

## Lampiran

### Lampiran 1. Hasil Pengolahan Data

#### Statistics

Usia

|                    |         |        |
|--------------------|---------|--------|
| N                  | Valid   | 40     |
|                    | Missing | 0      |
| Mean               |         | 54,50  |
| Std. Error of Mean |         | 1,008  |
| Median             |         | 52,50  |
| Mode               |         | 52     |
| Std. Deviation     |         | 6,373  |
| Variance           |         | 40,615 |
| Range              |         | 27     |
| Minimum            |         | 45     |
| Maximum            |         | 72     |
| Sum                |         | 2180   |

Usia

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | 45    | 2         | 5,0     | 5,0           | 5,0                |
|       | 47    | 2         | 5,0     | 5,0           | 10,0               |
|       | 48    | 2         | 5,0     | 5,0           | 15,0               |
|       | 49    | 2         | 5,0     | 5,0           | 20,0               |
|       | 50    | 4         | 10,0    | 10,0          | 30,0               |
|       | 52    | 8         | 20,0    | 20,0          | 50,0               |
|       | 53    | 3         | 7,5     | 7,5           | 57,5               |
|       | 55    | 3         | 7,5     | 7,5           | 65,0               |
|       | 57    | 2         | 5,0     | 5,0           | 70,0               |
|       | 58    | 2         | 5,0     | 5,0           | 75,0               |
|       | 59    | 2         | 5,0     | 5,0           | 80,0               |
|       | 60    | 3         | 7,5     | 7,5           | 87,5               |
|       | 62    | 2         | 5,0     | 5,0           | 92,5               |
|       | 69    | 2         | 5,0     | 5,0           | 97,5               |
|       | 72    | 1         | 2,5     | 2,5           | 100,0              |
|       | Total | 40        | 100,0   | 100,0         |                    |

### Statistics

Berat Badan

|                    |         |        |
|--------------------|---------|--------|
| N                  | Valid   | 40     |
|                    | Missing | 0      |
| Mean               |         | 53,10  |
| Std. Error of Mean |         | ,895   |
| Median             |         | 52,00  |
| Mode               |         | 48     |
| Std. Deviation     |         | 5,660  |
| Variance           |         | 32,041 |
| Range              |         | 28     |
| Minimum            |         | 42     |
| Maximum            |         | 70     |
| Sum                |         | 2124   |

### Berat Badan

|          | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------|-----------|---------|---------------|--------------------|
| Valid 42 | 1         | 2,5     | 2,5           | 2,5                |
| 45       | 1         | 2,5     | 2,5           | 5,0                |
| 47       | 1         | 2,5     | 2,5           | 7,5                |
| 48       | 5         | 12,5    | 12,5          | 20,0               |
| 49       | 4         | 10,0    | 10,0          | 30,0               |
| 50       | 4         | 10,0    | 10,0          | 40,0               |
| 51       | 3         | 7,5     | 7,5           | 47,5               |
| 52       | 4         | 10,0    | 10,0          | 57,5               |
| 53       | 1         | 2,5     | 2,5           | 60,0               |
| 54       | 1         | 2,5     | 2,5           | 62,5               |
| 55       | 3         | 7,5     | 7,5           | 70,0               |
| 56       | 1         | 2,5     | 2,5           | 72,5               |
| 57       | 2         | 5,0     | 5,0           | 77,5               |
| 58       | 2         | 5,0     | 5,0           | 82,5               |
| 59       | 2         | 5,0     | 5,0           | 87,5               |
| 60       | 2         | 5,0     | 5,0           | 92,5               |
| 62       | 1         | 2,5     | 2,5           | 95,0               |
| 65       | 1         | 2,5     | 2,5           | 97,5               |
| 70       | 1         | 2,5     | 2,5           | 100,0              |
| Total    | 40        | 100,0   | 100,0         |                    |

### Statistics

Kejadian Fraktur

|                    |         |      |
|--------------------|---------|------|
| N                  | Valid   | 40   |
|                    | Missing | 0    |
| Mean               |         | 1,40 |
| Std. Error of Mean |         | ,078 |
| Median             |         | 1,00 |
| Mode               |         | 1    |
| Std. Deviation     |         | ,496 |
| Variance           |         | ,246 |
| Range              |         | 1    |
| Minimum            |         | 1    |
| Maximum            |         | 2    |
| Sum                |         | 56   |

### Kejadian Fraktur

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | Ya    | 24        | 60,0    | 60,0          | 60,0               |
|       | Tidak | 16        | 40,0    | 40,0          | 100,0              |
|       | Total | 40        | 100,0   | 100,0         |                    |

### Statistics

|                    |         | Interpretasi Osteocalcin | Interpretasi OSTA Score | Interpretasi BMD | Interpretasi PTH |
|--------------------|---------|--------------------------|-------------------------|------------------|------------------|
| N                  | Valid   | 40                       | 40                      | 40               | 40               |
|                    | Missing | 0                        | 0                       | 0                | 0                |
| Mean               |         | 1,65                     | 1,53                    | 1,35             | 1,48             |
| Std. Error of Mean |         | ,076                     | ,080                    | ,076             | ,080             |
| Median             |         | 2,00                     | 2,00                    | 1,00             | 1,00             |
| Mode               |         | 2                        | 2                       | 1                | 1                |
| Std. Deviation     |         | ,483                     | ,506                    | ,483             | ,506             |
| Variance           |         | ,233                     | ,256                    | ,233             | ,256             |
| Range              |         | 1                        | 1                       | 1                | 1                |
| Minimum            |         | 1                        | 1                       | 1                | 1                |
| Maximum            |         | 2                        | 2                       | 2                | 2                |
| Sum                |         | 66                       | 61                      | 54               | 59               |

**Interpretasi BMD**

|       |              | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|--------------|-----------|---------|---------------|--------------------|
| Valid | Osteoporosis | 26        | 65,0    | 65,0          | 65,0               |
|       | Normal       | 14        | 35,0    | 35,0          | 100,0              |
|       | Total        | 40        | 100,0   | 100,0         |                    |

**Interpretasi PTH**

|       |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|--------|-----------|---------|---------------|--------------------|
| Valid | Tinggi | 21        | 52,5    | 52,5          | 52,5               |
|       | Normal | 19        | 47,5    | 47,5          | 100,0              |
|       | Total  | 40        | 100,0   | 100,0         |                    |

**Interpretasi Osteocalcin**

|       |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|--------|-----------|---------|---------------|--------------------|
| Valid | Tinggi | 14        | 35,0    | 35,0          | 35,0               |
|       | Normal | 26        | 65,0    | 65,0          | 100,0              |
|       | Total  | 40        | 100,0   | 100,0         |                    |

**Interpretasi OSTA Score**

|       |                | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----------------|-----------|---------|---------------|--------------------|
| Valid | Beresiko       | 19        | 47,5    | 47,5          | 47,5               |
|       | Tidak Beresiko | 21        | 52,5    | 52,5          | 100,0              |
|       | Total          | 40        | 100,0   | 100,0         |                    |

## Crosstabs

### Interpretasi BMD \* Kejadian Fraktur

Interpretasi BMD \* Kejadian Fraktur Crosstabulation

|                           |                           |                           | Kejadian Fraktur |        | Total  |
|---------------------------|---------------------------|---------------------------|------------------|--------|--------|
|                           |                           |                           | Ya               | Tidak  |        |
| Interpretasi BMD          | Osteoporosis              | Count                     | 20               | 6      | 26     |
|                           |                           | % within Interpretasi BMD | 76,9%            | 23,1%  | 100,0% |
|                           |                           | % within Kejadian Fraktur | 83,3%            | 37,5%  | 65,0%  |
|                           |                           | % of Total                | 50,0%            | 15,0%  | 65,0%  |
|                           | Normal                    | Count                     | 4                | 10     | 14     |
|                           |                           | % within Interpretasi BMD | 28,6%            | 71,4%  | 100,0% |
| % within Kejadian Fraktur |                           | 16,7%                     | 62,5%            | 35,0%  |        |
| Total                     | Count                     | 24                        | 16               | 40     |        |
|                           | % within Interpretasi BMD | 60,0%                     | 40,0%            | 100,0% |        |
|                           | % within Kejadian Fraktur | 100,0%                    | 100,0%           | 100,0% |        |
|                           | % of Total                | 60,0%                     | 40,0%            | 100,0% |        |

### Chi-Square Tests

|                                    | Value              | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|--------------------|----|-----------------------|----------------------|----------------------|
| Pearson Chi-Square                 | 8,864 <sup>b</sup> | 1  | ,003                  |                      |                      |
| Continuity Correction <sup>a</sup> | 6,964              | 1  | ,008                  |                      |                      |
| Likelihood Ratio                   | 8,999              | 1  | ,003                  |                      |                      |
| Fisher's Exact Test                |                    |    |                       | ,006                 | ,004                 |
| Linear-by-Linear Association       | 8,643              | 1  | ,003                  |                      |                      |
| N of Valid Cases                   | 40                 |    |                       |                      |                      |

a. Computed only for a 2x2 table

b. 0 cells (,0%) have expected count less than 5. The minimum expected count is 5,60.

**Risk Estimate**

|   | Value | 95% Confidence Interval |        |
|---|-------|-------------------------|--------|
|   |       | Lower                   | Upper  |
| Odds Ratio for Interpretasi BMD (Osteoporosis / Normal) | 8,333 | 1,906                   | 36,440 |
| For cohort Kejadian Fraktur = Ya                        | 2,692 | 1,145                   | 6,328  |
| For cohort Kejadian Fraktur = Tidak                     | ,323  | ,149                    | ,702   |
| N of Valid Cases  | 40    |                         |        |

## Interpretasi PTH \* Kejadian Fraktur

Interpretasi PTH \* Kejadian Fraktur Crosstabulation

|                  |                           |                           | Kejadian Fraktur |        | Total  |
|------------------|---------------------------|---------------------------|------------------|--------|--------|
|                  |                           |                           | Ya               | Tidak  |        |
| Interpretasi PTH | Tinggi                    | Count                     | 16               | 5      | 21     |
|                  |                           | % within Interpretasi PTH | 76,2%            | 23,8%  | 100,0% |
|                  |                           | % within Kejadian Fraktur | 66,7%            | 31,3%  | 52,5%  |
|                  |                           | % of Total                | 40,0%            | 12,5%  | 52,5%  |
|                  | Normal                    | Count                     | 8                | 11     | 19     |
|                  |                           | % within Interpretasi PTH | 42,1%            | 57,9%  | 100,0% |
|                  |                           | % within Kejadian Fraktur | 33,3%            | 68,8%  | 47,5%  |
|                  |                           | % of Total                | 20,0%            | 27,5%  | 47,5%  |
| Total            | Count                     | 24                        | 16               | 40     |        |
|                  | % within Interpretasi PTH | 60,0%                     | 40,0%            | 100,0% |        |
|                  | % within Kejadian Fraktur | 100,0%                    | 100,0%           | 100,0% |        |
|                  | % of Total                | 60,0%                     | 40,0%            | 100,0% |        |

### Chi-Square Tests

|                                    | Value              | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|--------------------|----|-----------------------|----------------------|----------------------|
| Pearson Chi-Square                 | 4,829 <sup>b</sup> | 1  | ,028                  |                      |                      |
| Continuity Correction <sup>a</sup> | 3,513              | 1  | ,061                  |                      |                      |
| Likelihood Ratio                   | 4,924              | 1  | ,026                  |                      |                      |
| Fisher's Exact Test                |                    |    |                       | ,051                 | ,030                 |
| Linear-by-Linear Association       | 4,708              | 1  | ,030                  |                      |                      |
| N of Valid Cases                   | 40                 |    |                       |                      |                      |

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7,60.

**Risk Estimate**

|   | Value | 95% Confidence Interval |        |
|---|-------|-------------------------|--------|
|   |       | Lower                   | Upper  |
| Odds Ratio for Interpretasi PTH (Tinggi / Normal) | 4,400 | 1,134                   | 17,069 |
| For cohort Kejadian Fraktur = Ya                  | 1,810 | 1,014                   | 3,228  |
| For cohort Kejadian Fraktur = Tidak               | ,411  | ,175                    | ,968   |
| N of Valid Cases                                  | 40    |                         |        |



## Interpretasi Osteocalcin \* Kejadian Fraktur

Interpretasi Osteocalcin \* Kejadian Fraktur Crosstabulation

|                          |                                   |                                   | Kejadian Fraktur |        | Total  |
|--------------------------|-----------------------------------|-----------------------------------|------------------|--------|--------|
|                          |                                   |                                   | Ya               | Tidak  |        |
| Interpretasi Osteocalcin | Tinggi                            | Count                             | 10               | 4      | 14     |
|                          |                                   | % within Interpretasi Osteocalcin | 71,4%            | 28,6%  | 100,0% |
|                          |                                   | % within Kejadian Fraktur         | 41,7%            | 25,0%  | 35,0%  |
|                          |                                   | % of Total                        | 25,0%            | 10,0%  | 35,0%  |
|                          | Normal                            | Count                             | 14               | 12     | 26     |
|                          |                                   | % within Interpretasi Osteocalcin | 53,8%            | 46,2%  | 100,0% |
|                          |                                   | % within Kejadian Fraktur         | 58,3%            | 75,0%  | 65,0%  |
|                          |                                   | % of Total                        | 35,0%            | 30,0%  | 65,0%  |
| Total                    | Count                             | 24                                | 16               | 40     |        |
|                          | % within Interpretasi Osteocalcin | 60,0%                             | 40,0%            | 100,0% |        |
|                          | % within Kejadian Fraktur         | 100,0%                            | 100,0%           | 100,0% |        |
|                          | % of Total                        | 60,0%                             | 40,0%            | 100,0% |        |

## Chi-Square Tests

|                                    | Value              | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------------|--------------------|----|-----------------------|----------------------|----------------------|
| Pearson Chi-Square                 | 1,172 <sup>b</sup> | 1  | ,279                  |                      |                      |
| Continuity Correction <sup>a</sup> | ,554               | 1  | ,457                  |                      |                      |
| Likelihood Ratio                   | 1,200              | 1  | ,273                  |                      |                      |
| Fisher's Exact Test                |                    |    |                       | ,329                 | ,230                 |
| Linear-by-Linear Association       | 1,143              | 1  | ,285                  |                      |                      |
| N of Valid Cases                   | 40                 |    |                       |                      |                      |

a. Computed only for a 2x2 table

b. 0 cells (,0%) have expected count less than 5. The minimum expected count is 5,60.

### Risk Estimate

|   | Value | 95% Confidence Interval |       |
|---|-------|-------------------------|-------|
|   |       | Lower                   | Upper |
| Odds Ratio for Interpretasi Osteocalcin (Tinggi / Normal) | 2,143 | ,532                    | 8,625 |
| For cohort Kejadian Fraktur = Ya                          | 1,327 | ,816                    | 2,157 |
| For cohort Kejadian Fraktur = Tidak                       | ,619  | ,245                    | 1,563 |
| N of Valid Cases  | 40    |                         |       |

### Interpretasi OSTA Score \* Kejadian Fraktur

#### Interpretasi OSTA Score \* Kejadian Fraktur Crosstabulation

|                         |                |                                  | Kejadian Fraktur |        | Total  |
|-------------------------|----------------|----------------------------------|------------------|--------|--------|
|                         |                |                                  | Ya               | Tidak  |        |
| Interpretasi OSTA Score | Beresiko       | Count                            | 11               | 8      | 19     |
|                         |                | % within Interpretasi OSTA Score | 57,9%            | 42,1%  | 100,0% |
|                         | Tidak Beresiko | % within Kejadian Fraktur        | 45,8%            | 50,0%  | 47,5%  |
|                         |                | % of Total                       | 27,5%            | 20,0%  | 47,5%  |
| Total                   | Beresiko       | Count                            | 13               | 8      | 21     |
|                         |                | % within Interpretasi OSTA Score | 61,9%            | 38,1%  | 100,0% |
|                         | Tidak Beresiko | % within Kejadian Fraktur        | 54,2%            | 50,0%  | 52,5%  |
|                         |                | % of Total                       | 32,5%            | 20,0%  | 52,5%  |
| Total                   | Beresiko       | Count                            | 24               | 16     | 40     |
|                         |                | % within Interpretasi OSTA Score | 60,0%            | 40,0%  | 100,0% |
|                         | Tidak Beresiko | % within Kejadian Fraktur        | 100,0%           | 100,0% | 100,0% |
|                         |                | % of Total                       | 60,0%            | 40,0%  | 100,0% |

### Chi-Square Tests

|                                    | Value             | df | Asymp. Sig.<br>(2-sided) | Exact Sig.<br>(2-sided) | Exact Sig.<br>(1-sided) |
|------------------------------------|-------------------|----|--------------------------|-------------------------|-------------------------|
| Pearson Chi-Square                 | ,067 <sup>b</sup> | 1  | ,796                     |                         |                         |
| Continuity Correction <sup>a</sup> | ,000              | 1  | 1,000                    |                         |                         |
| Likelihood Ratio                   | ,067              | 1  | ,796                     |                         |                         |
| Fisher's Exact Test                |                   |    |                          | 1,000                   | ,525                    |
| Linear-by-Linear<br>Association    | ,065              | 1  | ,799                     |                         |                         |
| N of Valid Cases                   | 40                |    |                          |                         |                         |

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7,60.

### Risk Estimate

|  | Value | 95% Confidence Interval |       |
|--|-------|-------------------------|-------|
|  |       | Lower                   | Upper |
| Odds Ratio for Interpretasi OSTA Score (Beresiko / Tidak Beresiko) | ,846  | ,238                    | 3,004 |
| For cohort Kejadian Fraktur = Ya                                   | ,935  | ,562                    | 1,557 |
| For cohort Kejadian Fraktur = Tidak                                | 1,105 | ,518                    | 2,360 |
| N of Valid Cases   | 40    |                         |       |

Lampiran 2. Ethical clearance

KOMISI ETIK PENELITIAN KESEHATAN  
*HEALTH RESEARCH ETHICS COMMITTEE*  
UNIVERSITAS MUHAMMADIYAH YOGYAKARTA

KETERANGAN LAYAK ETIK  
*DESCRIPTION OF ETHICAL APPROVAL*  
"ETHICAL APPROVAL"

No.064/EC-KEPK FKIK UMY/III/2019

Protokol penelitian yang diusulkan oleh :  
*The research protocol proposed by*

Peneliti utama : Salwa Nabilah Cholfa  
*Principal In Investigator*

Nama Institusi : Universitas Muhammadiyah Yogyakarta  
*Name of the Institution*

Dengan judul:  
*Title*

**"Deteksi Dini Osteoporosis untuk Mencegah Fraktur Patologis pada Wanita Menopause"**

*"Osteoporotic Early Detections for Prevent Pathologic Fracture in Menopausal Woman"*

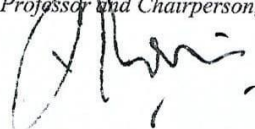
Dinyatakan layak etik sesuai 7 (tujuh) Standar WHO 2011, yaitu 1) Nilai Sosial, 2) Nilai Ilmiah, 3) Pemerataan Beban dan Manfaat, 4) Risiko, 5) Bujukan/Eksploitasi, 6) Kerahasiaan dan Privacy, dan 7) Persetujuan Setelah Penjelasan, yang merujuk pada Pedoman CIOMS 2016. Hal ini seperti yang ditunjukkan oleh terpenuhinya indikator setiap standar.

*Declared to be ethically appropriate in accordance to 7 (seven) WHO 2011 Standards, 1) Social Values, 2) Scientific Values, 3) Equitable Assessment and Benefits, 4) Risks, 5) Persuasion/Exploitation, 6) Confidentiality and Privacy, and 7) Informed Consent, referring to the 2016 CIOMS Guidelines. This is as indicated by the fulfillment of the indicators of each standard.*

Pernyataan Laik Etik ini berlaku selama kurun waktu tanggal 14 Maret 2019 sampai dengan tanggal 14 Maret 2020.

*This declaration of ethics applies during the period March 14, 2019 until March 14, 2020.*

March 14, 2019  
Professor and Chairperson,



Dr. dr. Titiek Hidayati, M. Kes.