [0,0 79902x35432] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2852|Title = none|Da
te = 01/16/08|Time = 13:40:29|User = 62baa7db-05d2-4095-af72-36024786
9bf9|MPP = 0.5001|Left = 16.437755|Top = 20.428606|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2852|OriginalWidth = 81600|Originalheight
 = 35482
     Property: tiff.ResolutionUnit, value: inch

Opening Slide #47: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
8-TCGA-02-0003-01Z-00-DX3.995C2924-E298-4517-82A4-15806766CE31.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
58-TCGA-02-0003-01Z-00-DX3.995C2924-E298-4517-82A4-15806766CE31.svs
Level count: 3
Level dimensions: ((49799, 47673), (12449, 11918), (3112, 2979))
Level downsamples: (1.0, 4.000162444953629, 16.002635252681365)
Dimensions: (49799, 47673)
Objective power: 40
Associated images:
  macro: <PIL.Image.Image image mode=RGBA size=1600x624 at 0x7F94A437
A5C0>
  thumbnail: <PIL.Image.Image image mode=RGBA size=802x768 at 0x7F94A
437A198>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 40
  Property: aperio.DSR ID, value: spectrumresearch
  Property: aperio.Date, value: 10/01/14
  Property: aperio.DisplayColor, value: 0
  Property: aperio.Exposure Scale, value: 0.000001
  Property: aperio.Exposure Time, value: 45
  Property: aperio.Filename, value: 200839
  Property: aperio.Focus Offset, value: -0.000500
  Property: aperio.ICC Profile, value: AT2
  Property: aperio.ImageID, value: 200839
  Property: aperio.Left, value: 18.645557
  Property: aperio.LineAreaXOffset, value: 0.010473
  Property: aperio.LineAreaYOffset, value: 0.007821
  Property: aperio.LineCameraSkew, value: -0.000534
  Property: aperio.MPP, value: 0.2533
  Property: aperio.OriginalHeight, value: 47773
  Property: aperio.OriginalWidth, value: 50800
  Property: aperio.Parmset, value: Research: No skipping
  Property: aperio.ScanScope ID, value: SS7054
  Property: aperio.StripeWidth, value: 2032
  Property: aperio.Time, value: 10:37:59
  Property: aperio.Time Zone, value: GMT-05:00
  Property: aperio.Top, value: 18.594173
  Property: aperio.User, value: 5fdab0e3-772f-47a2-816c-c9361b2b8078
  Property: openslide.comment, value: Aperio Image Library v12.0.15
50800x47773 [0,100 49799x47673] (240x240) JPEG/RGB Q=70|AppMag = 40|S
tripeWidth = 2032|ScanScope ID = SS7054|Filename = 200839|Date = 10/0
1/14|Time = 10:37:59|Time Zone = GMT-05:00|User = 5fdab0e3-772f-47a2-
816c-c9361b2b8078|Parmset = Research: No skipping|MPP = 0.2533|Left =
 18.645557|Top = 18.594173|LineCameraSkew = -0.000534|LineAreaXOffset
 = 0.010473|LineAreaYOffset = 0.007821|Focus Offset = -0.000500|DSR I
D = spectrumresearch|ImageID = 200839|Exposure Time = 45|Exposure Sca
le = 0.000001|DisplayColor = 0|OriginalWidth = 50800|OriginalHeight =
 47773|ICC Profile = AT2
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 47673
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 49799

```
        Property: openslide.level[1].downsample, value: 4.000162444953629
        Property: openslide.level[1].height, value: 11918
        Property: openslide.level[1].tile-height, value: 240
        Property: openslide.level[1].tile-width, value: 240
        Property: openslide.level[1].width, value: 12449
        Property: openslide.level[2].downsample, value: 16.002635252681365
        Property: openslide.level[2].height, value: 2979
        Property: openslide.level[2].tile-height, value: 240
        Property: openslide.level[2].tile-width, value: 240
        Property: openslide.level[2].width, value: 3112
        Property: openslide.mpp-x, value: 0.25330000000000003
        Property: openslide.mpp-y, value: 0.25330000000000003
        Property: openslide.objective-power, value: 40
        Property: openslide.vendor, value: aperio
        Property: tiff.ImageDescription, value: Aperio Image Library v12.0.
15
50800x47773 [0,100 49799x47673] (240x240) JPEG/RGB Q=70|AppMag = 40|S
tripeWidth = 2032|ScanScope ID = SS7054|Filename = 200839|Date = 10/0
1/14|Time = 10:37:59|Time Zone = GMT-05:00|User = 5fdab0e3-772f-47a2-
816c-c9361b2b8078|Parmset = Research: No skipping|MPP = 0.2533|Left =
 18.645557|Top = 18.594173|LineCameraSkew = -0.000534|LineAreaXOffset
 = 0.010473|LineAreaYOffset = 0.007821|Focus Offset = -0.000500|DSR I
D = spectrumresearch|ImageID = 200839|Exposure Time = 45|Exposure Sca
le = 0.000001|DisplayColor = 0|OriginalWidth = 50800|OriginalHeight =
 47773|ICC Profile = AT2
        Property: tiff.ResolutionUnit, value: inch


Opening Slide #48: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
7-TCGA-02-0003-01A-01-BS1.0156cf95-2119-4a30-9894-2c0315c954d1.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
47-TCGA-02-0003-01A-01-BS1.0156cf95-2119-4a30-9894-2c0315c954d1.svs
Level count: 4
Level dimensions: ((89890, 42769), (22472, 10692), (5618, 2673), (280
9, 1336))
Level downsamples: (1.0, 4.000091263757653, 16.000365055030613, 32.00
6718274025104)
Dimensions: (89890, 42769)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
5C0>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A668>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x487 at 0x7F94
A437A5C0>
Format: aperio
Properties:
    Property: aperio.AppMag, value: 20
    Property: aperio.DSR ID, value: ap1258-dsr
    Property: aperio.Date, value: 01/09/08
    Property: aperio.Filename, value: 2338
    Property: aperio.ImageID, value: 2338
    Property: aperio.Left, value: 14.775988
    Property: aperio.LineAreaXOffset, value: 0.012096
    Property: aperio.LineAreaYOffset, value: -0.021773
    Property: aperio.LineCameraSkew, value: 0.000989
    Property: aperio.MPP, value: 0.5001
```

```
  Property: aperio.OriginalWidth, value: 91800
  Property: aperio.Originalheight, value: 42819
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 2034
  Property: aperio.Time, value: 07:51:37
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 21.873077
  Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
  Property: openslide.comment, value: Aperio Image Library v8.2.43
91800x42819 [0,0 89890x42769] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2338|Title = none|Da
te = 01/09/08|Time = 07:51:37|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 14.775988|Top = 21.873077|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2338|OriginalWidth = 91800|Originalheight
 = 42819
  Property: openslide.level-count, value: 4
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 42769
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 89890
  Property: openslide.level[1].downsample, value: 4.0000912637576533
  Property: openslide.level[1].height, value: 10692
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 22472
  Property: openslide.level[2].downsample, value: 16.000365055030613
  Property: openslide.level[2].height, value: 2673
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 5618
  Property: openslide.level[3].downsample, value: 32.006718274025104
  Property: openslide.level[3].height, value: 1336
  Property: openslide.level[3].tile-height, value: 240
  Property: openslide.level[3].tile-width, value: 240
  Property: openslide.level[3].width, value: 2809
  Property: openslide.mpp-x, value: 0.50009999999999999
  Property: openslide.mpp-y, value: 0.50009999999999999
  Property: openslide.objective-power, value: 20
  Property: openslide.quickhash-1, value: afa9ffdc3dd1f5a2c7bb06ae288
f28cec1e9f270f5afc91ba3332a219e5bdf4a
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
91800x42819 [0,0 89890x42769] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2338|Title = none|Da
te = 01/09/08|Time = 07:51:37|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 14.775988|Top = 21.873077|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2338|OriginalWidth = 91800|Originalheight
 = 42819
  Property: tiff.ResolutionUnit, value: inch

Opening Slide #49: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
0-TCGA-02-0004-01A-01-TS1.7acffca5-3a57-4fe9-ad59-9379f4bb11a9.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
```

```
10-TCGA-02-0004-01A-01-TS1.7acffca5-3a57-4fe9-ad59-9379f4bb11a9.svs
Level count: 3
Level dimensions: ((45082, 31524), (11270, 7881), (2817, 1970))
Level downsamples: (1.0, 4.000088731144632, 16.00279016630357)
Dimensions: (45082, 31524)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
668>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A5C0>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x716 at 0x7F94
A437A710>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 02/22/08
  Property: aperio.Filename, value: 3763
  Property: aperio.ICC Profile, value: ScanScope v1
  Property: aperio.ImageID, value: 3763
  Property: aperio.Left, value: 29.079088
  Property: aperio.LineAreaXOffset, value: 0.000000
  Property: aperio.LineAreaYOffset, value: 0.000000
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5025
  Property: aperio.OriginalWidth, value: 47000
  Property: aperio.Originalheight, value: 31574
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 1000
  Property: aperio.Time, value: 08:59:23
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 19.529654
  Property: aperio.User, value: b9de16df-c4e3-4cef-9a9e-3ba49decce94
  Property: openslide.comment, value: Aperio Image Library v9.0.22
47000x31574 [0,0 45082x31524] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3763|Title = none|Da
te = 02/22/08|Time = 08:59:23|User = b9de16df-c4e3-4cef-9a9e-3ba49dec
ce94|MPP = 0.5025|Left = 29.079088|Top = 19.529654|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3763|OriginalWidth = 47000|Originalheight =
 31574|ICC Profile = ScanScope v1
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 31524
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 45082
  Property: openslide.level[1].downsample, value: 4.0000887311446318
  Property: openslide.level[1].height, value: 7881
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 11270
  Property: openslide.level[2].downsample, value: 16.002790166303569
  Property: openslide.level[2].height, value: 1970
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
```

```
    Property: openslide.level[2].width, value: 2817
    Property: openslide.mpp-x, value: 0.50249999999999995
    Property: openslide.mpp-y, value: 0.50249999999999995
    Property: openslide.objective-power, value: 20
    Property: openslide.quickhash-1, value: 5148d6c9a9628ae5c0cafcc4ecb
b1178413a5f768a60099b8d715608b3f32311
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
47000x31574 [0,0 45082x31524] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3763|Title = none|Da
te = 02/22/08|Time = 08:59:23|User = b9de16df-c4e3-4cef-9a9e-3ba49dec
ce94|MPP = 0.5025|Left = 29.079088|Top = 19.529654|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3763|OriginalWidth = 47000|Originalheight =
 31574|ICC Profile = ScanScope v1
    Property: tiff.ResolutionUnit, value: inch


Opening Slide #50: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
6-TCGA-02-0014-01Z-00-DX1.b7fd5196-fc51-4dc7-aa6d-e74e1e9ee71d.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
46-TCGA-02-0014-01Z-00-DX1.b7fd5196-fc51-4dc7-aa6d-e74e1e9ee71d.svs
Level count: 3
Level dimensions: ((77695, 20687), (19423, 5171), (4855, 1292))
Level downsamples: (1.0, 4.0003673073169645, 16.00734975273648)
Dimensions: (77695, 20687)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
358>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A710>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x272 at 0x7F94
A437A2B0>
Format: aperio
Properties:
    Property: aperio.AppMag, value: 20
    Property: aperio.DSR ID, value: ap1258-dsr
    Property: aperio.Date, value: 05/15/08
    Property: aperio.Filename, value: 4418
    Property: aperio.Filtered, value: 5
    Property: aperio.ICC Profile, value: ScanScope v1
    Property: aperio.ImageID, value: 4418
    Property: aperio.Left, value: 16.045910
    Property: aperio.LineAreaXOffset, value: 0.000000
    Property: aperio.LineAreaYOffset, value: 0.000000
    Property: aperio.LineCameraSkew, value: 0.000989
    Property: aperio.MPP, value: 0.5025
    Property: aperio.OriginalWidth, value: 81000
    Property: aperio.Originalheight, value: 20737
    Property: aperio.ScanScope ID, value: SS1258
    Property: aperio.StripeWidth, value: 1000
    Property: aperio.Time, value: 13:50:17
    Property: aperio.Title, value: none
    Property: aperio.Top, value: 15.545091
    Property: aperio.User, value: a8b14c91-c65f-42e2-b8b8-3f4efb120796
    Property: openslide.comment, value: Aperio Image Library v9.0.22
```

```
81000x20737 [0,0 77695x20687] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 4418|Title = none|Da
te = 05/15/08|Time = 13:50:17|User = a8b14c91-c65f-42e2-b8b8-3f4efb12
0796|MPP = 0.5025|Left = 16.045910|Top = 15.545091|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 4418|OriginalWidth = 81000|Originalheight =
 20737|Filtered = 5|ICC Profile = ScanScope v1
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 20687
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 77695
  Property: openslide.level[1].downsample, value: 4.0003673073169645
  Property: openslide.level[1].height, value: 5171
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 19423
  Property: openslide.level[2].downsample, value: 16.007349752736481
  Property: openslide.level[2].height, value: 1292
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 4855
  Property: openslide.mpp-x, value: 0.50249999999999995
  Property: openslide.mpp-y, value: 0.50249999999999995
  Property: openslide.objective-power, value: 20
  Property: openslide.quickhash-1, value: 8771e8632a3af9a78c751595eef
dc3cc29676a7de5858c3742b168da259e47cc
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
81000x20737 [0,0 77695x20687] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 4418|Title = none|Da
te = 05/15/08|Time = 13:50:17|User = a8b14c91-c65f-42e2-b8b8-3f4efb12
0796|MPP = 0.5025|Left = 16.045910|Top = 15.545091|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 4418|OriginalWidth = 81000|Originalheight =
 20737|Filtered = 5|ICC Profile = ScanScope v1
  Property: tiff.ResolutionUnit, value: inch

Opening Slide #51: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
8-TCGA-02-0004-01Z-00-DX1.d8189fdc-c669-48d5-bc9e-8ddf104caff6.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
18-TCGA-02-0004-01Z-00-DX1.d8189fdc-c669-48d5-bc9e-8ddf104caff6.svs
Level count: 3
Level dimensions: ((45082, 30758), (11270, 7689), (2817, 1922))
Level downsamples: (1.0, 4.000218787068679, 16.003335811966664)
Dimensions: (45082, 30758)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A437A
710>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A437
A2B0>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x698 at 0x7F94
A4465208>
Format: aperio
```

```
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 05/15/08
  Property: aperio.Filename, value: 4415
  Property: aperio.Filtered, value: 5
  Property: aperio.ICC Profile, value: ScanScope v1
  Property: aperio.ImageID, value: 4415
  Property: aperio.Left, value: 28.857544
  Property: aperio.LineAreaXOffset, value: 0.000000
  Property: aperio.LineAreaYOffset, value: 0.000000
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5025
  Property: aperio.OriginalWidth, value: 47000
  Property: aperio.Originalheight, value: 30808
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 1000
  Property: aperio.Time, value: 13:31:08
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 19.807549
  Property: aperio.User, value: a8b14c91-c65f-42e2-b8b8-3f4efb120796
  Property: openslide.comment, value: Aperio Image Library v9.0.22
47000x30808 [0,0 45082x30758] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 4415|Title = none|Da
te = 05/15/08|Time = 13:31:08|User = a8b14c91-c65f-42e2-b8b8-3f4efb12
0796|MPP = 0.5025|Left = 28.857544|Top = 19.807549|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 4415|OriginalWidth = 47000|Originalheight =
 30808|Filtered = 5|ICC Profile = ScanScope v1
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 30758
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 45082
  Property: openslide.level[1].downsample, value: 4.0002187870686789
  Property: openslide.level[1].height, value: 7689
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 11270
  Property: openslide.level[2].downsample, value: 16.003335811966664
  Property: openslide.level[2].height, value: 1922
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 2817
  Property: openslide.mpp-x, value: 0.50249999999999995
  Property: openslide.mpp-y, value: 0.50249999999999995
  Property: openslide.objective-power, value: 20
  Property: openslide.quickhash-1, value: 7ef69277d1f0d08b03b795bd979
cf6fd9e1b150a66481793520c1dcb7794802f
  Property: openslide.vendor, value: aperio
  Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
47000x30808 [0,0 45082x30758] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 4415|Title = none|Da
te = 05/15/08|Time = 13:31:08|User = a8b14c91-c65f-42e2-b8b8-3f4efb12
0796|MPP = 0.5025|Left = 28.857544|Top = 19.807549|LineCameraSkew =
```

```
       0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
     D = ap1258-dsr|ImageID = 4415|OriginalWidth = 47000|Originalheight =
      30808|Filtered = 5|ICC Profile = ScanScope v1
       Property: tiff.ResolutionUnit, value: inch


     Opening Slide #52: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
     5-TCGA-02-0021-01A-01-TS1.d7321a97-688f-4106-b569-eb2783ee7bbd.svs
     got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
     05-TCGA-02-0021-01A-01-TS1.d7321a97-688f-4106-b569-eb2783ee7bbd.svs
     Level count: 3
     Level dimensions: ((39327, 30394), (9831, 7598), (2457, 1899))
     Level downsamples: (1.0, 4.000284192160489, 16.005685467770775)
     Dimensions: (39327, 30394)
     Objective power: 20
     Associated images:
       label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
     208>
       macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
     5208>
       thumbnail: <PIL.Image.Image image mode=RGBA size=993x768 at 0x7F94A
     44650B8>
     Format: aperio
     Properties:
       Property: aperio.AppMag, value: 20
       Property: aperio.DSR ID, value: ap1258-dsr
       Property: aperio.Date, value: 02/15/08
       Property: aperio.Filename, value: 3515
       Property: aperio.ICC Profile, value: ScanScope v1
       Property: aperio.ImageID, value: 3515
       Property: aperio.Left, value: 32.955044
       Property: aperio.LineAreaXOffset, value: 0.000000
       Property: aperio.LineAreaYOffset, value: 0.000000
       Property: aperio.LineCameraSkew, value: 0.000989
       Property: aperio.MPP, value: 0.5025
       Property: aperio.OriginalWidth, value: 41000
       Property: aperio.Originalheight, value: 30444
       Property: aperio.ScanScope ID, value: SS1258
       Property: aperio.StripeWidth, value: 1000
       Property: aperio.Time, value: 08:31:05
       Property: aperio.Title, value: none
       Property: aperio.Top, value: 16.757334
       Property: aperio.User, value: 146d3321-ee94-4e53-9d5e-d8e6cc5a5745
       Property: openslide.comment, value: Aperio Image Library v9.0.22
     41000x30444 [0,0 39327x30394] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
     ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3515|Title = none|Da
     te = 02/15/08|Time = 08:31:05|User = 146d3321-ee94-4e53-9d5e-d8e6cc5a
     5745|MPP = 0.5025|Left = 32.955044|Top = 16.757334|LineCameraSkew =
      0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
     D = ap1258-dsr|ImageID = 3515|OriginalWidth = 41000|Originalheight =
      30444|ICC Profile = ScanScope v1
       Property: openslide.level-count, value: 3
       Property: openslide.level[0].downsample, value: 1
       Property: openslide.level[0].height, value: 30394
       Property: openslide.level[0].tile-height, value: 240
       Property: openslide.level[0].tile-width, value: 240
       Property: openslide.level[0].width, value: 39327
       Property: openslide.level[1].downsample, value: 4.000284192160489
```

```
Property: openslide.level[1].height, value: 7598
Property: openslide.level[1].tile-height, value: 240
Property: openslide.level[1].tile-width, value: 240
Property: openslide.level[1].width, value: 9831
Property: openslide.level[2].downsample, value: 16.005685467770775
Property: openslide.level[2].height, value: 1899
Property: openslide.level[2].tile-height, value: 240
Property: openslide.level[2].tile-width, value: 240
Property: openslide.level[2].width, value: 2457
Property: openslide.mpp-x, value: 0.50249999999999995
Property: openslide.mpp-y, value: 0.50249999999999995
Property: openslide.objective-power, value: 20
Property: openslide.quickhash-1, value: be0bc74fc9ade4a27e5180bd3b8
e164c201b89ebe71a70638eac17ad9dc1053f
Property: openslide.vendor, value: aperio
Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
41000x30444 [0,0 39327x30394] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3515|Title = none|Da
te = 02/15/08|Time = 08:31:05|User = 146d3321-ee94-4e53-9d5e-d8e6cc5a
5745|MPP = 0.5025|Left = 32.955044|Top = 16.757334|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3515|OriginalWidth = 41000|Originalheight =
 30444|ICC Profile = ScanScope v1
Property: tiff.ResolutionUnit, value: inch


Opening Slide #53: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
6-TCGA-02-0023-01B-01-TS1.8bce3519-fded-4567-89a7-cc7638a442da.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
26-TCGA-02-0023-01B-01-TS1.8bce3519-fded-4567-89a7-cc7638a442da.svs
Level count: 3
Level dimensions: ((63922, 41430), (15980, 10357), (3995, 2589))
Level downsamples: (1.0, 4.000159131278682, 16.00140906144268)
Dimensions: (63922, 41430)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
0B8>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
50B8>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x663 at 0x7F94
A44652E8>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 01/11/08
  Property: aperio.Filename, value: 2669
  Property: aperio.ImageID, value: 2669
  Property: aperio.Left, value: 15.053673
  Property: aperio.LineAreaXOffset, value: 0.012096
  Property: aperio.LineAreaYOffset, value: -0.021773
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5001
  Property: aperio.OriginalWidth, value: 65280
  Property: aperio.Originalheight, value: 41480
  Property: aperio.ScanScope ID, value: SS1258
```

```
       Property: aperio.StripeWidth, value: 2034
       Property: aperio.Time, value: 14:49:07
       Property: aperio.Title, value: none
       Property: aperio.Top, value: 22.482675
       Property: aperio.User, value: 7f4f719a-aa15-40ea-920b-aee5b1edac78
       Property: openslide.comment, value: Aperio Image Library v8.2.43
65280x41480 [0,0 63922x41430] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2669|Title = none|Da
te = 01/11/08|Time = 14:49:07|User = 7f4f719a-aa15-40ea-920b-aee5b1ed
ac78|MPP = 0.5001|Left = 15.053673|Top = 22.482675|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2669|OriginalWidth = 65280|Originalheight
 = 41480
       Property: openslide.level-count, value: 3
       Property: openslide.level[0].downsample, value: 1
       Property: openslide.level[0].height, value: 41430
       Property: openslide.level[0].tile-height, value: 240
       Property: openslide.level[0].tile-width, value: 240
       Property: openslide.level[0].width, value: 63922
       Property: openslide.level[1].downsample, value: 4.0001591312786822
       Property: openslide.level[1].height, value: 10357
       Property: openslide.level[1].tile-height, value: 240
       Property: openslide.level[1].tile-width, value: 240
       Property: openslide.level[1].width, value: 15980
       Property: openslide.level[2].downsample, value: 16.001409061442679
       Property: openslide.level[2].height, value: 2589
       Property: openslide.level[2].tile-height, value: 240
       Property: openslide.level[2].tile-width, value: 240
       Property: openslide.level[2].width, value: 3995
       Property: openslide.mpp-x, value: 0.50009999999999999
       Property: openslide.mpp-y, value: 0.50009999999999999
       Property: openslide.objective-power, value: 20
       Property: openslide.vendor, value: aperio
       Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
65280x41480 [0,0 63922x41430] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2669|Title = none|Da
te = 01/11/08|Time = 14:49:07|User = 7f4f719a-aa15-40ea-920b-aee5b1ed
ac78|MPP = 0.5001|Left = 15.053673|Top = 22.482675|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2669|OriginalWidth = 65280|Originalheight
 = 41480
       Property: tiff.ResolutionUnit, value: inch

Opening Slide #54: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
9-TCGA-02-0011-01Z-00-DX1.7CF44982-AE5A-47A5-8D07-E526522DC094.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
39-TCGA-02-0011-01Z-00-DX1.7CF44982-AE5A-47A5-8D07-E526522DC094.svs
Level count: 4
Level dimensions: ((81671, 63104), (20417, 15776), (5104, 3944), (255
2, 1972))
Level downsamples: (1.0, 4.000073468188274, 16.000685736677116, 32.00
137147335423)
Dimensions: (81671, 63104)
Objective power: 40
Associated images:
   macro: <PIL.Image.Image image mode=RGBA size=1600x624 at 0x7F94A437
```

```
A2B0>
  thumbnail: <PIL.Image.Image image mode=RGBA size=993x768 at 0x7F94A
437A5C0>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 40
  Property: aperio.DSR ID, value: spectrumresearch
  Property: aperio.Date, value: 10/01/14
  Property: aperio.DisplayColor, value: 0
  Property: aperio.Exposure Scale, value: 0.000001
  Property: aperio.Exposure Time, value: 45
  Property: aperio.Filename, value: 200848
  Property: aperio.Focus Offset, value: -0.000500
  Property: aperio.ICC Profile, value: AT2
  Property: aperio.ImageID, value: 200848
  Property: aperio.Left, value: 14.652649
  Property: aperio.LineAreaXOffset, value: 0.010473
  Property: aperio.LineAreaYOffset, value: 0.007821
  Property: aperio.LineCameraSkew, value: -0.000534
  Property: aperio.MPP, value: 0.2533
  Property: aperio.OriginalHeight, value: 63204
  Property: aperio.OriginalWidth, value: 83312
  Property: aperio.Parmset, value: Research: No skipping
  Property: aperio.ScanScope ID, value: SS7054
  Property: aperio.StripeWidth, value: 2032
  Property: aperio.Time, value: 10:47:17
  Property: aperio.Time Zone, value: GMT-05:00
  Property: aperio.Top, value: 21.223282
  Property: aperio.User, value: 5fdab0e3-772f-47a2-816c-c9361b2b8078
  Property: openslide.comment, value: Aperio Image Library v12.0.15
83312x63204 [0,100 81671x63104] (240x240) JPEG/RGB Q=70|AppMag = 40|S
tripeWidth = 2032|ScanScope ID = SS7054|Filename = 200848|Date = 10/0
1/14|Time = 10:47:17|Time Zone = GMT-05:00|User = 5fdab0e3-772f-47a2-
816c-c9361b2b8078|Parmset = Research: No skipping|MPP = 0.2533|Left =
 14.652649|Top = 21.223282|LineCameraSkew = -0.000534|LineAreaXOffset
 = 0.010473|LineAreaYOffset = 0.007821|Focus Offset = -0.000500|DSR I
D = spectrumresearch|ImageID = 200848|Exposure Time = 45|Exposure Sca
le = 0.000001|DisplayColor = 0|OriginalWidth = 83312|OriginalHeight =
 63204|ICC Profile = AT2
  Property: openslide.level-count, value: 4
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 63104
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 81671
  Property: openslide.level[1].downsample, value: 4.0000734681882744
  Property: openslide.level[1].height, value: 15776
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 20417
  Property: openslide.level[2].downsample, value: 16.000685736677116
  Property: openslide.level[2].height, value: 3944
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 5104
  Property: openslide.level[3].downsample, value: 32.001371473354233
  Property: openslide.level[3].height, value: 1972
```

```
      Property: openslide.level[3].tile-height, value: 240
      Property: openslide.level[3].tile-width, value: 240
      Property: openslide.level[3].width, value: 2552
      Property: openslide.mpp-x, value: 0.25330000000000003
      Property: openslide.mpp-y, value: 0.25330000000000003
      Property: openslide.objective-power, value: 40
      Property: openslide.quickhash-1, value: be71654ccd3e96b90956138d56b
57785f21004f6be37f34fabd929554bfabc0c
      Property: openslide.vendor, value: aperio
      Property: tiff.ImageDescription, value: Aperio Image Library v12.0.
15
83312x63204 [0,100 81671x63104] (240x240) JPEG/RGB Q=70|AppMag = 40|S
tripeWidth = 2032|ScanScope ID = SS7054|Filename = 200848|Date = 10/0
1/14|Time = 10:47:17|Time Zone = GMT-05:00|User = 5fdab0e3-772f-47a2-
816c-c9361b2b8078|Parmset = Research: No skipping|MPP = 0.2533|Left =
 14.652649|Top = 21.223282|LineCameraSkew = -0.000534|LineAreaXOffset
 = 0.010473|LineAreaYOffset = 0.007821|Focus Offset = -0.000500|DSR I
D = spectrumresearch|ImageID = 200848|Exposure Time = 45|Exposure Sca
le = 0.000001|DisplayColor = 0|OriginalWidth = 83312|OriginalHeight =
 63204|ICC Profile = AT2
      Property: tiff.ResolutionUnit, value: inch


Opening Slide #55: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
7-TCGA-02-0034-01A-01-BS1.0f95c851-8845-41d3-86d0-158eeed2b950.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
37-TCGA-02-0034-01A-01-BS1.0f95c851-8845-41d3-86d0-158eeed2b950.svs
Level count: 4
Level dimensions: ((87893, 46207), (21973, 11551), (5493, 2887), (274
6, 1443))
Level downsamples: (1.0, 4.00015261408624, 16.00305297714615, 32.0145
65254368605)
Dimensions: (87893, 46207)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
278>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5278>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x538 at 0x7F94
A44652E8>
Format: aperio
Properties:
   Property: aperio.AppMag, value: 20
   Property: aperio.DSR ID, value: ap1258-dsr
   Property: aperio.Date, value: 01/16/08
   Property: aperio.Filename, value: 2825
   Property: aperio.ImageID, value: 2825
   Property: aperio.Left, value: 16.994121
   Property: aperio.LineAreaXOffset, value: 0.012096
   Property: aperio.LineAreaYOffset, value: -0.021773
   Property: aperio.LineCameraSkew, value: 0.000989
   Property: aperio.MPP, value: 0.5001
   Property: aperio.OriginalWidth, value: 89760
   Property: aperio.Originalheight, value: 46257
   Property: aperio.ScanScope ID, value: SS1258
   Property: aperio.StripeWidth, value: 2034
   Property: aperio.Time, value: 09:35:24
```

```
     Property: aperio.Title, value: none
     Property: aperio.Top, value: 23.146143
     Property: aperio.User, value: 7cb07d2b-58f7-4a8d-bcec-74650c6eaa52
     Property: openslide.comment, value: Aperio Image Library v8.2.43
89760x46257 [0,0 87893x46207] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2825|Title = none|Da
te = 01/16/08|Time = 09:35:24|User = 7cb07d2b-58f7-4a8d-bcec-74650c6e
aa52|MPP = 0.5001|Left = 16.994121|Top = 23.146143|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2825|OriginalWidth = 89760|Originalheight
 = 46257
     Property: openslide.level-count, value: 4
     Property: openslide.level[0].downsample, value: 1
     Property: openslide.level[0].height, value: 46207
     Property: openslide.level[0].tile-height, value: 240
     Property: openslide.level[0].tile-width, value: 240
     Property: openslide.level[0].width, value: 87893
     Property: openslide.level[1].downsample, value: 4.0001526140862396
     Property: openslide.level[1].height, value: 11551
     Property: openslide.level[1].tile-height, value: 240
     Property: openslide.level[1].tile-width, value: 240
     Property: openslide.level[1].width, value: 21973
     Property: openslide.level[2].downsample, value: 16.003052977146151
     Property: openslide.level[2].height, value: 2887
     Property: openslide.level[2].tile-height, value: 240
     Property: openslide.level[2].tile-width, value: 240
     Property: openslide.level[2].width, value: 5493
     Property: openslide.level[3].downsample, value: 32.014565254368605
     Property: openslide.level[3].height, value: 1443
     Property: openslide.level[3].tile-height, value: 240
     Property: openslide.level[3].tile-width, value: 240
     Property: openslide.level[3].width, value: 2746
     Property: openslide.mpp-x, value: 0.50009999999999999
     Property: openslide.mpp-y, value: 0.50009999999999999
     Property: openslide.objective-power, value: 20
     Property: openslide.quickhash-1, value: 9dc5d481c5a8dd8a61fbe684a7f
b90d43771a6710a75a680c236beaaca034a8c
     Property: openslide.vendor, value: aperio
     Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
89760x46257 [0,0 87893x46207] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2825|Title = none|Da
te = 01/16/08|Time = 09:35:24|User = 7cb07d2b-58f7-4a8d-bcec-74650c6e
aa52|MPP = 0.5001|Left = 16.994121|Top = 23.146143|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2825|OriginalWidth = 89760|Originalheight
 = 46257
     Property: tiff.ResolutionUnit, value: inch


Opening Slide #56: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
9-TCGA-02-0015-01A-01-TS1.afb08afd-8e23-4ced-90ef-abf1e458f091.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
19-TCGA-02-0015-01A-01-TS1.afb08afd-8e23-4ced-90ef-abf1e458f091.svs
Level count: 3
Level dimensions: ((75907, 30400), (18976, 7600), (4744, 1900))
Level downsamples: (1.0, 4.000079047217538, 16.00031618887015)
Dimensions: (75907, 30400)
```

```
            Objective power: 20
            Associated images:
              label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
            2E8>
              macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
            52E8>
              thumbnail: <PIL.Image.Image image mode=RGBA size=1024x410 at 0x7F94
            A44652B0>
            Format: aperio
            Properties:
              Property: aperio.AppMag, value: 20
              Property: aperio.DSR ID, value: ap1258-dsr
              Property: aperio.Date, value: 01/15/08
              Property: aperio.Filename, value: 2815
              Property: aperio.ImageID, value: 2815
              Property: aperio.Left, value: 12.725649
              Property: aperio.LineAreaXOffset, value: 0.012096
              Property: aperio.LineAreaYOffset, value: -0.021773
              Property: aperio.LineCameraSkew, value: 0.000989
              Property: aperio.MPP, value: 0.5001
              Property: aperio.OriginalWidth, value: 77520
              Property: aperio.Originalheight, value: 30450
              Property: aperio.ScanScope ID, value: SS1258
              Property: aperio.StripeWidth, value: 2034
              Property: aperio.Time, value: 13:36:19
              Property: aperio.Title, value: none
              Property: aperio.Top, value: 21.488829
              Property: aperio.User, value: c7af007b-ff00-4ad6-a44c-2a5ceb912eaf
              Property: openslide.comment, value: Aperio Image Library v8.2.43
            77520x30450 [0,0 75907x30400] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
            ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2815|Title = none|Da
            te = 01/15/08|Time = 13:36:19|User = c7af007b-ff00-4ad6-a44c-2a5ceb91
            2eaf|MPP = 0.5001|Left = 12.725649|Top = 21.488829|LineCameraSkew =
             0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
             ID = ap1258-dsr|ImageID = 2815|OriginalWidth = 77520|Originalheight
             = 30450
              Property: openslide.level-count, value: 3
              Property: openslide.level[0].downsample, value: 1
              Property: openslide.level[0].height, value: 30400
              Property: openslide.level[0].tile-height, value: 240
              Property: openslide.level[0].tile-width, value: 240
              Property: openslide.level[0].width, value: 75907
              Property: openslide.level[1].downsample, value: 4.0000790472175378
              Property: openslide.level[1].height, value: 7600
              Property: openslide.level[1].tile-height, value: 240
              Property: openslide.level[1].tile-width, value: 240
              Property: openslide.level[1].width, value: 18976
              Property: openslide.level[2].downsample, value: 16.000316188870151
              Property: openslide.level[2].height, value: 1900
              Property: openslide.level[2].tile-height, value: 240
              Property: openslide.level[2].tile-width, value: 240
              Property: openslide.level[2].width, value: 4744
              Property: openslide.mpp-x, value: 0.50009999999999999
              Property: openslide.mpp-y, value: 0.50009999999999999
              Property: openslide.objective-power, value: 20
              Property: openslide.quickhash-1, value: 3c8130efabbc1263242cb73ce43
            065ea68e6e4292c081989f15b173c88b5d1c1
```

```
     Property: openslide.vendor, value: aperio
     Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
77520x30450 [0,0 75907x30400] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2815|Title = none|Da
te = 01/15/08|Time = 13:36:19|User = c7af007b-ff00-4ad6-a44c-2a5ceb91
2eaf|MPP = 0.5001|Left = 12.725649|Top = 21.488829|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2815|OriginalWidth = 77520|Originalheight
 = 30450
     Property: tiff.ResolutionUnit, value: inch

Opening Slide #57: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
5-TCGA-02-0023-01B-01-BS1.dbe1cb38-9c15-44cc-ac94-e2f17e427aa0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
25-TCGA-02-0023-01B-01-BS1.dbe1cb38-9c15-44cc-ac94-e2f17e427aa0.svs
Level count: 3
Level dimensions: ((65919, 35886), (16479, 8971), (4119, 2242))
Level downsamples: (1.0, 4.000202495234001, 16.004943042609053)
Dimensions: (65919, 35886)
Objective power: 20
Associated images:
   label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
2B0>
   macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
52B0>
   thumbnail: <PIL.Image.Image image mode=RGBA size=1024x557 at 0x7F94
A4465320>
Format: aperio
Properties:
     Property: aperio.AppMag, value: 20
     Property: aperio.DSR ID, value: ap1258-dsr
     Property: aperio.Date, value: 01/14/08
     Property: aperio.Filename, value: 2671
     Property: aperio.ImageID, value: 2671
     Property: aperio.Left, value: 20.432166
     Property: aperio.LineAreaXOffset, value: 0.012096
     Property: aperio.LineAreaYOffset, value: -0.021773
     Property: aperio.LineCameraSkew, value: 0.000989
     Property: aperio.MPP, value: 0.5001
     Property: aperio.OriginalWidth, value: 67320
     Property: aperio.Originalheight, value: 35936
     Property: aperio.ScanScope ID, value: SS1258
     Property: aperio.StripeWidth, value: 2034
     Property: aperio.Time, value: 05:34:24
     Property: aperio.Title, value: none
     Property: aperio.Top, value: 22.372545
     Property: aperio.User, value: a0092174-b177-4951-9d13-364d96b5c0be
     Property: openslide.comment, value: Aperio Image Library v8.2.43
67320x35936 [0,0 65919x35886] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2671|Title = none|Da
te = 01/14/08|Time = 05:34:24|User = a0092174-b177-4951-9d13-364d96b5
c0be|MPP = 0.5001|Left = 20.432166|Top = 22.372545|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2671|OriginalWidth = 67320|Originalheight
 = 35936
     Property: openslide.level-count, value: 3
```

```
Property: openslide.level[0].downsample, value: 1
Property: openslide.level[0].height, value: 35886
Property: openslide.level[0].tile-height, value: 240
Property: openslide.level[0].tile-width, value: 240
Property: openslide.level[0].width, value: 65919
Property: openslide.level[1].downsample, value: 4.0002024952340012
Property: openslide.level[1].height, value: 8971
Property: openslide.level[1].tile-height, value: 240
Property: openslide.level[1].tile-width, value: 240
Property: openslide.level[1].width, value: 16479
Property: openslide.level[2].downsample, value: 16.004943042609053
Property: openslide.level[2].height, value: 2242
Property: openslide.level[2].tile-height, value: 240
Property: openslide.level[2].tile-width, value: 240
Property: openslide.level[2].width, value: 4119
Property: openslide.mpp-x, value: 0.50009999999999999
Property: openslide.mpp-y, value: 0.50009999999999999
Property: openslide.objective-power, value: 20
Property: openslide.quickhash-1, value: a52a3f3f54ab32a492023fee3db
d7af574a7f15af3e3fe4511b800e6e80e1cb0
Property: openslide.vendor, value: aperio
Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
67320x35936 [0,0 65919x35886] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2671|Title = none|Da
te = 01/14/08|Time = 05:34:24|User = a0092174-b177-4951-9d13-364d96b5
c0be|MPP = 0.5001|Left = 20.432166|Top = 22.372545|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2671|OriginalWidth = 67320|Originalheight
 = 35936
Property: tiff.ResolutionUnit, value: inch


Opening Slide #58: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
1-TCGA-02-0003-01A-01-TS1.6fc43119-1e2b-4c23-bd58-af026407d094.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
21-TCGA-02-0003-01A-01-TS1.6fc43119-1e2b-4c23-bd58-af026407d094.svs
Level count: 3
Level dimensions: ((48919, 36996), (12229, 9249), (3057, 2312))
Level downsamples: (1.0, 4.000122659252597, 16.00200996521682)
Dimensions: (48919, 36996)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
320>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5320>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1015x768 at 0x7F94
A4465128>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 02/15/08
  Property: aperio.Filename, value: 3513
  Property: aperio.ICC Profile, value: ScanScope v1
  Property: aperio.ImageID, value: 3513
  Property: aperio.Left, value: 32.405140
```

```
      Property: aperio.LineAreaXOffset, value: 0.000000
      Property: aperio.LineAreaYOffset, value: 0.000000
      Property: aperio.LineCameraSkew, value: 0.000989
      Property: aperio.MPP, value: 0.5025
      Property: aperio.OriginalWidth, value: 51000
      Property: aperio.Originalheight, value: 37046
      Property: aperio.ScanScope ID, value: SS1258
      Property: aperio.StripeWidth, value: 1000
      Property: aperio.Time, value: 08:17:48
      Property: aperio.Title, value: none
      Property: aperio.Top, value: 19.245115
      Property: aperio.User, value: 146d3321-ee94-4e53-9d5e-d8e6cc5a5745
      Property: openslide.comment, value: Aperio Image Library v9.0.22
51000x37046 [0,0 48919x36996] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3513|Title = none|Da
te = 02/15/08|Time = 08:17:48|User = 146d3321-ee94-4e53-9d5e-d8e6cc5a
5745|MPP = 0.5025|Left = 32.405140|Top = 19.245115|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3513|OriginalWidth = 51000|Originalheight =
 37046|ICC Profile = ScanScope v1
      Property: openslide.level-count, value: 3
      Property: openslide.level[0].downsample, value: 1
      Property: openslide.level[0].height, value: 36996
      Property: openslide.level[0].tile-height, value: 240
      Property: openslide.level[0].tile-width, value: 240
      Property: openslide.level[0].width, value: 48919
      Property: openslide.level[1].downsample, value: 4.0001226592525967
      Property: openslide.level[1].height, value: 9249
      Property: openslide.level[1].tile-height, value: 240
      Property: openslide.level[1].tile-width, value: 240
      Property: openslide.level[1].width, value: 12229
      Property: openslide.level[2].downsample, value: 16.002009965216821
      Property: openslide.level[2].height, value: 2312
      Property: openslide.level[2].tile-height, value: 240
      Property: openslide.level[2].tile-width, value: 240
      Property: openslide.level[2].width, value: 3057
      Property: openslide.mpp-x, value: 0.50249999999999995
      Property: openslide.mpp-y, value: 0.50249999999999995
      Property: openslide.objective-power, value: 20
      Property: openslide.vendor, value: aperio
      Property: tiff.ImageDescription, value: Aperio Image Library v9.0.2
2
51000x37046 [0,0 48919x36996] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 1000|ScanScope ID = SS1258|Filename = 3513|Title = none|Da
te = 02/15/08|Time = 08:17:48|User = 146d3321-ee94-4e53-9d5e-d8e6cc5a
5745|MPP = 0.5025|Left = 32.405140|Top = 19.245115|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.000000|LineAreaYOffset = 0.000000|DSR I
D = ap1258-dsr|ImageID = 3513|OriginalWidth = 51000|Originalheight =
 37046|ICC Profile = ScanScope v1
      Property: tiff.ResolutionUnit, value: inch

Opening Slide #59: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
3-TCGA-02-0026-01B-01-BS1.51aee3a8-ff85-49f4-9de7-a3824bd9ca4f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
53-TCGA-02-0026-01B-01-BS1.51aee3a8-ff85-49f4-9de7-a3824bd9ca4f.svs
Level count: 3
Level dimensions: ((31961, 23204), (7990, 5801), (3995, 2900))
```

```
Level downsamples: (1.0, 4.000062578222778, 8.000814811617971)
Dimensions: (31961, 23204)
Objective power: 20
Associated images:
  label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
128>
  macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5128>
  thumbnail: <PIL.Image.Image image mode=RGBA size=1024x743 at 0x7F94
A4465390>
Format: aperio
Properties:
  Property: aperio.AppMag, value: 20
  Property: aperio.DSR ID, value: ap1258-dsr
  Property: aperio.Date, value: 01/14/08
  Property: aperio.Filename, value: 2678
  Property: aperio.ImageID, value: 2678
  Property: aperio.Left, value: 15.049439
  Property: aperio.LineAreaXOffset, value: 0.012096
  Property: aperio.LineAreaYOffset, value: -0.021773
  Property: aperio.LineCameraSkew, value: 0.000989
  Property: aperio.MPP, value: 0.5001
  Property: aperio.OriginalWidth, value: 32640
  Property: aperio.Originalheight, value: 23254
  Property: aperio.ScanScope ID, value: SS1258
  Property: aperio.StripeWidth, value: 2034
  Property: aperio.Time, value: 06:01:00
  Property: aperio.Title, value: none
  Property: aperio.Top, value: 17.100649
  Property: aperio.User, value: a0092174-b177-4951-9d13-364d96b5c0be
  Property: openslide.comment, value: Aperio Image Library v8.2.43
32640x23254 [0,0 31961x23204] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2678|Title = none|Da
te = 01/14/08|Time = 06:01:00|User = a0092174-b177-4951-9d13-364d96b5
c0be|MPP = 0.5001|Left = 15.049439|Top = 17.100649|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2678|OriginalWidth = 32640|Originalheight
 = 23254
  Property: openslide.level-count, value: 3
  Property: openslide.level[0].downsample, value: 1
  Property: openslide.level[0].height, value: 23204
  Property: openslide.level[0].tile-height, value: 240
  Property: openslide.level[0].tile-width, value: 240
  Property: openslide.level[0].width, value: 31961
  Property: openslide.level[1].downsample, value: 4.0000625782227779
  Property: openslide.level[1].height, value: 5801
  Property: openslide.level[1].tile-height, value: 240
  Property: openslide.level[1].tile-width, value: 240
  Property: openslide.level[1].width, value: 7990
  Property: openslide.level[2].downsample, value: 8.0008148116179711
  Property: openslide.level[2].height, value: 2900
  Property: openslide.level[2].tile-height, value: 240
  Property: openslide.level[2].tile-width, value: 240
  Property: openslide.level[2].width, value: 3995
  Property: openslide.mpp-x, value: 0.50009999999999999
  Property: openslide.mpp-y, value: 0.50009999999999999
  Property: openslide.objective-power, value: 20
```

```
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
32640x23254 [0,0 31961x23204] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2678|Title = none|Da
te = 01/14/08|Time = 06:01:00|User = a0092174-b177-4951-9d13-364d96b5
c0be|MPP = 0.5001|Left = 15.049439|Top = 17.100649|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2678|OriginalWidth = 32640|Originalheight
 = 23254
    Property: tiff.ResolutionUnit, value: inch

Opening Slide #60: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
5-TCGA-02-0024-01B-01-BS1.6bad2316-6812-47b2-b35a-d0a3ef2b618f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
55-TCGA-02-0024-01B-01-BS1.6bad2316-6812-47b2-b35a-d0a3ef2b618f.svs
Level count: 3
Level dimensions: ((63922, 25109), (15980, 6277), (3995, 1569))
Level downsamples: (1.0, 4.000142234109348, 16.001843684465364)
Dimensions: (63922, 25109)
Objective power: 20
Associated images:
    label: <PIL.Image.Image image mode=RGBA size=470x473 at 0x7F94A4465
390>
    macro: <PIL.Image.Image image mode=RGBA size=1280x416 at 0x7F94A446
5390>
    thumbnail: <PIL.Image.Image image mode=RGBA size=1024x402 at 0x7F94
A4465358>
Format: aperio
Properties:
    Property: aperio.AppMag, value: 20
    Property: aperio.DSR ID, value: ap1258-dsr
    Property: aperio.Date, value: 01/09/08
    Property: aperio.Filename, value: 2352
    Property: aperio.ImageID, value: 2352
    Property: aperio.Left, value: 16.714876
    Property: aperio.LineAreaXOffset, value: 0.012096
    Property: aperio.LineAreaYOffset, value: -0.021773
    Property: aperio.LineCameraSkew, value: 0.000989
    Property: aperio.MPP, value: 0.5001
    Property: aperio.OriginalWidth, value: 65280
    Property: aperio.Originalheight, value: 25159
    Property: aperio.ScanScope ID, value: SS1258
    Property: aperio.StripeWidth, value: 2034
    Property: aperio.Time, value: 09:18:12
    Property: aperio.Title, value: none
    Property: aperio.Top, value: 20.151552
    Property: aperio.User, value: 62b4f535-7795-449b-9333-19179be01318
    Property: openslide.comment, value: Aperio Image Library v8.2.43
65280x25159 [0,0 63922x25109] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2352|Title = none|Da
te = 01/09/08|Time = 09:18:12|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 16.714876|Top = 20.151552|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2352|OriginalWidth = 65280|Originalheight
 = 25159
    Property: openslide.level-count, value: 3
```

```
    Property: openslide.level[0].downsample, value: 1
    Property: openslide.level[0].height, value: 25109
    Property: openslide.level[0].tile-height, value: 240
    Property: openslide.level[0].tile-width, value: 240
    Property: openslide.level[0].width, value: 63922
    Property: openslide.level[1].downsample, value: 4.0001422341093482
    Property: openslide.level[1].height, value: 6277
    Property: openslide.level[1].tile-height, value: 240
    Property: openslide.level[1].tile-width, value: 240
    Property: openslide.level[1].width, value: 15980
    Property: openslide.level[2].downsample, value: 16.001843684465364
    Property: openslide.level[2].height, value: 1569
    Property: openslide.level[2].tile-height, value: 240
    Property: openslide.level[2].tile-width, value: 240
    Property: openslide.level[2].width, value: 3995
    Property: openslide.mpp-x, value: 0.50009999999999999
    Property: openslide.mpp-y, value: 0.50009999999999999
    Property: openslide.objective-power, value: 20
    Property: openslide.quickhash-1, value: f24c1385c387a293738b8b7aabf
265d832822d207ffbf8eb804dfda73b1cd528
    Property: openslide.vendor, value: aperio
    Property: tiff.ImageDescription, value: Aperio Image Library v8.2.4
3
65280x25159 [0,0 63922x25109] (240x240) JPEG/RGB Q=70|AppMag = 20|Str
ipeWidth = 2034|ScanScope ID = SS1258|Filename = 2352|Title = none|Da
te = 01/09/08|Time = 09:18:12|User = 62b4f535-7795-449b-9333-19179be0
1318|MPP = 0.5001|Left = 16.714876|Top = 20.151552|LineCameraSkew =
 0.000989|LineAreaXOffset = 0.012096|LineAreaYOffset = -0.021773|DSR
 ID = ap1258-dsr|ImageID = 2352|OriginalWidth = 65280|Originalheight
 = 25159
    Property: tiff.ResolutionUnit, value: inch


Slide Magnifications:
  20x Slides: [1, 2, 3, 4, 5, 6, 7, 8, 9, 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, 48, 49, 50, 51, 52, 53, 55,
 56, 57, 58, 59, 60]
  40x Slides: [10, 11, 12, 47, 54]
  ??x Slides: []

Time elapsed: 0:00:03.040169
```

In [7]: `slide_stats()`

```
Opening Slide #1: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-032
-TCGA-02-0021-01Z-00-DX1.1cf4eb25-9406-4638-b69c-e9e141930716.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
32-TCGA-02-0021-01Z-00-DX1.1cf4eb25-9406-4638-b69c-e9e141930716.svs
  Dimensions: 36,001 x 28,953
Opening Slide #2: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-029
-TCGA-02-0007-01A-01-BS1.daf31c78-c900-400a-a63f-b25c53daf160.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
29-TCGA-02-0007-01A-01-BS1.daf31c78-c900-400a-a63f-b25c53daf160.svs
  Dimensions: 85,895 x 42,764
Opening Slide #3: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-017
-TCGA-02-0001-01C-01-BS1.0cc8ca55-d024-440c-a4f0-01cf5b3af861.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
17-TCGA-02-0001-01C-01-BS1.0cc8ca55-d024-440c-a4f0-01cf5b3af861.svs
  Dimensions: 89,890 x 29,684
Opening Slide #4: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-013
-TCGA-02-0025-01Z-00-DX2.aa8923a0-2930-47f4-bbff-ceb080fafc9e.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
13-TCGA-02-0025-01Z-00-DX2.aa8923a0-2930-47f4-bbff-ceb080fafc9e.svs
  Dimensions: 68,003 x 40,359
Opening Slide #5: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-007
-TCGA-02-0003-01Z-00-DX2.c7652d8d-d78f-49ae-8259-bb2bdb5d50fb.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
07-TCGA-02-0003-01Z-00-DX2.c7652d8d-d78f-49ae-8259-bb2bdb5d50fb.svs
  Dimensions: 50,002 x 26,379
Opening Slide #6: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-001
-TCGA-02-0021-01A-01-BS1.fa85bc28-b7d4-41c9-a840-568353e0edd6.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
01-TCGA-02-0021-01A-01-BS1.fa85bc28-b7d4-41c9-a840-568353e0edd6.svs
  Dimensions: 89,890 x 42,546
Opening Slide #7: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-020
-TCGA-02-0027-01A-01-BS1.08d266e3-c3e7-4445-87a9-69b8c8da54aa.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
20-TCGA-02-0027-01A-01-BS1.08d266e3-c3e7-4445-87a9-69b8c8da54aa.svs
  Dimensions: 73,910 x 42,761
Opening Slide #8: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-009
-TCGA-02-0026-01Z-00-DX2.ff8b5c7e-b5ec-43e5-b078-54ab86737f6f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
09-TCGA-02-0026-01Z-00-DX2.ff8b5c7e-b5ec-43e5-b078-54ab86737f6f.svs
  Dimensions: 46,002 x 37,949
Opening Slide #9: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-012
-TCGA-02-0025-01A-01-BS1.c97b92ed-147a-4676-8cbe-d1f3cb585372.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
12-TCGA-02-0025-01A-01-BS1.c97b92ed-147a-4676-8cbe-d1f3cb585372.svs
  Dimensions: 65,919 x 42,884
Opening Slide #10: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
2-TCGA-02-0016-01Z-00-DX1.BDC4422F-DA4A-4239-B2CF-F19796446767.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
02-TCGA-02-0016-01Z-00-DX1.BDC4422F-DA4A-4239-B2CF-F19796446767.svs
  Dimensions: 81,671 x 59,711
Opening Slide #11: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
8-TCGA-02-0009-01Z-00-DX3.BAA1276B-E4D7-43D4-BDDF-807532462518.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
08-TCGA-02-0009-01Z-00-DX3.BAA1276B-E4D7-43D4-BDDF-807532462518.svs
  Dimensions: 99,599 x 53,954
Opening Slide #12: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
8-TCGA-02-0027-01Z-00-DX1.8F83A541-8884-45C8-BE51-04ADE5D8D6F2.svs
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got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
48-TCGA-02-0027-01Z-00-DX1.8F83A541-8884-45C8-BE51-04ADE5D8D6F2.svs
  Dimensions: 83,663 x 76,347
Opening Slide #13: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
3-TCGA-02-0024-01Z-00-DX1.d4cec60d-e2b6-41d1-92af-2d24f15b03a9.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
33-TCGA-02-0024-01Z-00-DX1.d4cec60d-e2b6-41d1-92af-2d24f15b03a9.svs
  Dimensions: 26,001 x 26,335
Opening Slide #14: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
7-TCGA-02-0026-01A-01-TS1.7d45400b-00cc-4174-aa6d-5e40f514f930.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
27-TCGA-02-0026-01A-01-TS1.7d45400b-00cc-4174-aa6d-5e40f514f930.svs
  Dimensions: 57,929 x 18,245
Opening Slide #15: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
2-TCGA-02-0004-01A-01-BS1.64d91764-048f-419a-872d-bbd75246fb2e.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
52-TCGA-02-0004-01A-01-BS1.64d91764-048f-419a-872d-bbd75246fb2e.svs
  Dimensions: 91,888 x 35,230
Opening Slide #16: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
0-TCGA-02-0009-01Z-00-DX2.f5c99ad0-30b1-4f1b-afb0-0a355068eacc.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
50-TCGA-02-0009-01Z-00-DX2.f5c99ad0-30b1-4f1b-afb0-0a355068eacc.svs
  Dimensions: 60,002 x 35,651
Opening Slide #17: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
5-TCGA-02-0026-01B-01-TS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
15-TCGA-02-0026-01B-01-TS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
  Dimensions: 27,965 x 43,300
Opening Slide #18: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
5-TCGA-02-0010-01Z-00-DX1.b53f8c4e-6e10-4684-b7fc-fd9e0b9d6c01.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
45-TCGA-02-0010-01Z-00-DX1.b53f8c4e-6e10-4684-b7fc-fd9e0b9d6c01.svs
  Dimensions: 36,001 x 25,891
Opening Slide #19: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
9-TCGA-02-0028-01A-01-TS2.d9b3c085-9d7f-4b74-a7fc-b30bca81b178.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
59-TCGA-02-0028-01A-01-TS2.d9b3c085-9d7f-4b74-a7fc-b30bca81b178.svs
  Dimensions: 67,917 x 38,688
Opening Slide #20: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
6-TCGA-02-0033-01Z-00-DX1.3c22d6a0-8b25-4f00-a499-b610d0f3c9a0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
06-TCGA-02-0033-01Z-00-DX1.3c22d6a0-8b25-4f00-a499-b610d0f3c9a0.svs
  Dimensions: 60,002 x 41,413
Opening Slide #21: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-06
0-TCGA-02-0025-01A-01-TS1.9146b647-aed2-4d31-b8f5-2750c028a356.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
60-TCGA-02-0025-01A-01-TS1.9146b647-aed2-4d31-b8f5-2750c028a356.svs
  Dimensions: 69,062 x 30,201
Opening Slide #22: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
3-TCGA-02-0023-01Z-00-DX1.69f7c0c4-ff59-4100-94c3-86b7bf2c27c8.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
43-TCGA-02-0023-01Z-00-DX1.69f7c0c4-ff59-4100-94c3-86b7bf2c27c8.svs
  Dimensions: 32,612 x 27,027
Opening Slide #23: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
7-TCGA-02-0009-01A-01-BS1.dfcc32a1-9a93-4b65-adb6-9ef510994f07.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
57-TCGA-02-0009-01A-01-BS1.dfcc32a1-9a93-4b65-adb6-9ef510994f07.svs
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   Dimensions: 19,975 x 12,691
Opening Slide #24: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
9-TCGA-02-0010-01A-01-TS2.dabc8968-8590-40e9-9916-6bc523a85bb4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
49-TCGA-02-0010-01A-01-TS2.dabc8968-8590-40e9-9916-6bc523a85bb4.svs
   Dimensions: 81,900 x 40,437
Opening Slide #25: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
4-TCGA-02-0010-01A-01-BS1.37c68e18-09f3-429d-80d9-9f1ffb51ac2e.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
54-TCGA-02-0010-01A-01-BS1.37c68e18-09f3-429d-80d9-9f1ffb51ac2e.svs
   Dimensions: 87,893 x 42,768
Opening Slide #26: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
4-TCGA-02-0001-01Z-00-DX2.b521a862-280c-4251-ab54-5636f20605d0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
04-TCGA-02-0001-01Z-00-DX2.b521a862-280c-4251-ab54-5636f20605d0.svs
   Dimensions: 54,002 x 41,831
Opening Slide #27: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
1-TCGA-02-0009-01A-01-TS1.f7c6584a-198d-451e-a91c-59b3f40fe0ca.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
51-TCGA-02-0009-01A-01-TS1.f7c6584a-198d-451e-a91c-59b3f40fe0ca.svs
   Dimensions: 20,143 x 30,114
Opening Slide #28: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
6-TCGA-02-0015-01A-01-BS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
16-TCGA-02-0015-01A-01-BS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
   Dimensions: 79,902 x 28,445
Opening Slide #29: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
3-TCGA-02-0024-01B-01-TS1.ab1c5ed9-9f8e-4160-942f-84fb74fe7daa.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
03-TCGA-02-0024-01B-01-TS1.ab1c5ed9-9f8e-4160-942f-84fb74fe7daa.svs
   Dimensions: 93,885 x 40,560
Opening Slide #30: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
8-TCGA-02-0010-01Z-00-DX2.5334831b-8e1f-4b61-bbf6-0f6e950a1b2f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
38-TCGA-02-0010-01Z-00-DX2.5334831b-8e1f-4b61-bbf6-0f6e950a1b2f.svs
   Dimensions: 54,002 x 40,857
Opening Slide #31: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
1-TCGA-02-0006-01B-01-TS2.15b581bb-b760-46b4-b8ae-79c1fcd17d67.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
41-TCGA-02-0006-01B-01-TS2.15b581bb-b760-46b4-b8ae-79c1fcd17d67.svs
   Dimensions: 95,883 x 42,779
Opening Slide #32: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
5-TCGA-02-0006-01B-01-BS1.e426e878-9367-482d-8cd9-2f389aa96dfe.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
35-TCGA-02-0006-01B-01-BS1.e426e878-9367-482d-8cd9-2f389aa96dfe.svs
   Dimensions: 69,914 x 38,139
Opening Slide #33: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
3-TCGA-02-0007-01A-01-TS2.b97b0953-afe4-4c7a-98d7-921d12e26887.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
23-TCGA-02-0007-01A-01-TS2.b97b0953-afe4-4c7a-98d7-921d12e26887.svs
   Dimensions: 81,900 x 39,098
Opening Slide #34: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
1-TCGA-02-0014-01A-01-TS2.3c136536-3c20-4da2-a41b-a4221137ad23.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
31-TCGA-02-0014-01A-01-TS2.3c136536-3c20-4da2-a41b-a4221137ad23.svs
   Dimensions: 63,922 x 36,365
Opening Slide #35: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
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1-TCGA-02-0011-01B-01-TS1.e0250635-3446-4c9e-a271-ac25428fc090.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
11-TCGA-02-0011-01B-01-TS1.e0250635-3446-4c9e-a271-ac25428fc090.svs
  Dimensions: 27,965 x 19,190
Opening Slide #36: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
6-TCGA-02-0011-01B-01-BS1.90348ecd-40b3-477c-8888-076f5f8f8a98.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
56-TCGA-02-0011-01B-01-BS1.90348ecd-40b3-477c-8888-076f5f8f8a98.svs
  Dimensions: 75,907 x 25,348
Opening Slide #37: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
6-TCGA-02-0027-01A-01-TS1.f7418da1-4691-4dd3-acb0-8fc3e4d737da.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
36-TCGA-02-0027-01A-01-TS1.f7418da1-4691-4dd3-acb0-8fc3e4d737da.svs
  Dimensions: 82,491 x 44,547
Opening Slide #38: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
4-TCGA-02-0006-01Z-00-DX1.a37df719-8b93-4245-ae49-67eb1114253a.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
44-TCGA-02-0006-01Z-00-DX1.a37df719-8b93-4245-ae49-67eb1114253a.svs
  Dimensions: 40,001 x 31,019
Opening Slide #39: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
4-TCGA-02-0014-01A-01-BS1.c0d26a6a-e351-46c2-bce4-7ea67c1007dd.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
24-TCGA-02-0014-01A-01-BS1.c0d26a6a-e351-46c2-bce4-7ea67c1007dd.svs
  Dimensions: 59,927 x 29,451
Opening Slide #40: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
8-TCGA-02-0001-01Z-00-DX3.2836ce55-491f-4d86-99b1-668946927af8.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
28-TCGA-02-0001-01Z-00-DX3.2836ce55-491f-4d86-99b1-668946927af8.svs
  Dimensions: 52,002 x 34,553
Opening Slide #41: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
0-TCGA-02-0016-01A-01-BS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
30-TCGA-02-0016-01A-01-BS1.683107c3-d999-48fe-8466-e98dd1ca08b3.svs
  Dimensions: 67,917 x 37,008
Opening Slide #42: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
2-TCGA-02-0015-01B-01-TS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
22-TCGA-02-0015-01B-01-TS1.681cbdeb-048c-4838-b25f-a7dc2bdb86e4.svs
  Dimensions: 53,934 x 16,596
Opening Slide #43: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
4-TCGA-02-0010-01Z-00-DX4.07de2e55-a8fe-40ee-9e98-bcb78050b9f7.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
14-TCGA-02-0010-01Z-00-DX4.07de2e55-a8fe-40ee-9e98-bcb78050b9f7.svs
  Dimensions: 32,001 x 38,474
Opening Slide #44: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
2-TCGA-02-0028-01A-01-BS1.e447454b-fce4-4791-8526-2387a6be22fe.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
42-TCGA-02-0028-01A-01-BS1.e447454b-fce4-4791-8526-2387a6be22fe.svs
  Dimensions: 83,897 x 38,110
Opening Slide #45: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
0-TCGA-02-0016-01A-01-TS1.97330d4f-c7ca-44a5-a7e6-7c6bee198110.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
40-TCGA-02-0016-01A-01-TS1.97330d4f-c7ca-44a5-a7e6-7c6bee198110.svs
  Dimensions: 81,531 x 32,525
Opening Slide #46: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
4-TCGA-02-0033-01A-01-BS1.325cc830-c031-4c5e-8d18-2d14eea0be9d.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
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34-TCGA-02-0033-01A-01-BS1.325cc830-c031-4c5e-8d18-2d14eea0be9d.svs
  Dimensions: 79,902 x 35,432
Opening Slide #47: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
8-TCGA-02-0003-01Z-00-DX3.995C2924-E298-4517-82A4-15806766CE31.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
58-TCGA-02-0003-01Z-00-DX3.995C2924-E298-4517-82A4-15806766CE31.svs
  Dimensions: 49,799 x 47,673
Opening Slide #48: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
7-TCGA-02-0003-01A-01-BS1.0156cf95-2119-4a30-9894-2c0315c954d1.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
47-TCGA-02-0003-01A-01-BS1.0156cf95-2119-4a30-9894-2c0315c954d1.svs
  Dimensions: 89,890 x 42,769
Opening Slide #49: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
0-TCGA-02-0004-01A-01-TS1.7acffca5-3a57-4fe9-ad59-9379f4bb11a9.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
10-TCGA-02-0004-01A-01-TS1.7acffca5-3a57-4fe9-ad59-9379f4bb11a9.svs
  Dimensions: 45,082 x 31,524
Opening Slide #50: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-04
6-TCGA-02-0014-01Z-00-DX1.b7fd5196-fc51-4dc7-aa6d-e74e1e9ee71d.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
46-TCGA-02-0014-01Z-00-DX1.b7fd5196-fc51-4dc7-aa6d-e74e1e9ee71d.svs
  Dimensions: 77,695 x 20,687
Opening Slide #51: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
8-TCGA-02-0004-01Z-00-DX1.d8189fdc-c669-48d5-bc9e-8ddf104caff6.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
18-TCGA-02-0004-01Z-00-DX1.d8189fdc-c669-48d5-bc9e-8ddf104caff6.svs
  Dimensions: 45,082 x 30,758
Opening Slide #52: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-00
5-TCGA-02-0021-01A-01-TS1.d7321a97-688f-4106-b569-eb2783ee7bbd.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
05-TCGA-02-0021-01A-01-TS1.d7321a97-688f-4106-b569-eb2783ee7bbd.svs
  Dimensions: 39,327 x 30,394
Opening Slide #53: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
6-TCGA-02-0023-01B-01-TS1.8bce3519-fded-4567-89a7-cc7638a442da.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
26-TCGA-02-0023-01B-01-TS1.8bce3519-fded-4567-89a7-cc7638a442da.svs
  Dimensions: 63,922 x 41,430
Opening Slide #54: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
9-TCGA-02-0011-01Z-00-DX1.7CF44982-AE5A-47A5-8D07-E526522DC094.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
39-TCGA-02-0011-01Z-00-DX1.7CF44982-AE5A-47A5-8D07-E526522DC094.svs
  Dimensions: 81,671 x 63,104
Opening Slide #55: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-03
7-TCGA-02-0034-01A-01-BS1.0f95c851-8845-41d3-86d0-158eeed2b950.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
37-TCGA-02-0034-01A-01-BS1.0f95c851-8845-41d3-86d0-158eeed2b950.svs
  Dimensions: 87,893 x 46,207
Opening Slide #56: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-01
9-TCGA-02-0015-01A-01-TS1.afb08afd-8e23-4ced-90ef-abf1e458f091.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
19-TCGA-02-0015-01A-01-TS1.afb08afd-8e23-4ced-90ef-abf1e458f091.svs
  Dimensions: 75,907 x 30,400
Opening Slide #57: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
5-TCGA-02-0023-01B-01-BS1.dbe1cb38-9c15-44cc-ac94-e2f17e427aa0.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
25-TCGA-02-0023-01B-01-BS1.dbe1cb38-9c15-44cc-ac94-e2f17e427aa0.svs
  Dimensions: 65,919 x 35,886
```

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Opening Slide #58: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-02
1-TCGA-02-0003-01A-01-TS1.6fc43119-1e2b-4c23-bd58-af026407d094.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
21-TCGA-02-0003-01A-01-TS1.6fc43119-1e2b-4c23-bd58-af026407d094.svs
  Dimensions: 48,919 x 36,996
Opening Slide #59: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
3-TCGA-02-0026-01B-01-BS1.51aee3a8-ff85-49f4-9de7-a3824bd9ca4f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
53-TCGA-02-0026-01B-01-BS1.51aee3a8-ff85-49f4-9de7-a3824bd9ca4f.svs
  Dimensions: 31,961 x 23,204
Opening Slide #60: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-05
5-TCGA-02-0024-01B-01-BS1.6bad2316-6812-47b2-b35a-d0a3ef2b618f.svs
got openslide open: /media/raj/Raj1_5/data/training_slides/TCGA-GBM-0
55-TCGA-02-0024-01B-01-BS1.6bad2316-6812-47b2-b35a-d0a3ef2b618f.svs
  Dimensions: 63,922 x 25,109
Max width:          99,599 pixels (slide #11)
Max height:         76,347 pixels (slide #12)
Max size:    6,387,419,061 pixels (slide #12)
Min width:          19,975 pixels (slide #23)
Min height:         12,691 pixels (slide #23)
Min size:      253,502,725 pixels (slide #23)
Avg width:          63,460 pixels
Avg height:         36,146 pixels
Avg size:    2,408,916,822 pixels

Time elapsed: 0:00:01.156178
```


SVS Image Sizes

SVS Image Sizes (Labeled with slide numbers)

Distribution of image sizes in millions of pixels

Image shapes (width to height)

Image shapes (height to width)