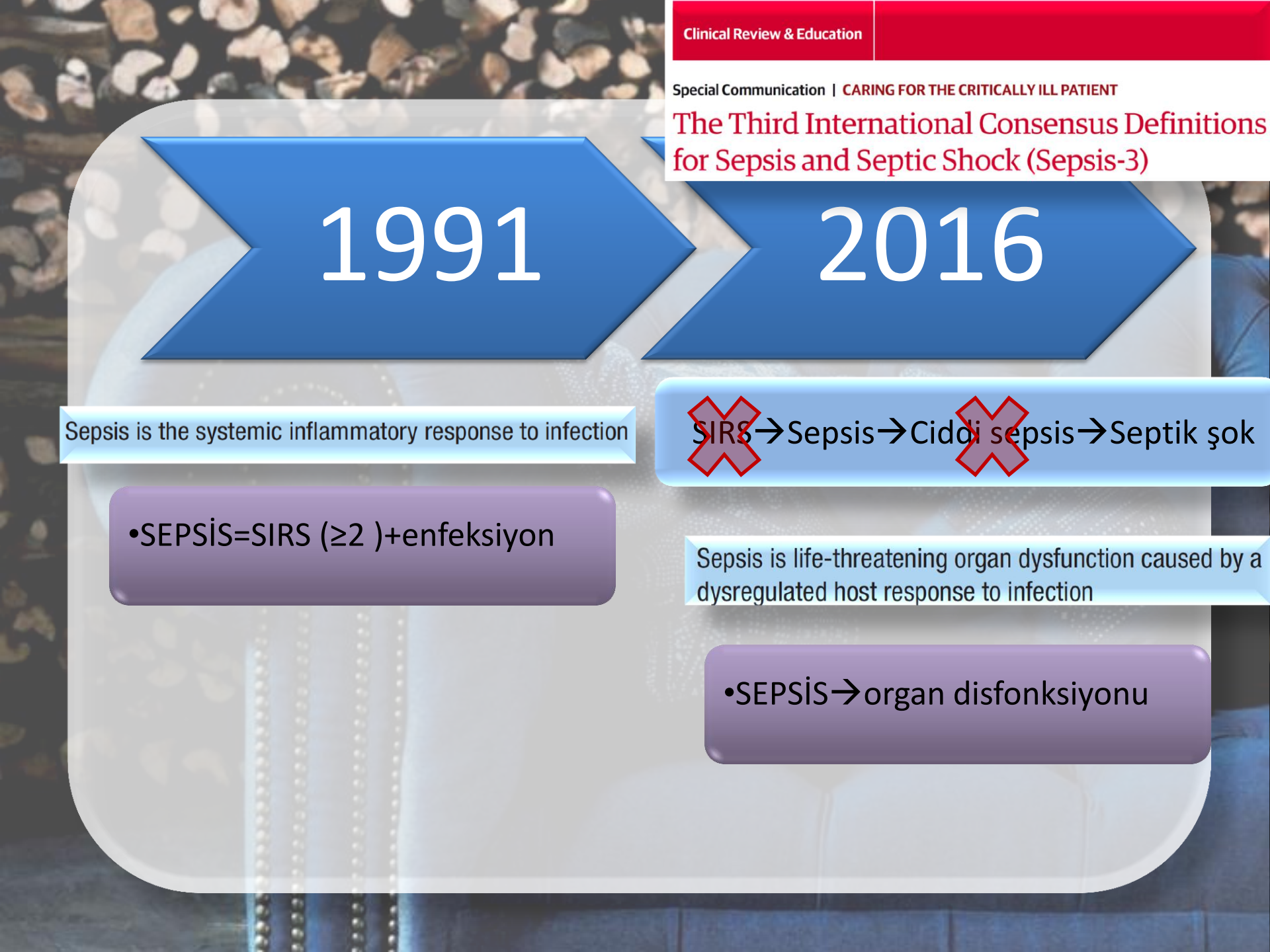
‘qSOFA’

SON VALİDASYON ÇALIŞMALARI VE YENİ BEKLENTİLER

Uz. Dr. Seda DAĞAR



Clinical Review & Education

Special Communication | CARING FOR THE CRITICALLY ILL PATIENT

The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)

1991

2016

Sepsis is the systemic inflammatory response to infection

SIRS→Sepsis→Ciddi sepsis→Septik şok

•SEPSİS=SIRS (≥2)+enfeksiyon

Sepsis is life-threatening organ dysfunction caused by a dysregulated host response to infection

•SEPSİS→organ disfonksiyonu

Clinical Review & Education

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Box 4. qSOFA (Quick SOFA) Criteria

Respiratory rate ≥22/min

Altered mentation

Systolic blood pressure ≤100 mm Hg

qSOFA

- Kolay
- Ucuz
- Yatakbaşı
- Tekrarlanabilir
- Laboratuar bağımlı değil

qSOFA;

- SIRS'ı yerine mi geldi?
- Tanımlama aracı mı?
- Tarama aracı mı?
- Klinik karar verme aracı mı?
- Erken uyarı sistemlerinden biri mi?
- Organ disfonksiyonu indikatörü mü?
- Risk belirleme aracı mı?
- Prognostik bir skor mu?

Research

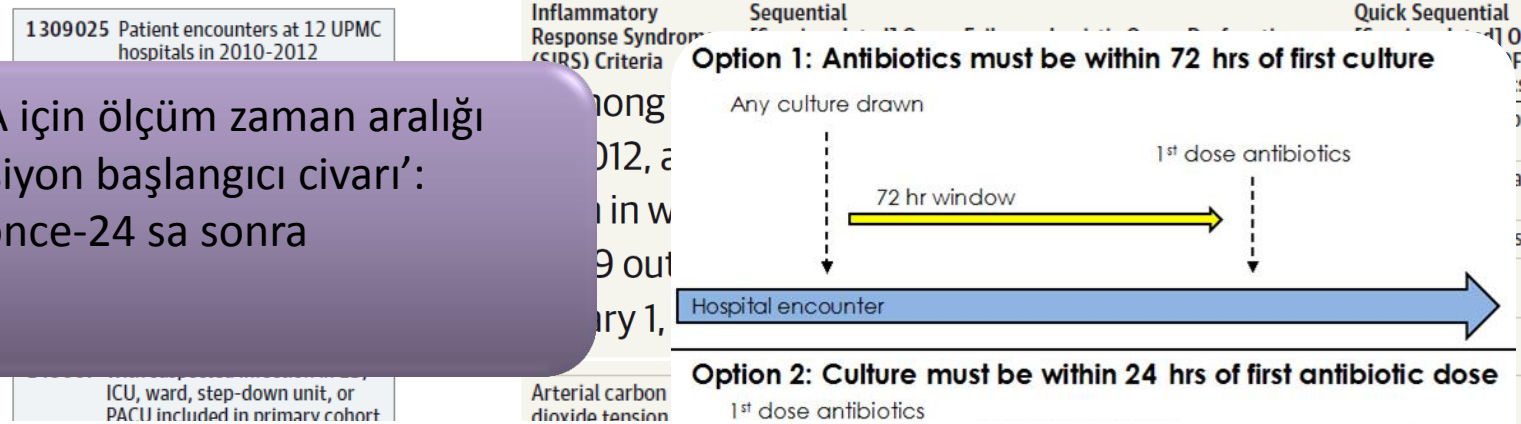
JAMA The Journal of the American Medical Association

Original Investigation | CARING FOR THE CRITICALLY ILL PATIENT

Assessment of Clinical Criteria for Sepsis
For the Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)

Christopher W. Seymour, MD, MSc; Vincent X. Liu, MD, MSc; Theodore J. Iwashyna, MD, PhD; Frank M. Brunkhorst, MD; Thomas D. Rea, MD, André Scherag, PhD; Gordon Rubenfeld, MD, MSc; Jeremy M. Kahn, MD, MSc; Manu Shankar-Hari, MD, MSc; Mervyn Singer, MD, FRCP; Clifford S. Deutschman, MD, MS; Gabriel J. Escobar, MD; Derek C. Angus, MD, MPH

- qSOFA için ölçüm zaman aralığı 'enfeksiyon başlangıcı civarı': 48 sa önce-24 sa sonra
- GKS



2) Altered mentation defined as GCS <15
Because GCS may not always be measured, we used any alteration in mentation (GCS<15) instead of GCS ≤13 in the qSOFA model.

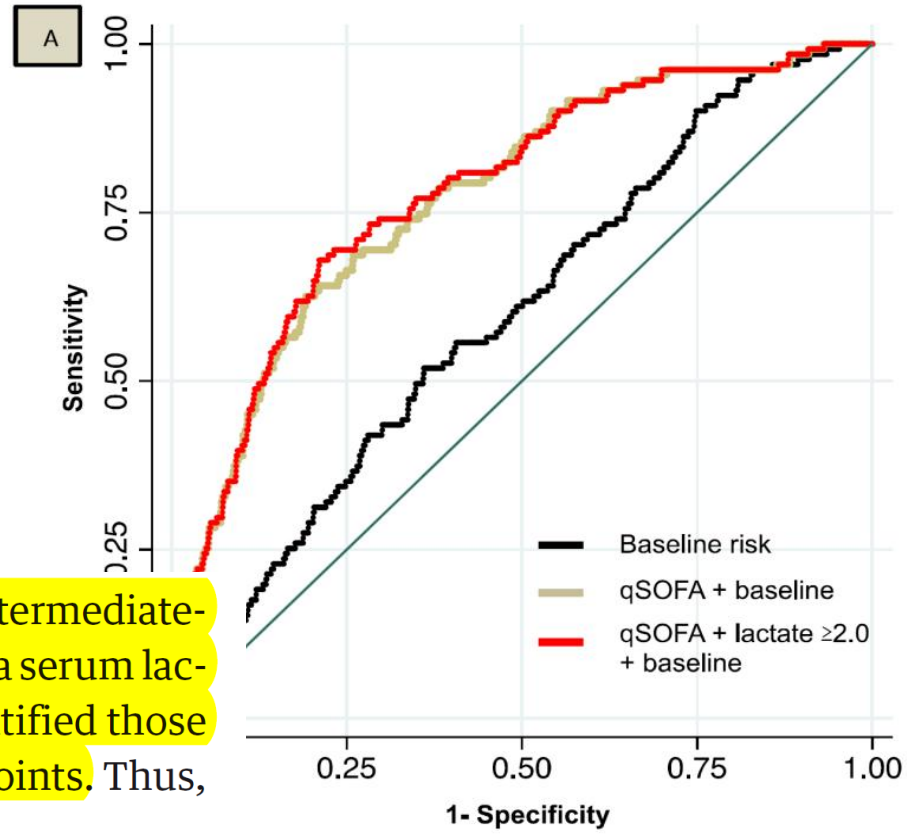
Criteria	ICU (N=7,932)	Comparison	P value	Outside the ICU (N=66,522)	Comparison	P value
Baseline model	0.58 (0.57, 0.60)	.	.	0.69 (0.68, 0.70)	.	.
SIRS	0.64 (0.62, 0.66)	vs SOFA:	<0.01	0.76 (0.75, 0.77)	vs SOFA:	<0.01
		vs. qSOFA:	0.01		vs. qSOFA:	<0.01
		vs. LODS:	<0.01		vs. LODS:	<0.01
SOFA	0.74 (0.73, 0.76)	vs SIRS:	<0.01	0.79 (0.78, 0.80)	vs SIRS:	<0.01
		vs. LODS:	0.20		vs. LODS:	<0.01
		vs. qSOFA:	<0.01		vs. qSOFA:	<0.01
LODS	0.75 (0.73, 0.76)	vs SIRS:	<0.01	0.81 (0.80, 0.82)	vs SIRS:	<0.01
		vs. SOFA:	0.20		vs. SOFA:	<0.01
		vs. qSOFA:	<0.01		vs. qSOFA:	0.72
qSOFA *	0.66 (0.64, 0.68)	vs SIRS:	0.01	0.81 (0.80, 0.82)	vs SIRS:	<0.01
		vs. SOFA:	<0.01		vs. SOFA:	<0.01
		vs. LODS:	<0.01		vs. LODS:	0.72

Original Investigation | CARING FOR THE CRITICALLY ILL PATIENT

Assessment of Clinical Criteria for Sepsis For the Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)

Conclusions

- Laktat???



and beyond the qSOFA model. However, among intermediate-risk encounters (qSOFA score = 1), the addition of a serum lactate level of 2.0 mmol/L (18 mg/dL) or higher identified those with a risk profile similar to those with 2 qSOFA points. Thus,

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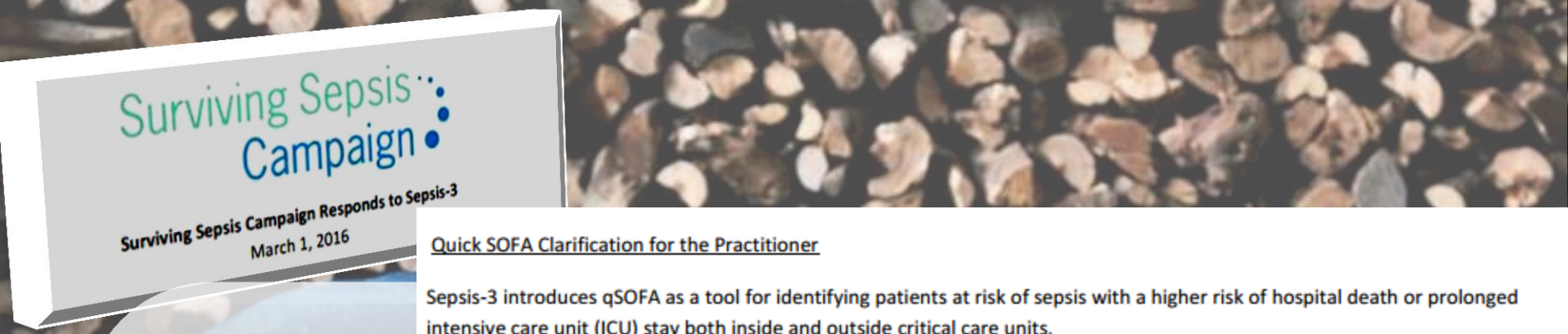
ing. First, qSOFA was derived and tested among patient encounters in which infection was already suspected. The qSOFA is not an alert that alone will differentiate patients with infection from those without infection. However, at least in many US and

Second, mental status is assessed variably in different settings, which may affect the performance of the qSOFA. Although the qSOFA appeared robust in sensitivity analyses to alternative GCS cut points, further work is needed to clarify its clinical usefulness. In particular, the model evaluated only whether mental status was abnormal, not whether it had changed from baseline, which is extremely difficult to operationalize and validate, both in the EHR and as part of routine charting. An alternative to the GCS (eg, Laboratory and Acute Physiology Score, version 2, in KPNC encounters)[28] found similar results.



Quick SOFA Clarification for the Practitioner

Sepsis-3 introduces qSOFA as a tool for identifying patients at risk of sepsis with a higher risk of hospital death or prolonged intensive care unit (ICU) stay both inside and outside critical care units.

Note that:

- qSOFA *does not* define sepsis (but the presence of two qSOFA criteria is a predictor of both increased mortality and ICU stays of more than three days in non-ICU patients)
- The new sepsis definitions recommend using a change in baseline of *the total SOFA score* of two or more points to represent organ dysfunction.

model. The final qSOFA score consisted of altered mental status, systolic blood pressure less than or equal to 100 mmHg, and a respiratory rate of at least 22 breaths per minute. A score of 2 or higher had greater than 60% sensitivity for in-hospital mortality in the UPMC validation cohort, which included ICU and non-ICU patients. The proposed use of qSOFA is at the bedside to identify high-risk, infected patients outside the ICU and to prompt clinicians to consider additional diagnostic tests or escalation of therapy. However, it is not currently part of the recent consensus definition of sepsis. In addition, the SSC still recommends screening with SIRS criteria and to utilize qSOFA to screen for organ dysfunction in those who meet the traditional definition of sepsis.[51]

New Sepsis Criteria: A Change We Should Not Make

Steven Q. Simpson, MD, FCCP, FACP

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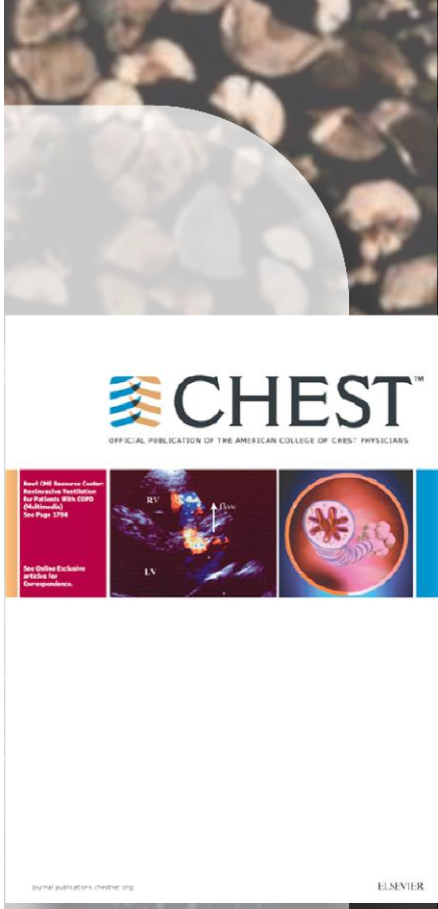
To appear in: *CHEST*



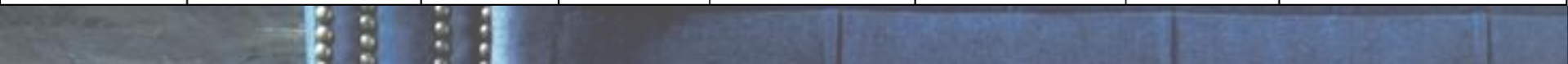
sensitivity and specificity for life-threatening organ dysfunction.[8] The logic of this approach, in terms of saving lives, is not evident. In fact, the lethality of severe sepsis demands a screening mechanism that exhibits high sensitivity, even at the expense of specificity.

The consensus statement argues that the SIRS concept is not helpful. The supporting evidence cited is a recent study demonstrating that SIRS is absent in 1 of 8 patients with infection and organ dysfunction. [9] This could be restated that 7 of 8 patients (87.9%) with life threatening organ dysfunction have SIRS, making SIRS a highly sensitive indicator for organ dysfunction. Sepsis experts have never believed that SIRS alone is a "criterion" for sepsis, but recognize that when infection is present or suspected, SIRS is a harbinger of the possibility of life threatening organ dysfunction. The presence of such organ dysfunction is the key clinical feature that shifts patients into the higher mortality risk category. However, abandoning the use of SIRS to focus on findings that are more highly predictive of death could encourage waiting, rather than early, aggressive intervention. This is a mistake that we cannot make.

sepsis expert or intensivist may be lacking. A change in definition and diagnostic criteria could set back decades of work persuading providers at all levels to recognize sepsis early and to intervene aggressively. It seems unlikely that simply changing the clinical definition of sepsis will lead to additional substantial reductions in mortality. What patients need is that we continue to build on the momentum of the last two decades and that we not disrupt it by conflating change with progress.

Yazar, Yayım yılı Ülke	Hasta grubu	Çalışma türü	Karşılaştırılan skorlar	Sonlanım noktaları	AUC	Sensitivite/ Spesisitve	Ana sonuçlar
Wang ve ark. 2016 Çin	Klinik+radyoloji ile tanı konan 477 acil servis hastası	Retrospektif kohort	qSOFA SOFA MEDS APACHE II	28 günlük mortalite	qSOFA=0.666 SOFA=0.729 MEDS=0.751 APACHE II=0.732	qSOFA ≥2 %42.9/%82.6	qSOFA'nın YB yatışını öngörme performansı kendinden daha kompleks skorlara benzer ancak prognostik becerisi sadece SOFA ve APACHE II ile benzer, MEDS'in altında
				YB yatışı	qSOFA=0.636 SOFA=0.682 MEDS=0.661 APACHE II=0.640	qSOFA ≥2 %33.3/%84	
April ve ark. 2016 ABD	Kültür ± Ab, YB'a yatırılan 214 acil servis hastası	Retrospektif kohort	qSOFA SIRS SOFA LODS	Hastane içi mortalite	qSOFA=0.66 SIRS=0.65 SOFA=0.76 LODS=0.70	qSOFA ≥2 %89.7/%27.4 SIRS ≥2 %97.4/%2.3	Sonuçlar SEPSİS-3 kılavuzunda YB hastane içi mortalite sonuçları benzer, acil servisten YB'a yatırılan hastalarda SOFA üstün, eğer hesaplayacak yeterli veri yoksa SIRS veya qSOFA'dan herhangi biri kullanılabilir
Williams ve ark. 2016 avustralya	Acil hekimi ve yatıran hekim tarafından enfeksiyon düşünülen 8871 acil servis hastası	Retrospektif kohort	qSOFA SIRS	30 günlük mortalite	qSOFA=0.78 SIRS=0.71	qSOFA ≥2 %50.2/%91.3 SIRS≥2 %77.4/%54.1	SIRS organ disfonksiyonu ve mortalite öngörüsü için kullanışlı bir skorken, qSOFA AS'te tarama amaçlı kullanımda SIRS'ın altında
Henning ve ark. 2016 ABD	Acil serviste ab verilen ve hastaneye yatırılan 7754 acil servis hastası	Retrospektif kohort	qSOFA Eski sepsis tanımı	Hastane içi mortalite	qSOFA=0.77	qSOFA ≥2 %52/%86 SIRS bağımlı eski sepsis %83/%50	qSOFA ve SIRS farklı hedefler üzerinde birbirlerine üstünlük sağlıyor; SIRS erken tanıda, qSOFA ciddi hastalık tespitinde
Finkelsztein ve ark. 2017 ABD	Klinik+lab+radyoloji+ab ile tanı konan YB dışı 152 hasta	Retrospektif kohort	qSOFA SIRS	Hastane içi mortalite	qSOFA=0.74 SIRS=0.59	qSOFA ≥2 %90/%42 SIRS≥2 %93/%12	qSOFA mortalite ve YBsız günleri öngörmede SIRS'tan daha etkin
Freund ve ark. 2017 Fransa, İspanya, Belçika, İsviçre	Klinik+lab+radyoloji ile tanı konan 879 acil servis hastası	Prospektif kohort	qSOFA SOFA SIRS	Hastane içi mortalite	qSOFA=0.80 SOFA=0.77 SIRS=0.65	qSOFA ≥2 %70/%79 SIRS≥2 %93/%27	Acil serviste enfeksiyon şüphesi olan hastalar için qSOFA üstün bir prognostik ölçüt

Churpek ve ark. 2016 ABD	Orjinal Seymour çalışmasıyla aynı kriterlere sahip YB dışı 30677 hasta *Enfeksiyon şüphesi öncesi MV veya vazopresör alan hastalar dışlanmış	Retrospektif kohort	qSOFA SIRS NEWS MEWS	Hastane içi mortalite	qSOFA=0.69 SIRS=0.65 NEWS=0.77 MEWS=0.73	qSOFA≥2 %68.7/%63.5 SIRS≥2 %93.8/%12.3 NEWS≥7 %86.6/%47.5 MEWS≥5 %71.4/%65	Genel erken uyarı skorları hastane içi mortalite ve YB'a yatışı öngörmede qSOFA'dan daha başarılı. qSOFA,kullanımı, mevcut skorların kullanımının yerine geçmemeli
				Mortalite ya da YB yatışı		qSOFA≥2 %68.7/%63.5 SIRS≥2 %93.8/%12.3 NEWS≥7 %86.6/%47.5 MEWS≥5 %71.4/%65	
Singer ve ark. 2016 ABD	IV ab alan 4149 'enfeksiyon şüpheli' acil servis hastası ve 18381 enfeksiyonu olmayan hasta acil servis hastası Toplam 22530 hasta	Retrospektif kohort		Hastane içi mortalite	qSOFA tüm hastalarda=0.76 enf olanlarda=0.75 enf. olmayanlarda=0.70	qSOFA≥2 %71/%74	qSOFA skoru, hem enf şüphesi olan hem de olmayan acil servis hastalarında hastane içi mortalite ve YB yatışı ile ilişkili
				YB yatışı	qSOFA tüm hastalarda=0.61 enf olanlarda=0.68 enf. olmayanlarda=0.58		
Bourboulis ve ark. 2017 Yunanistan	Enfeksiyon tespit edilen YB dışı 3346 hasta ve 1058 YB hastası	Prospektif kohort	qSOFA SOFA	28 günlük mortalite		qSOFA≥2 %60.8/%87.2	qSOFA skor erken risk değerlendirmesinde yetersiz



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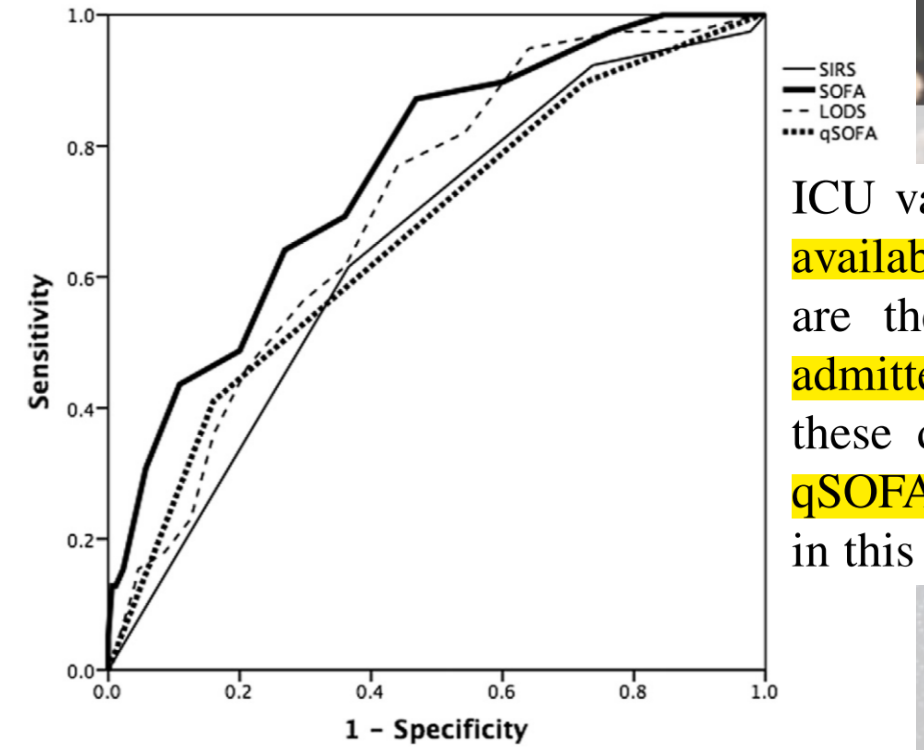
Original Contributions

SEPSIS CLINICAL CRITERIA IN EMERGENCY DEPARTMENT PATIENTS ADMITTED TO AN INTENSIVE CARE UNIT: AN EXTERNAL VALIDATION STUDY OF QUICK SEQUENTIAL ORGAN FAILURE ASSESSMENT

Michael D. April, MD, DPHIL, MSC, Jose Aguirre, MD, Lloyd I. Tannenbaum, MD, Tyler Moore, MD, Alexander Pingree, MD, Robert E. Thaxton, MD, Daniel J. Sessions, MD, and James H. Lantry, MD

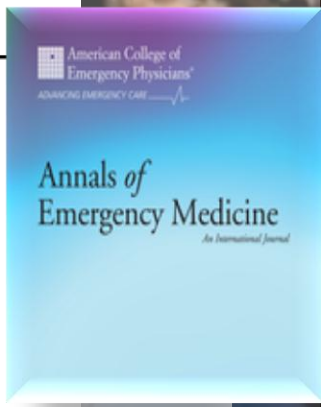
April ve ark. 2016 ABD	Kültür ± Ab, YB'a yatırılan 214 acil servis hastası	Retrospektif kohort	qSOFA SIRS SOFA LODS	Hastane içi mortalite	qSOFA=0.66 SIRS=0.65 SOFA=0.76 LODS=0.70	qSOFA ≥2 %89.7/%27.4 SIRS ≥2 %97.4/%2.3	Sonuçlar SEPSİS-3 kılavuzunda YB hastane içi mortalite sonuçları benzer, acil servisten YB'a yatırılan hastalarda SOFA üstün, eğer hesaplayacak yeterli veri yoksa SIRS veya qSOFA'dan herhangi biri kullanılabilir



ICU validation cohort, if the requisite clinical data are available to calculate a SOFA score, we believe these are the optimal prognostic criteria for ED patients admitted to an ICU with suspected infection. Should these data be unavailable, we believe either SIRS or qSOFA will provide comparable prognostic information in this patient population.

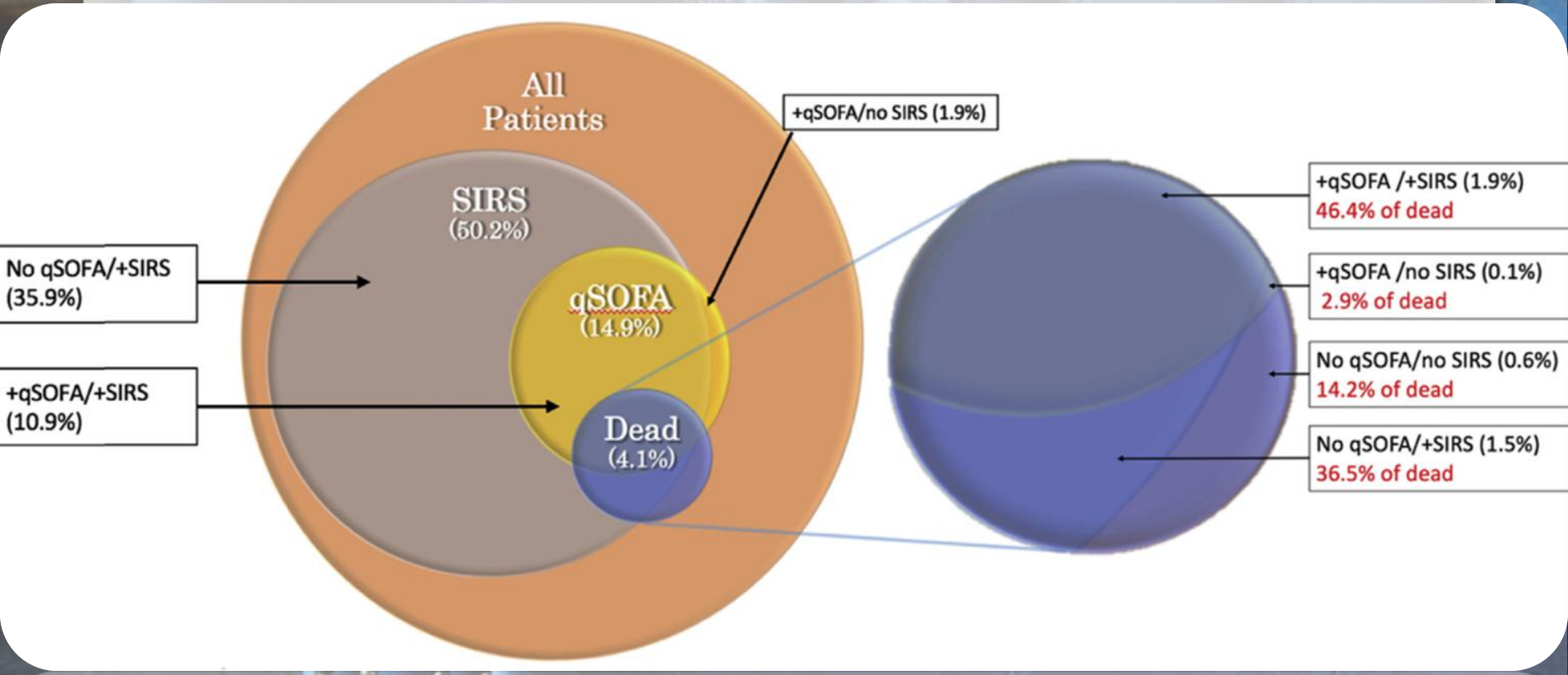
and 0.66 for qSOFA) (15). Thus, the prognostic superiority of qSOFA over SIRS does not appear to hold when applied to the sickest ED patients requiring ICU-level care.

are differentiated into ward vs. ICU patients. It is important for ED providers to know that for the sickest subset of their patients with sepsis, qSOFA may not demonstrate the prognostic superiority as reported by the Sepsis-3 guidelines.

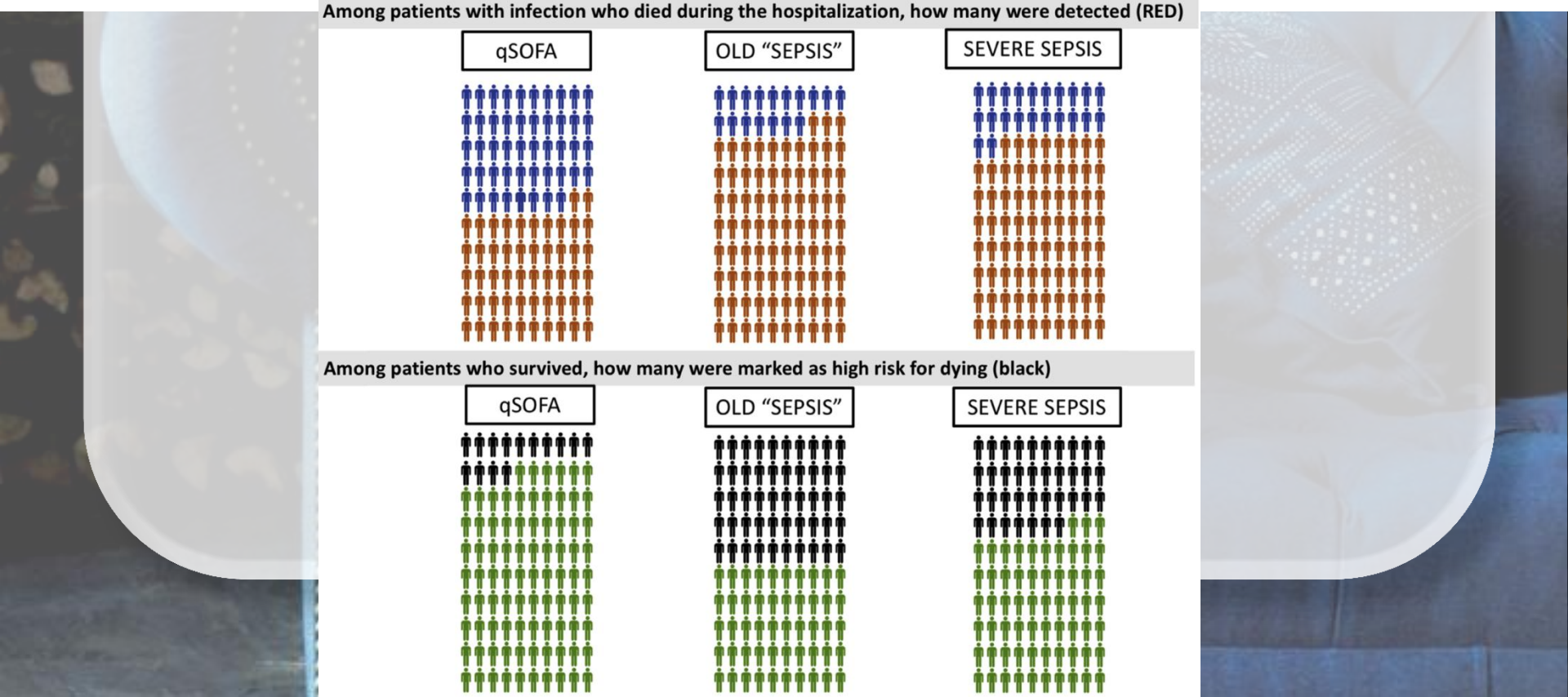


An Emergency Department Validation of the SEP-3 Sepsis and Septic Shock Definitions and Comparison With 1992 Consensus Definitions

Daniel J. Henning, MD; Michael A. Puskarich, MD; Wesley H. Self, MD; Michael D. Howell, MD, MPH; Michael W. Donnino, MD; Donald M. Yealy, MD; Alan E. Jones, MD; Nathan I. Shapiro, MD, MPH*



Population	Total n	Criteria Fulfilled, No. (%)	Mortality, No. (%)	Sens (95% CI), %	Spec (95% CI), %	PPV (95% CI), %	NPV (95% CI), %
qSOFA score ≥2							
Overall	7,637	1,214 (15.9)	172 (14.2)	52 (46–57)	86 (85–87)	14 (13–15)	98 (98-98)
Cohort 1	2,132	314 (14.7)	45 (14.3)	54 (44–65)	87 (85–88)	14 (10–18)	98 (97–99)
Cohort 2	4,618	689 (14.9)	91 (13.5)	47 (40–54)	87 (86–88)	14 (13–15)	97 (97–97)
Cohort 3	887	211 (23.8)	36 (17.1)	63 (51–76)	79 (76–82)	14 (12–16)	97 (96–98)
Sepsis*							
Overall	6,750	3,388 (50.2)	229 (6.8)	83 (79–87)	50 (49–51)	7 (6–8)	96 (96–96)
Cohort 1	2,132	1,064 (49.9)	70 (6.6)	84 (77–92)	52 (41–62)	7 (6–8)	99 (99–99)
Cohort 2	4,618	2,324 (50.3)	159 (6.8)	82 (77–88)	51 (50–53)	7 (6–8)	99 (99–99)
Severe sepsis*							
Overall	6,750	2,241 (33.2)	216 (9.7)	78 (73–83)	64 (63–65)	10 (9–11)	99 (99–99)
Cohort 1	2,132	774 (36.2)	70 (9.0)	84 (77–92)	66 (64–68)	9 (7–11)	99 (99–99)
Cohort 2	4,618	1,467 (31.8)	146 (10.0)	76 (70–82)	70 (69–72)	10 (9–12)	99 (99–99)



Population	Total n	Criteria Fulfilled (%)	Mortality n (%)	Sens (95% CI), %	Spec (95% CI), %	PPV (95% CI), %	NPV (95% CI), %
qSOFA score ≥2	7,637	1,214 (15.9)	172 (14.2)	52 (46–57)	86 (85–87)	14 (13–15)	98 (98–98)
qSOFA ≥2 or lactate >2 mmol/L							
Overall	6,750	2,258 (33.5)	216 (9.6)	78 (77–79)	68 (67–69)	10 (9–11)	99 (99–99)
Cohort 1	2,132	716 (33.6)	67 (9.4)	81 (79–83)	68 (66–70)	9 (8–10)	99 (99–99)
Cohort 2	4,618	1,542 (33.4)	149 (9.7)	77 (76–78)	69 (68–70)	10 (9–11)	99 (99–99)
qSOFA ≥2 or lactate >4 mmol/L							
Overall	6,750	1,159 (17.2)	165 (14.2)	60 (59–61)	85 (84–86)	14 (13–15)	98 (98–98)
Cohort 1	2,132	362 (17.0)	53 (14.6)	64 (62–66)	85 (83–87)	15 (13–17)	98 (97–99)
Cohort 2	4,618	797 (17.3)	112 (14.1)	58 (57–59)	85 (84–86)	14 (13–15)	98 (98–98)

Conclusion: Both the new SEP-3 and original sepsis definitions stratify ED patients at risk for mortality, albeit with differing performances. In terms of mortality prediction, the SEP-3 definitions had improved specificity, but at the cost of sensitivity. Use of either approach requires a clearly intended target: more sensitivity versus specificity. [Ann Emerg Med. 2017;■:1-9.]

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Critical Care

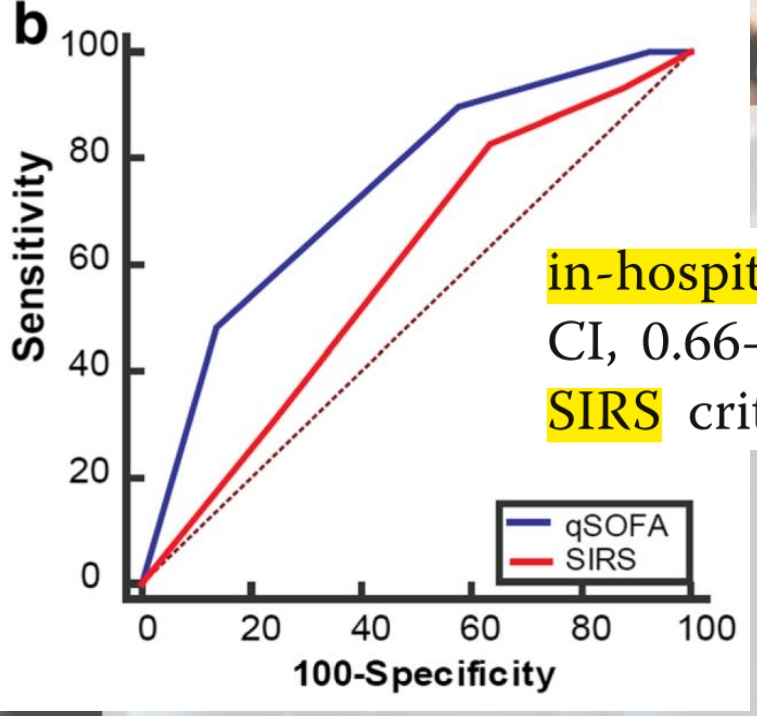
RESEARCH Open Access

Comparison of qSOFA and SIRS for predicting adverse outcomes of patients with suspicion of sepsis outside the intensive care unit

Eli J. Finkelsztein[1], Daniel S. Jones[1], Kevin C. Ma[1], Maria A. Pabón[1], Tatiana Delgado[1], Kiichi Nakahira[1], John E. Arbo[2], David A. Berlin[1], Edward J. Schenck[1], Augustine M. K. Choi[1] and Ilias I. Siempos[1,3,4*]

Finkelsztein ve ark. 2017 ABD	Klinik+lab+radyoloji+ab ile tanı konan YB dışı 152 hasta	Retrospektif kohort	qSOFA SIRS	Hastane içi mortalite	qSOFA=0.74 SIRS=0.59	qSOFA ≥2 %90/%42 SIRS≥2 %93/%12	qSOFA mortalite ve YBsız günleri öngörmede SIRS'tan daha etkin

Assessment of qSOFA and SIRS was done within 8 hours before ICU admission. The maximum score during that time window was recorded. Only acute changes from baseline were taken into account while calculating the scores. For example, a patient with known chronically

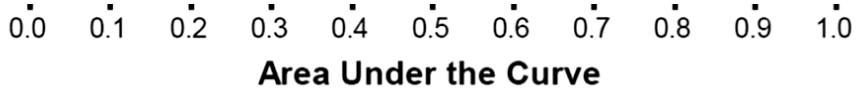


in-hospital mortality using qSOFA (AUC, 0.74; 95% CI, 0.66–0.81) was significantly greater compared with SIRS criteria (AUC, 0.59; 95% CI, 0.51–0.67; $p = 0.03$)

- GKS
- qSOFA ölçüm zamanı

qSOFA (measured in accordance with Seymour and colleagues for altered mentation) (AUC, 0.73; 95% CI, 0.65–0.80) was greater compared with SIRS criteria (AUC, 0.59; 95% CI, 0.51–0.67; $p = 0.046$) [6]. Similarly, the discrimination of in-hospital mortality using qSOFA (AUC, 0.75; 95% CI, 0.67–0.82) was greater compared with SIRS criteria (AUC, 0.58; 95% CI, 0.49–0.66; $p = 0.02$) even when suspicion of infection was defined according to the original qSOFA publication [6].

Finally, the performance of qSOFA to predict mortality was compared with the previous definition of severe sepsis, namely a SIRS score ≥ 2 plus evidence of organ dysfunction or blood lactate level > 2 mmoL/L [16]. The discrimination of in-hospital mortality using qSOFA (AUC, 0.74; 95% CI, 0.66–0.81) was greater compared with the previous definition of severe sepsis (AUC, 0.57; 95% CI, 0.49–0.65; $p = 0.01$).



Research

JAMA The Journal of the American Medical Association

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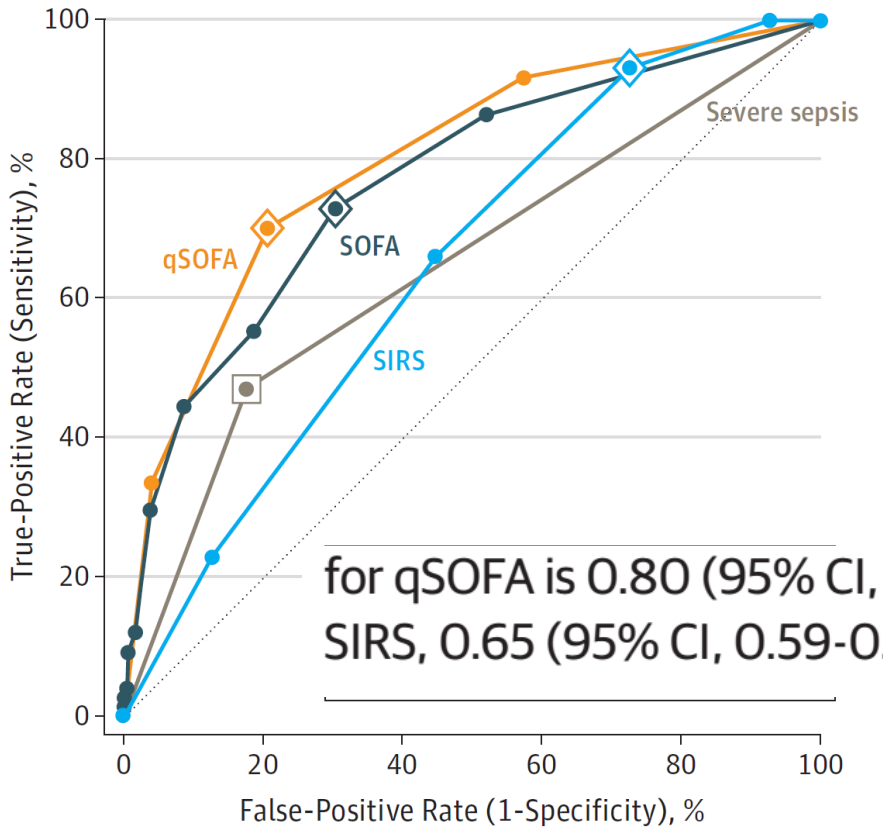
Prognostic Accuracy of Sepsis-3 Criteria for In-Hospital Mortality Among Patients With Suspected Infection Presenting to the Emergency Department

JAMA. 2017;317(3):301-308. doi:10.1001/jama.2016.20329

Yonathan Freund, MD, PhD; Najla Lemachatti, MD; Evguenia Krastinova, MD, PhD; Marie Van Laer, MD; Yann-Erick Claessens, MD, PhD; Aurélie Avondo, MD; Céline Occelli, MD; Anne-Laure Feral-Pierssens, MD; Jennifer Truchot, MD; Mar Ortega, MD; Bruno Carneiro, MD; Julie Pernet, MD; Pierre-Géraud Claret, MD, PhD; Fabrice Dami, MD; Ben Bloom, MD; Bruno Riou, MD, PhD; Sébastien Beaune, MD, PhD; for the French Society of Emergency Medicine Collaborators Group

Freund ve ark. 2017 Fransa, İspanya, Belçika, İsviçre	Klinik+lab+radyoloji ile tanı konan 879 acil servis hastası	Prospektif kohort	qSOFA SOFA SIRS	Hastane içi mortalite	qSOFA=0.80 SOFA=0.77 SIRS=0.65	qSOFA ≥2 %70/%79 SIRS≥2 %93/%27	Acil serviste enfeksiyon şüphesi olan hastalar için qSOFA üstün bir prognostik ölçüt



for qSOFA is 0.80 (95% CI, 0.74-0.85); SOFA, 0.77 (95% CI, 0.71-0.82); SIRS, 0.65 (95% CI, 0.59-0.70); and severe sepsis, 0.65 (95% CI, 0.59-0.70)

The AUROC of blood lactate was 0.70 (95% CI, 0.63-0.77). We found no value in adding lactate to qSOFA for the prediction of in-hospital mortality, with a similar AUROC for both: 0.80 (95% CI, 0.75-0.85) for qSOFA and lactate and 0.80 (95% CI, 0.74-0.85) for qSOFA alone.

AJRCCM 10.1164/rccm.201604-0854OC

THE AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE

qSOFA, SIRS, and early warning scores for detecting clinical deterioration in infected patients outside the ICU

Running title: Sepsis risk prediction outside the ICU

Matthew M Churpek, MD, MPH, PhD[1,2,*]; Ashley Snyder, MPH[1]; Xuan Han, MD[1]; Sarah Sokol, PharmD[3]; Natasha Pettit, PharmD[3]; Michael D. Howell, MD, MPH[1,2]; Dana P Edelson, MD, MS[1,2]

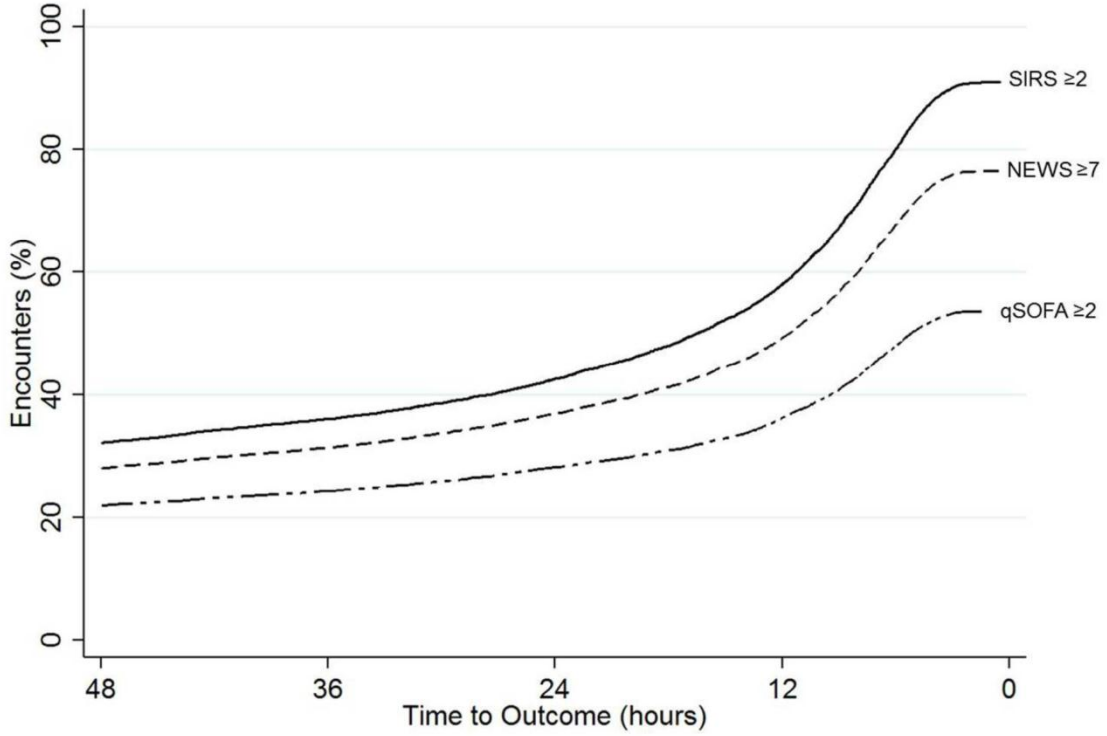
The National Early Warning Score (NEWS).

Physiological parameters	3	2	1	0	1	2	3
Respiration Rate (breaths per minute)	≤8		9–11	12–20		21–24	≥25
S_pO_2 (%)	≤91	92–93	94–95	≥96			
Any supplemental oxygen?		Yes		No			
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	
Systolic BP (mmHg)	≤90	91–100	101–110	111–219			≥220
Heart/pulse rate (beats per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Level of consciousness using the AVPU system				A			V, P or U

	öncesi MV veya vazopresör alan hastalar dışlanmış					NEWS≥7 %86.6/%47.5	yenile geçmemeli

Table 1 Modified Early Warning Score

	3	2	1	0	1	2	3
Systolic Blood pressure (mmHg)	<70	71–80	81–100	101–199		⩾200	
Heart rate (bpm)		<40	41–50	51–100	101–110	111–129	⩾130
Respiratory rate (bpm)		<9		9–14	15–20	21–29	⩾30
Temperature (°C)		<35		35–38.4		⩾38.5	
AVPU score				**A**lert	Reacting to **V**oice	Reacting to **P**ain	**U**nresponsive



Cumulative percentage of patients meeting ≥2 qSOFA criteria, ≥7 NEWS criteria, or ≥2 SIRS criteria in the 48 hours prior to the composite outcome

62% for ≥2 SIRS. The majority of patients met SIRS criteria 17 hours prior to ICU transfer or death, compared to 12 hours for NEWS ≥7, and 5 hours for ≥2 and 17 hours for ≥1 qSOFA criteria (**Figure 2**).

qSOFA, SIRS, and early warning scores for detecting clinical deterioration in infected patients outside the ICU

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above caregiver intuition. Overall, our study provides evidence that hospitals already utilizing the NEWS or MEWS would not benefit from switching to qSOFA for use as an early warning score given the costs and risks of retraining caregivers to use a new scoring system.

Conclusions: Commonly used early warning scores are more accurate than the qSOFA score for predicting death and ICU transfer in non-ICU patients. These results suggest that the qSOFA score should not replace general early warning scores when risk-stratifying patients with suspected infection.

Vincent *et al. Critical Care* (2016) 20:210
DOI 10.1186/s13054-016-1389-z

Critical Care

COMMENTARY Open Access

qSOFA does not replace SIRS in the definition of sepsis

Jean-Louis Vincent[1*], Greg S. Martin[2] and Mitchell M. Levy[3]

We all agree on the fundamental importance of identifying sepsis early and of applying effective and complete treatment to minimize complications. However, the SIRS criteria were to consider transfer to an ICU. Importantly, this approach for this purpose is designed to be an early warning system, and a patient with less than two qSOFA criteria may still raise concern. Clinical judgment should always supersede tools designed to help improve patient care, such as qSOFA.

COMMENTARY Open Access

qSOFA does not replace SIRS in the definition of sepsis

Jean-Louis Vincent[1*], Greg S. Martin[2] and Mitchell M. Levy[3]

We thank Drs Franchini and Duca for their comments. Physicians have long used fever, associated tachycardia and altered white blood cell count as signs of infection ... we have never needed the SIRS criteria to help with this and we don't need the qSOFA for this either. Furthermore, qSOFA does not replace SIRS as a screening tool for sepsis because it was conceived, derived and validated as a prognostic tool. Moreover, sepsis is more often identified from associated unexplained organ dysfunction than from infection [5].

The use of qSOFA as an alarm signal should be further validated, keeping in mind that it is not specific for sepsis. Patients with many other conditions, including

But, it is still important to identify these patients and act quickly, whatever the underlying cause. The best screening tools for sepsis remain within the minds of clinicians, suspecting infection and assessing organ function using an array of criteria that so far have eluded complete description.

qSOFA;

- SIRS'ı yerine mi geldi?
- Tanımlama aracı mı?
- Tarama aracı mı?
- Klinik karar verme aracı mı?

HAYIR

qSOFA;

- Erken uyarı sistemlerinden biri mi?
- Organ disfonksiyonu indikatörü mü?
- Risk belirleme aracı mı?
- Prognostik bir skor mu?

EVET

Beklentiler

- ‘Enfeksiyon şüphesi’ tanımı için netlik….
- Farklı qSOFA ölçüm zaman aralıkları….
- Antibiyotik alan, RSI veya sedasyon uygulanan, entübe gelen hastalarda durum…
- Akut ve kronik organ disfonksiyonu ayrımı…
- Öngördürme etkinliğini arttıracak parametreler; laktat, pH….


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