

**Table S1.** Laboratory investigation in the studied groups

	Mild	Moderate	Severe	test	p
<b>Hemoglobin (g/dl)</b>					
Mean ± SD	10.13 ± 1.27	9.78 ± 1.42	10.05 ± 1.19	0.284 <sup>∞</sup>	0.755
Range	6.8 – 12	7.8 – 12.4	7.9 – 11.7		
<b>TLC (10<sup>3</sup>)</b>					
Mean ± SD	8.56 ± 2.85	10.85 ± 4.39	15.58 ± 4.13	14.963 <sup>§</sup>	0.001**
Range	3.7 – 12.6	6 – 22	10.5 – 22.8		
<b>Granulocytes</b>					
Mean ± SD	3.51 ± 1.86 <sup>α</sup>	5.3 ± 2.94	7.98 ± 4.15 <sup>α</sup>	9.085 <sup>§</sup>	0.011*
Range	0.9 – 6.2	1.5 – 11	2.6 – 14.3		
<b>Lymphocytes:</b>					
Mean ± SD	4.13 ± 1.4 <sup>α</sup>	4.95 ± 2.31	6.7 ± 3.16 <sup>α</sup>	6.657 <sup>§</sup>	0.036*
Range	1.7 – 6.5	1.2 – 9.1	0.7 - 12		
<b>Platelet (10<sup>3</sup>):</b>					
Mean ± SD	353 ± 107.46 <sup>α</sup>	348.67 ± 142.69	232.18 ± 115.82 <sup>α</sup>	17.209 <sup>§</sup>	0.029*
Range	114 - 488	45 – 635	27 - 455		
<b>CRP:</b>					
Mean ± SD	14.65 ± 28.89 <sup>α</sup>	27.39 ± 34.22	102.82 ± 91.26 <sup>α</sup>	16.074 <sup>§</sup>	<0.001**
Range	0.55 – 109	1.7 – 117	13 – 279.4		

**Table S2.** Comparing number of patients that need ICU admission and mechanical ventilation and who treated in ward only without ICU admission or M.V:

	Mild	Moderate	Severe	$\chi^2$	P
	N (%)	N (%)	N (%)		
<b>ICU-MV</b>					
<b>No</b>	<b>14 (100)</b>	<b>10 (66.7)</b>	<b>0 (0)</b>	<b>26.111</b>	<b>&lt;0.001**</b>
<b>Yes</b>	<b>0 (0)</b>	<b>5 (33.3)</b>	<b>11 (100)</b>		

**Table S3.** Comparing Neopterin level between patients that need ICU admission and mechanical ventilation and who treated in ward only without ICU admission or M.V:

	No Need for ICU&MV (24)	Need ICU&MV (16)	MW test	P
<b>Neopterin</b>				
Mean ± SD	8.27 ± 4.41	17.29 ± 2.76	-4.887	<0.001**
Range	0.16 – 17.46	13.48 – 23.15		

MW Mann whitney test

\*\*p≤0.001 is highly significant

**Table S4.** Comparing Neopterin level in the survivors and non-survivors groups:

	No-survivor (4)	Survivor (36)	MW test	P
<b>Neopterin</b>				
Mean $\pm$ SD	19.02 $\pm$ 2.33	11.08 $\pm$ 5.61	<b>-2.705</b>	<b>0.007*</b>
Range	16.63 – 22.23	0.16 – 23.15		

MW Mann whitney test

\*p<0.05 is highly significant

**Table S5.** Neopterin level in the studied groups

	Mild	Moderate	Severe	KW test	p
<b>Neopterin</b>					
Mean $\pm$ SD	7.09 $\pm$ 3.64	11.89 $\pm$ 5.12	17.95 $\pm$ 2.78 <sup>§</sup>	21.967	<0.001**
Range	0.16 – 14.97	1.879 – 19.52	14.82 – 23.15		

<sup>§</sup> group responsible for significant difference

\*\*p $\leq$ 0.001 is highly significant

**Table S6.**Correlation between neopterin level and other variables in the studied group:

	Serum Neopterin level	
	r	P
Age	-0.089	0.585
Weight	0.079	0.629
Respiratory rate	0.682	0.001**
Heart rate	0.371	0.018*
Temperature	0.652	0.001**
HB	-0.159	0.328
TLC	0.484	0.002*
Granulocyte	0.404	0.01*
Lymphocyte	0.317	0.046*
Platelet	-0.186	0.25
CRP	0.514	0.001**
Total PRESS score	0.793	0.001**

r Spearman correlation

\*p<0.05 is statistically significant

\*\*p≤0.001 is highly significant

**Table S7.**performance of Neopterin level in diagnosis of poor prognosis of pneumonia:

Cutoff	AUC	Sensitivity	Specificity	PPV	NPV	+LR	-LR	Accuracy	p
13.935	0.866	92.3	77.8	66.7	95.5	4.16	0.1	82.5	<0.001**