# Kronik Yaralı Hastaların Komorbiditeleri-Ortak Özellikleri ve Takibi

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İç Hastalıkları-Endokrinoloji ve Metabolizma Bilim Dalı

Kronik yara nadiren tek başına görülen değişik komorbiditelerin sıklıkla birlikte eşlik ettiği ve etyolojide rol oynadığı bir klinik antitedir

Kronik yaralı hastalarda komorbiditeler sıklıkla ileri aşamadadır. Bu prognoz ve tedavi seçimleri açısından önemlidir.

Aetiology, comorbidities and cofactors of chronic leg ulcers: retrospective evaluation of 1 000 patients from 10 specialised dermatological wound care centers in Germany

**Table 1** Diagnostic criteria for ulcer entity

| Ulcer entity | Diagnostic basic criteria |
|---|---|
| Venous | Clinical presentation and ultrasound/duplex diagnostic |
| Arterial | Ankle-brachial index (ABI) |
| Vasculitis | Histopathologic results from biopsies |
| Post-traumatic | Anamnesis |
| Pyoderma gangraenosum | Diagnosis of exclusion with typical clinical appearance + biopsy |
| Lymphoedema | Clinical appearance |
| Neoplasm | Histopathologic results from biopsies |
| Post-surgery | Anamnesis |

**Table 2** Aetiology of chronic leg ulcers in Germany

| Aetiology | Incidence (absolute) | Incidence (%) |
|---|---|---|
| Venous leg ulcer | 513 | 51·3 |
| Mixed leg ulcer | 129 | 12·9 |
| Arterial leg ulcer | 110 | 11·0 |
| Vasculitis | 45 | 4·5 |
| Post-traumatic ulcer | 32 | 3·2 |
| Pyoderma gangrenosum | 28 | 2·8 |
| Lymphoedema | 17 | 1·7 |
| Neoplasms | 10 | 1·0 |
| Post-surgical ulcer | 6 | 0·6 |
| Unclear | 110 | 11·0 |
| Total | 1 000 | 100 |

Int Wound J. 2016 Oct; 13(5): 821–828.

**Table 3** Comorbidities and chronic leg ulcers

| Num-bers | Cofactors | Incidence (absolute) | Incidence (%) |
|---|---|---|---|
| 1 | Hypertension | 255 | 25·5 |
| | Obesity | 39 | 3·9 |
| | NIDDM | 25 | 2·5 |
| | Dyslipidaemia | 13 | 1·3 |
| 2 | Hypertension, obesity | 127 | 12·7 |
| | Hypertension, NIDDM | 86 | 8·6 |
| | Hypertension, dyslipidaemia | 53 | 5·3 |
| | Obesity, NIDDM | 12 | 1·2 |
| | Obesity, dyslipidaemia | 6 | 0·6 |
| | Dyslipidaemia, NIDDM | 1 | 0·1 |
| 3 | Hypertension, obesity, NIDDM | 77 | 7·7 |
| | Hypertension, obesity, dyslipidaemia | 36 | 3·6 |
| | Hypertension, dyslipidaemia, NIDDM | 31 | 3·1 |
| 4 | Hypertension, NIDDM, obesity, Dyslipidaemia | 40 | 4·0 |
| 0 | No relevant cofactors | 199 | 19·9 |
| | Total | 1 000 | 100·0 |

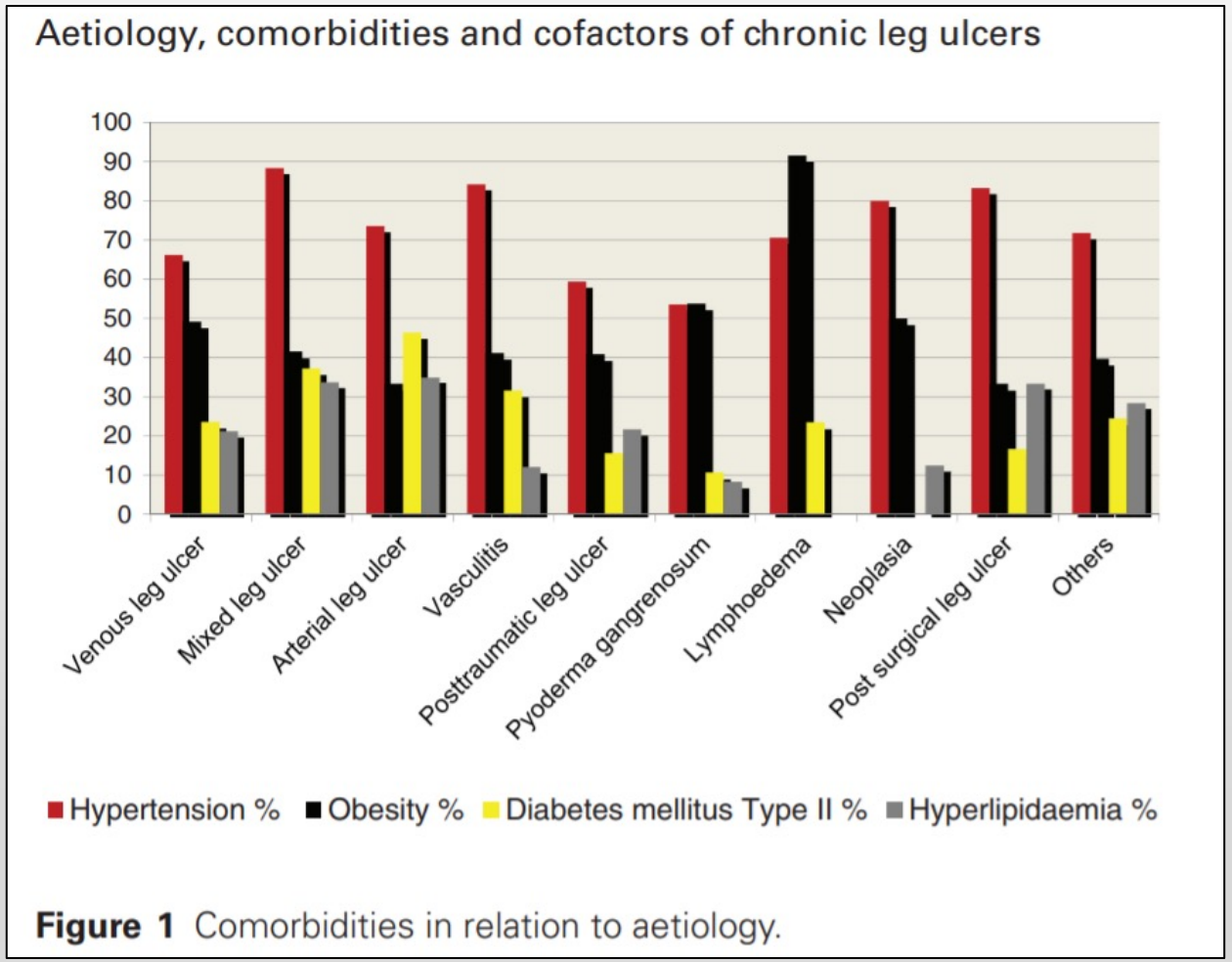
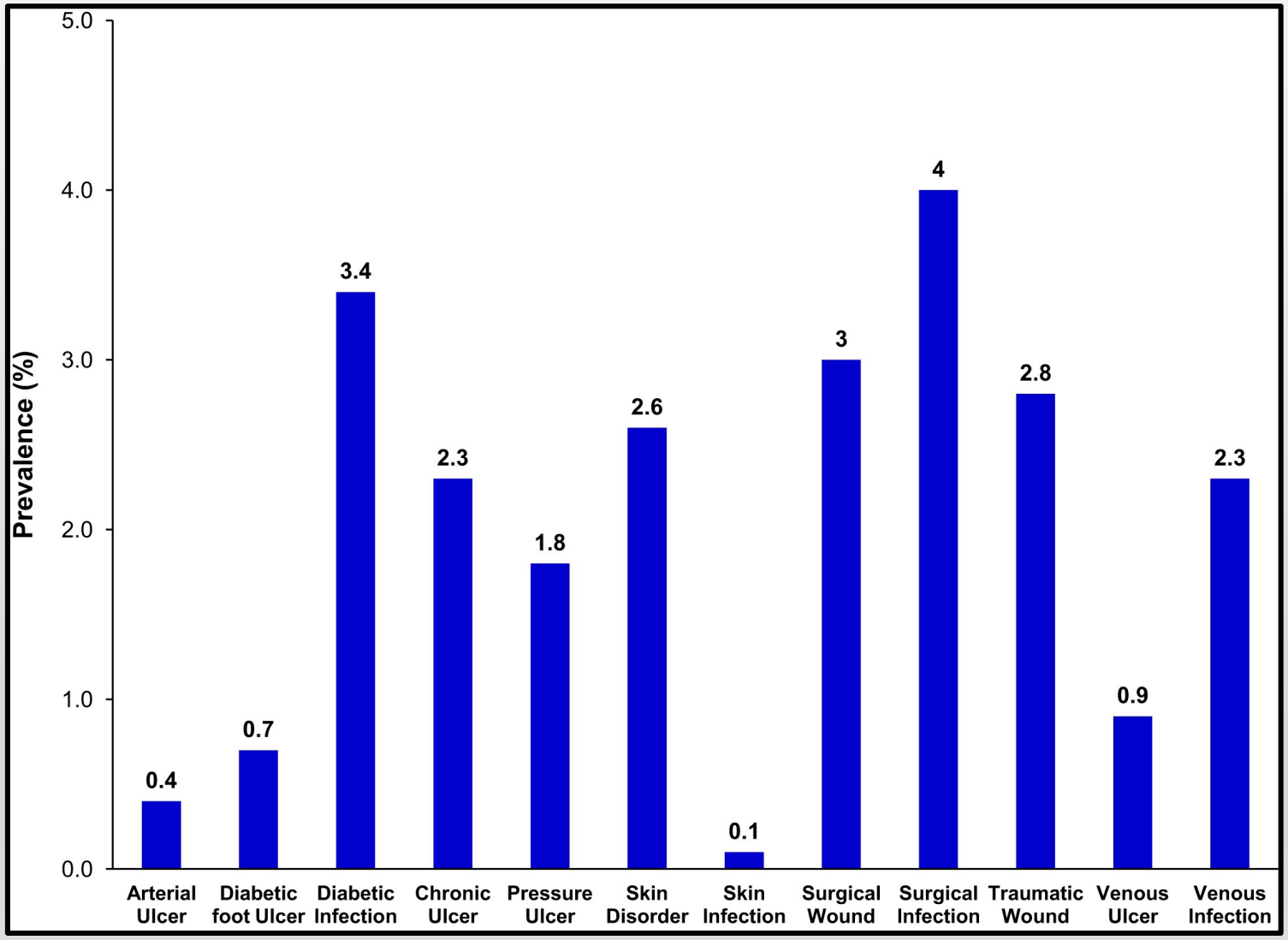



**Figure 1** Comorbidities in relation to aetiology.

Int Wound J. 2016 Oct; 13(5): 821–828.




Prevalence of wound types in the Medicare population based on 2014 claims data.

An economic evaluation of the impact, cost, and Medicare policy implications of chronic nonhealing wounds. Value Health 2018; 21: 27-32.

Kronik yara için en önemli risk faktörlerinden biri yaştır.

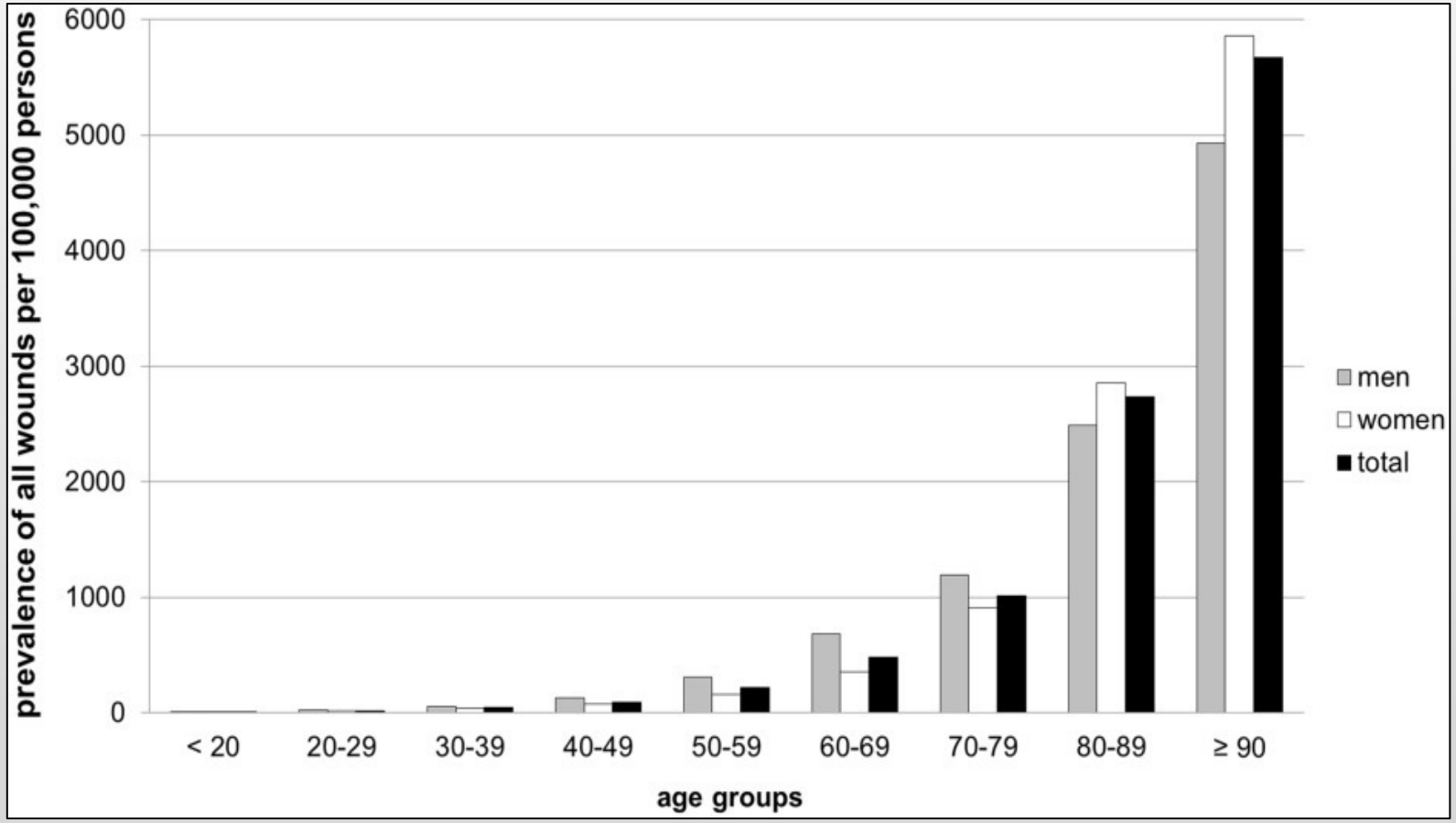
**Table 1 – Prevalence of wounds (%) in the Medicare population in 2014 by type of wound and beneficiary demographics*.**

| Beneficiary demographics | Venous (Infections) | Pressure ulcer | Chronic ulcer | Surgical wounds (Infections) | Skin disorders (Infections) | Traumatic wounds | Arterial ulcer | Diabetic foot ulcer (Infections) | All wounds |
|---|---|---|---|---|---|---|---|---|---|
| Male | | | | | | | | | |
| < 65 years | 0.6 (2.3) | 1.4 | 2.2 | 3.5 (4.4) | 1.7 (0.03) | 2.6 | 0.4 | 1.1 (3.2) | 12.5 |
| 65–74 years | 0.6 (1.6) | 0.9 | 1.5 | 2.6 (3.1) | 2.1 (0.05) | 2.0 | 0.3 | 0.7 (2.4) | 11.0 |
| ≥ 75 years | 1.3 (3.0) | 3.3 | 3.5 | 3.8 (4.8) | 3.5 (0.13) | 4.1 | 0.7 | 1.0 (4.6) | 19.6 |
| Female | | | | | | | | | |
| < 65 years | 0.6 (2.3) | 1.1 | 1.6 | 3.4 (5.0) | 2.4 (0.04) | 2.4 | 0.3 | 0.7 (3.1) | 13.4 |
| 65–74 years | 0.8 (1.7) | 0.9 | 1.4 | 2.5 (3.3) | 2.5 (0.05) | 1.8 | 0.2 | 0.4 (2.5) | 11.7 |
| ≥ 75 years | 1.4 (3.2) | 3.6 | 3.7 | 3.1 (4.6) | 3.4 (0.08) | 3.9 | 0.6 | 0.7 (5.1) | 19.7 |
| All Medicare beneficiaries | 0.9 (2.3) | 1.8 | 2.3 | 3.0 (4.0) | 2.6 (0.07) | 2.7 | 0.4 | 0.7 (3.4) | 14.5 |

* Figures in parentheses represent prevalence of infections for types of wounds. Beneficiaries with multiple types of wounds are counted in each group.

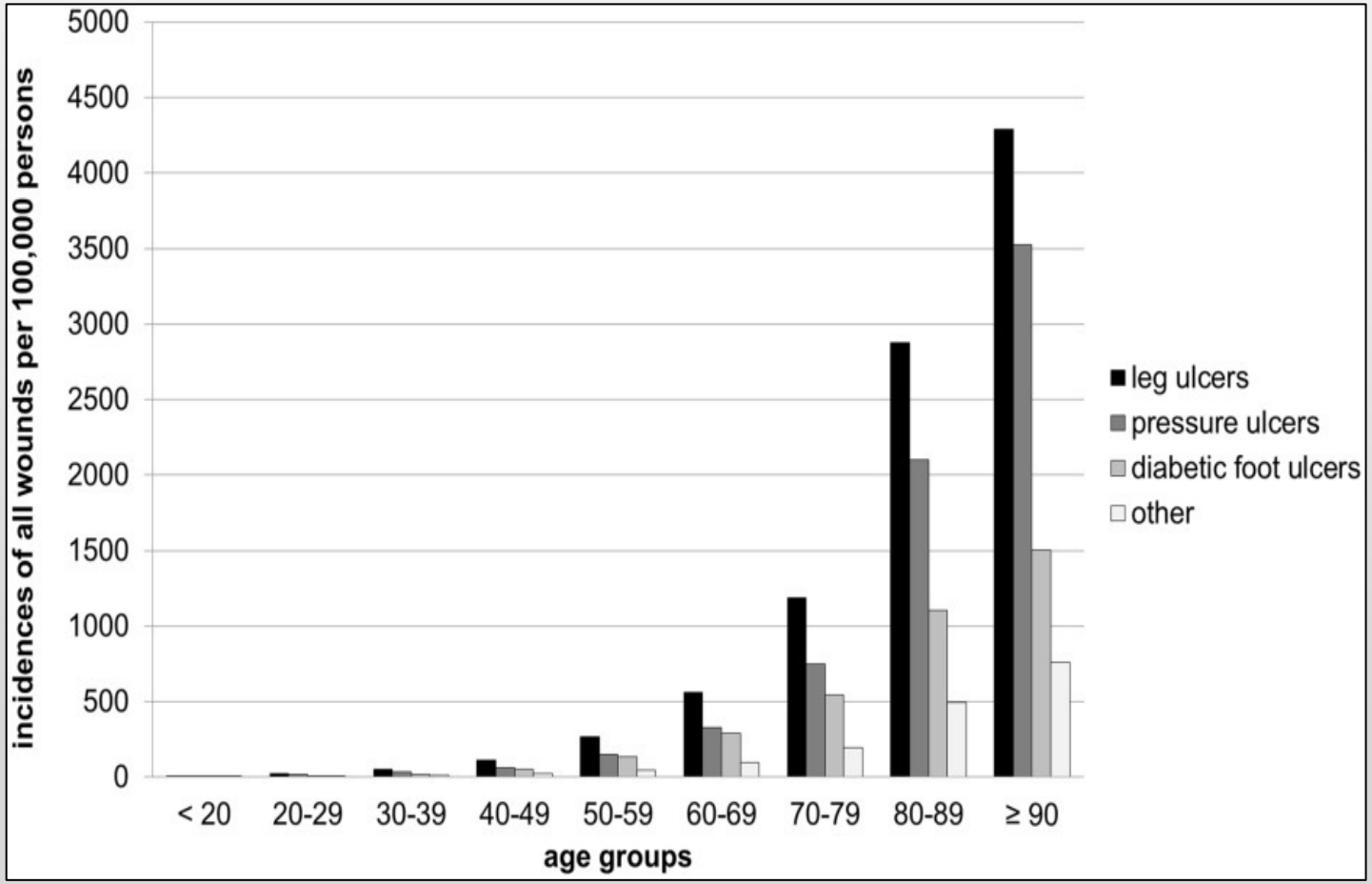
An economic evaluation of the impact, cost, and Medicare policy implications of chronic nonhealing wounds. Value Health 2018; 21: 27-32.

# Epidemiology of chronic wounds in Germany: Analysis of statutory health insurance data




Wound Repair Regeneration, Volume: 24, Issue: 2, Pages: 434-442, First published: 26 November 2015, DOI: (10.1111/wrr.12387)

# Epidemiology of chronic wounds in Germany: Analysis of statutory health insurance data




Wound Repair Regeneration, Volume: 24, Issue: 2, Pages: 434-442, First published: 26 November 2015, DOI: (10.1111/wrr.12387)

Kronik yara ekonomik yükü yüksek bir durumdur.

# Health economic burden that wounds impose on the National Health Service in the UK

BMJ Open 2015;5:e009283.

**Table 3** Percentage of patients who utilised resources in the study year

| Resource | Percentage of patients | | p Value |
|---|---|---|---|
| | Cases (%) | Controls (%) | |
| GP visits | 86 | 47 | <0.001 |
| Practice nurse visits | 72 | 29 | <0.001 |
| Community nurse visits | 75 | 2 | <0.001 |
| Specialist nurse visits | 2 | <1 | ns |
| Allied healthcare visits | 14 | 3 | 0.005 |
| Hospital outpatient visits | 53 | 18 | <0.001 |
| Hospital admissions and day cases | 29 | 6 | <0.001 |
| Ambulance services | <1 | <1 | ns |
| Accident and emergency attendances | <1 | <1 | ns |
| Diagnostic tests | 80 | 45 | <0.001 |
| Non-wound care devices | 36 | 5 | <0.001 |
| Wound care products | 100 | 0 | <0.001 |
| Prescriptions for individual drugs | 98 | 72 | <0.001 |

GP, general practitioner.

**Table 5** Annual cost of NHS resource use attributable to managing 2.2 million patients with a wound and 2.2 million matched controls

| Resource | Annual cost | | |
|---|---|---|---|
| | Cases | Controls | Difference |
| GP visits | £514 993 223 | £145 951 520 | £369 041 702 |
| Practice nurse visits | £256 760 021 | £15 396 180 | £241 363 841 |
| Community nurse visits | £682 382 518 | £3 026 353 | £679 356 166 |
| Specialist nurse visits | £3 650 732 | £322 189 | £3 328 543 |
| Allied healthcare visits | £34 451 980 | £4 859 496 | £29 592 485 |
| Hospital outpatient visits | £515 002 111 | £99 947 406 | £415 054 705 |
| Hospital admissions and day cases | £1 334 299 309 | £135 277 073 | £1 199 022 237 |
| Ambulance services | £2 555 290 | £511 058 | £2 044 232 |
| Accident and emergency attendances | £666 597 | £666 597 | £0 |
| Diagnostic tests | £282 646 224 | £113 238 466 | £169 407 758 |
| Devices | £282 261 975 | £17 525 292 | £264 736 682 |
| Wound care products | £742 703 819 | £0 | £742 703 819 |
| Prescriptions for individual drugs | £1390 246 214 | £188 175 050 | £1 202 071 164 |
| TOTAL | £6 042 620 014 | £724 896 679 | £5 317 723 335 |

GP, general practitioner; NHS, National Health Service.

Kronik yara mortalitesi yüksek bir durumdur.

Long-term Mortality among Patients with Chronic Ulcers

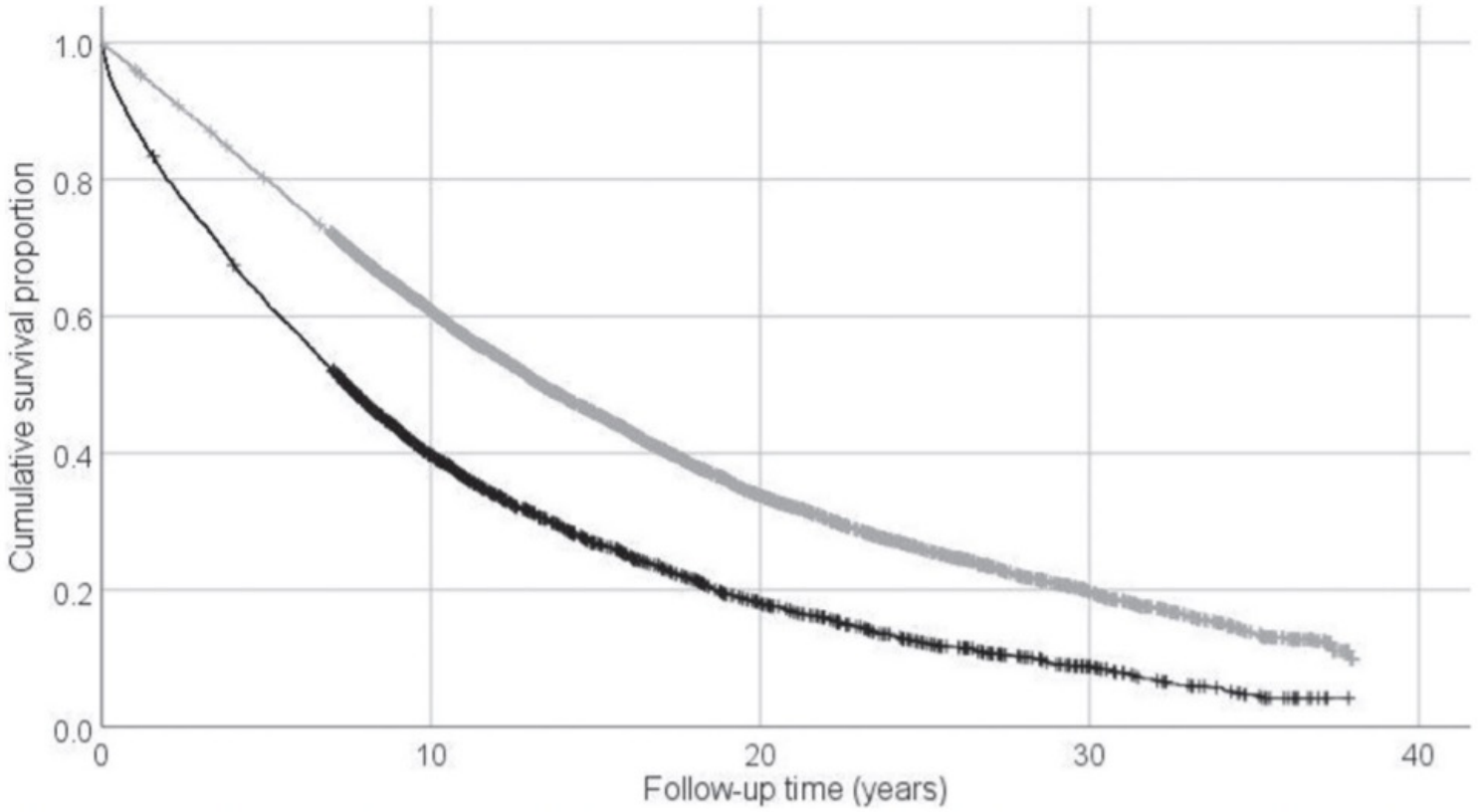



**Fig. 1. Kaplan–Meier method demonstrating the mortality of patients with chronic ulcers (*black line*) compared with the mortality of their reference group (*grey line*) during follow-up.**

Acta Derm Venereol 2021; 101: adv00455.

**Table III. Overall mortality hazard ratios (HR) of patients with chronic ulcers compared with the reference group according to ulcer aetiology**

| Ulcer diagnosis[a] | Patients *n* | Deaths *n* | HR | 95% CI |
|---|---|---|---|---|
| Arterial leg ulcer | 395 | 375 | 2.85 | 2.52–3.23 |
| Atypical ulcer[b] | 294 | 195 | 2.19 | 1.84–2.61 |
| Mixed leg ulcer | 99 | 91 | 2.03 | 1.59–2.60 |
| Venous leg ulcer | 1,924 | 1,526 | 1.49 | 1.41–1.59 |

[a]Including patients having ulcers of only 1 aetiology during follow-up. [b]Vasculitis, pyoderma gangraenosum, malignant, rheumatoid or calciphylaxis.
95% CI: 95% confidence interval.

Acta Derm Venereol 2021; 101: adv00455.

**Table II. Overall mortality risk and the most common underlying causes of death with respective hazard ratios (HR) and subdistribution hazard ratios (SHR) among patients with chronic ulcers compared with the reference group**

| | Number of deaths | | | | | |
|---|---|---|---|---|---|---|
| | Patients *n* | References *n* | HR | 95% CI | SHR | 95% CI |
| Overall | 2,801 | 6,615 | 1.74 | 1.66–1.82 | – | – |
| Diabetes[a] | 116 | 50 | 8.98 | 6.44–12.52 | 7.01 | 5.03–9.76 |
| Digestive diseases[b] | 110 | 180 | 2.50 | 1.97–3.17 | 1.82 | 1.44–2.31 |
| Pneumonia | 95 | 190 | 2.01 | 1.57–2.58 | 1.49 | 1.16–1.90 |
| Ischaemic heart diseases | 772 | 1,727 | 1.80 | 1.66–1.97 | 1.40 | 1.28–1.52 |
| Cerebrovascular diseases | 282 | 739 | 1.55 | 1.36–1.78 | 1.14 | 0.99–1.31 |
| Malignancies | 345 | 1,139 | 1.23 | 1.09–1.39 | 0.90 | 0.80–1.01 |
| Dementia | 214 | 940 | 0.99 | 0.85–1.15 | 0.66 | 0.57–0.77 |

[a]Including all types of diabetes. [b]Excluding alcohol-related diseases.
95% CI: 95% confidence interval.

Acta Derm Venereol 2021; 101: adv00455.

**Table IV. Mortality risk associated with the most common underlying and selected immediate causes of death among patients with venous and arterial leg ulcers compared with the reference group**

| | Patients with arterial leg ulcers[a] $n = 395$ | | Patients with venous leg ulcers[a] $n = 1,924$ | |
|---|---|---|---|---|
| | HR | 95% CI | HR | 95% CI |
| Underlying cause of death | | | | |
| Diabetes | 18.12 | 7.72–42.49 | 5.81 | 3.80–8.89 |
| Digestive diseases[b] | 3.92 | 2.02–7.59 | 2.23 | 1.63–3.04 |
| Ischaemic heart diseases | 3.90 | 3.14–4.84 | 1.38 | 1.23–1.56 |
| Pneumonia | 2.15 | 1.04–4.47 | 1.97 | 1.44–2.71 |
| Immediate cause of death | | | | |
| Sepsis | 5.98 | 2.30–15.60 | 4.53 | 2.68–7.65 |
| Pneumonia | 2.79 | 2.06–3.79 | 1.42 | 1.22–1.66 |

[a]Including patients having ulcers of only one aetiology during follow-up. [b]Excluding alcohol-related diseases.
HR: hazard ratio; mortality risk of patients with ulcers; 95% CI: confidence interval.

Acta Derm Venereol 2021; 101: adv00455.

# Diyabetik ülserler

ANNALS OF MEDICINE, 2017
VOL. 49, NO. 2, 106–116
http://dx.doi.org/10.1080/07853890.2016.1231932

Taylor & Francis
Taylor & Francis Group

REVIEW ARTICLE

# Global epidemiology of diabetic foot ulceration: a systematic review and meta-analysis†

Global prevalence 6.3%
North America 13.0%
Asia 5.5%
Europe 5.1%
Africa 7.2%
Oceania 3%

**Table 1.** Prevalence of diabetic foot ulcer in each country.

| Country | No. of studies | Prevalence | 95%CI | $I^2$ |
|---|---|---|---|---|
| Belgium | 1 | 16.6 | 10.7–22.4 | NA |
| Canada | 1 | 14.8 | 9.4–20.1 | NA |
| USA | 3 | 13 | 8.3–17.7 | 98 |
| Trinidad | 1 | 12.2 | 10.8–13.6 | NA |
| India | 2 | 11.6 | 6.4–16.8 | 90.8 |
| Norway | 1 | 10.4 | 8.8–11.9 | NA |
| Cameroon | 3 | 9.9 | 6.3–13.5 | 86.6 |
| Italy | 1 | 9.7 | 7.8–11.6 | NA |
| Thailand | 2 | 8.8 | 1.7–15.9 | 95 |
| Iran | 2 | 8.1 | 0.1–16.1 | 94.9 |
| Denmark | 1 | 7.8 | 5.6–10.1 | NA |
| Pakistan | 4 | 7.4 | 0.5–14.3 | 99 |
| Tanzania | 2 | 7.3 | 2.1–12.6 | 83.4 |
| Pacific island countries | 1 | 6.8 | 4.5–9.0 | NA |
| UK | 4 | 6.3 | 4.6–8.0 | 79.8 |
| Egypt | 2 | 6.2 | 4.1–8.2 | 49.8 |
| Bahrain | 1 | 5.9 | 4.7–7.1 | NA |
| South Africa | 2 | 5.8 | 3.8–7.9 | 0 |
| France | 1 | 5.6 | 2.4–8.7 | NA |
| Greece | 1 | 4.8 | 3.3–6.2 | NA |
| Jordan | 2 | 4.2 | 3.4–5.1 | 0 |
| China | 10 | 4.1 | 3.1–5.2 | 97.4 |
| Uganda | 1 | 4 | 1.6–6.4 | NA |
| Ireland | 1 | 3.9 | 2.3–5.5 | NA |
| Turkey | 1 | 3.1 | 1.9–4.3 | NA |
| Spain | 5 | 3 | 1.9–4.4 | 97 |
| Germany | 2 | 2.8 | 2.4–3.3 | 0 |
| Saudi Arabia | 1 | 2.3 | 2.2–2.4 | NA |
| Japan | 1 | 2 | 1.4–2.6 | NA |
| Netherland | 2 | 1.8 | 1.0–2.6 | 0 |
| Korea | 2 | 1.7 | 0.6–2.9 | 85.1 |
| Poland | 1 | 1.7 | 1.1–2.3 | NA |
| Australia | 2 | 1.5 | 0.7–2.4 | 58.1 |

NA: not available.

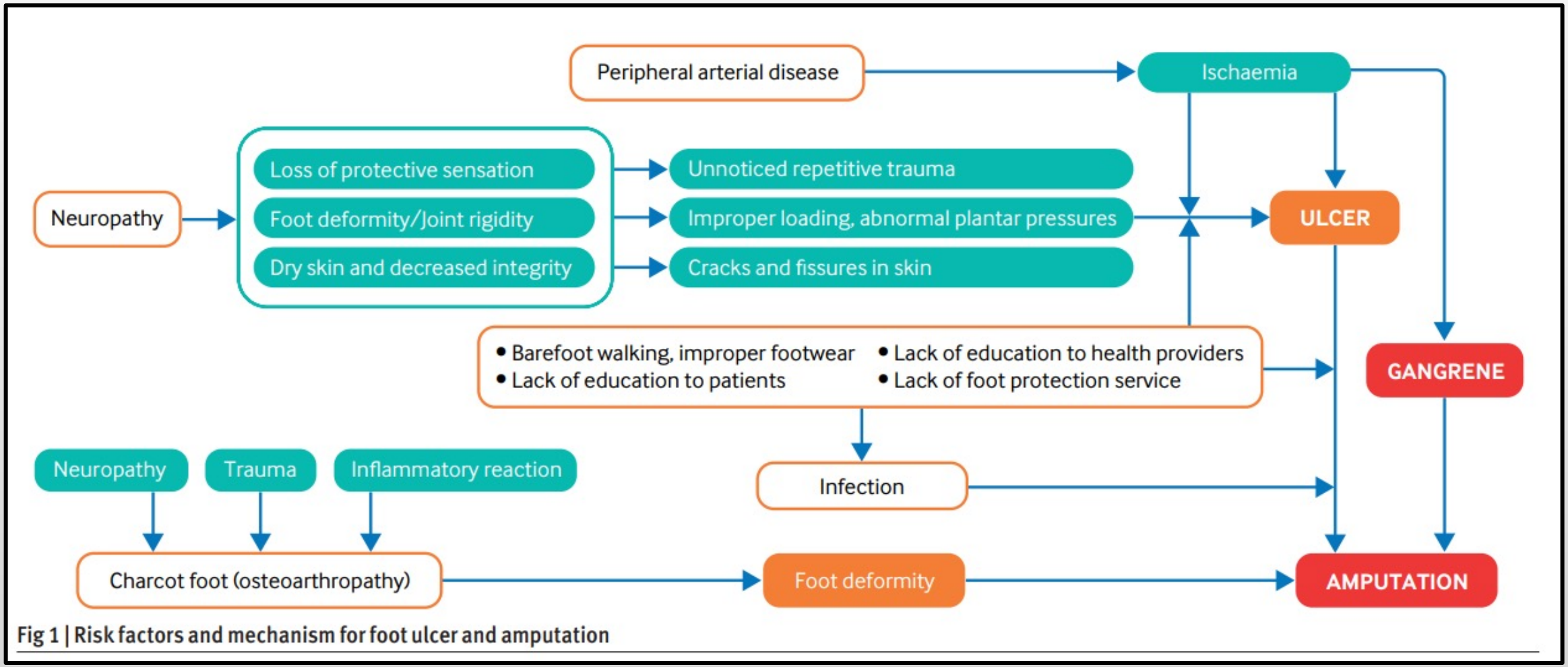



**Fig 1 | Risk factors and mechanism for foot ulcer and amputation**

BMJ 2017;359:Supp 1

Diyabetik ülserlerde ampütasyon sıklığı 0.03% and 1.5% arasındadır.

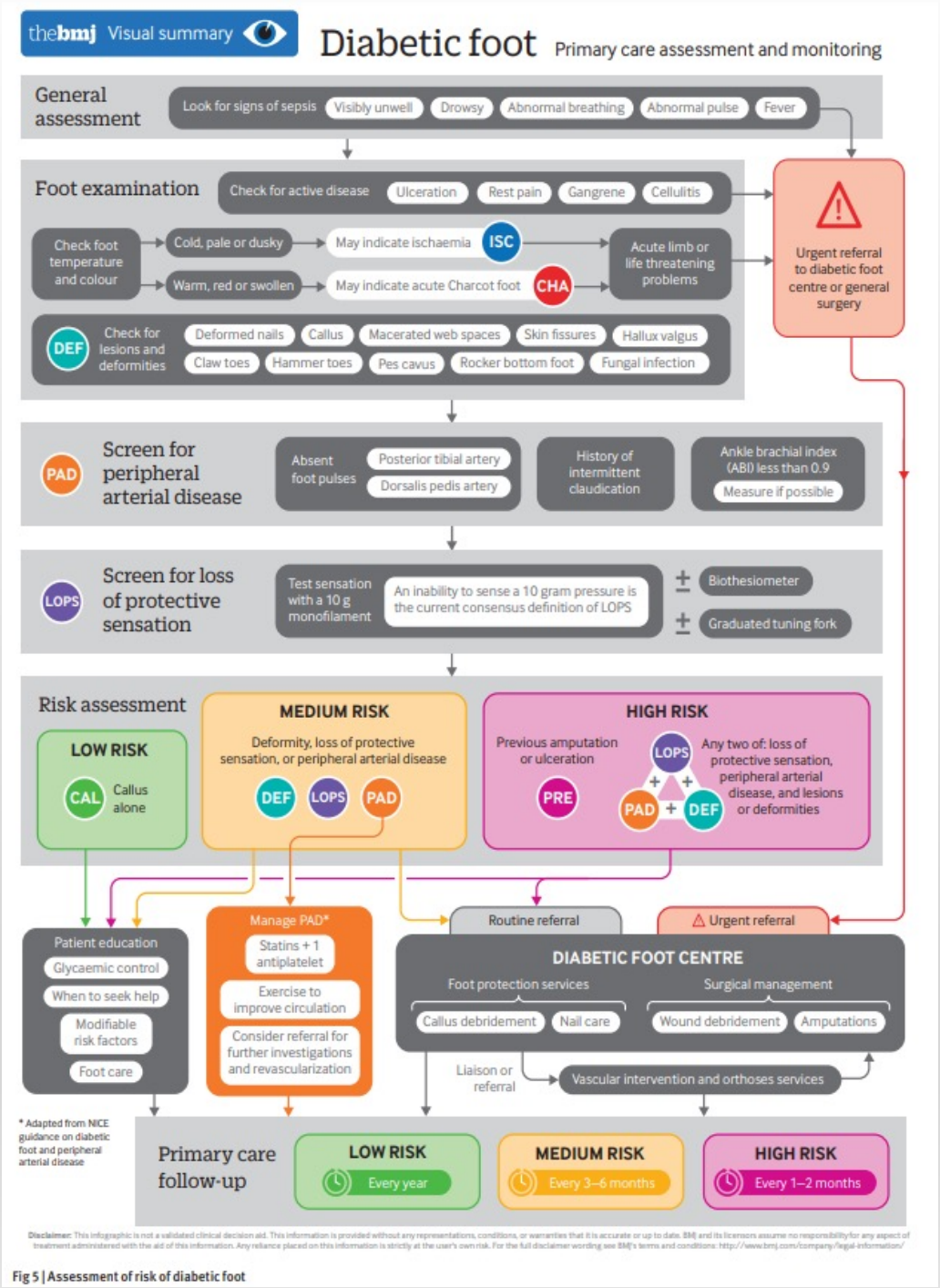
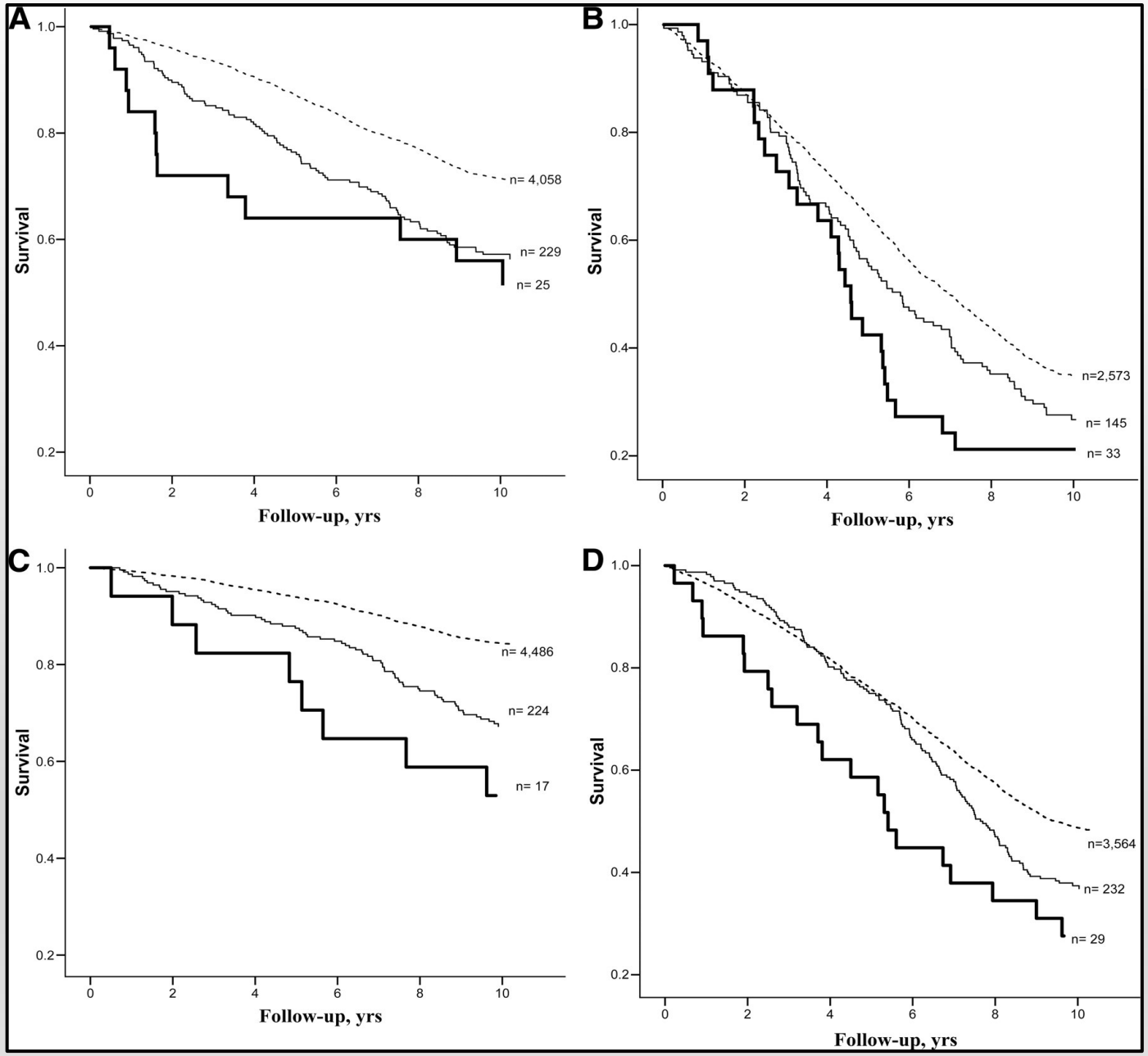



Fig 5 | Assessment of risk of diabetic foot

BMJ 2017;359:Supp 1

# History of Foot Ulcer Increases Mortality Among ~~Individuals With~~ DiabetesTen-year follow-up of the Nord-Trøndelag Health Study, Norway




Kaplan-Meier survival curves (all-cause mortality) comparing nondiabetes, diabetes, and diabetes with an HFU subgroups by sex and age. Dotted line, nondiabetes; thin line, diabetes without an HFU; thick line, diabetes with an HFU. A: Estimates for men aged 65–74 years. B: Estimates for men aged ≥75 years. C: Estimates for women aged 65–74 years. D: Estimates for women aged ≥75 years.

Diabetes Care. 2009;32(12):2193-2199. doi:10.2337/dc09-0651

# Diyabetik ülserlerde glisemik kontrol önemli midir?

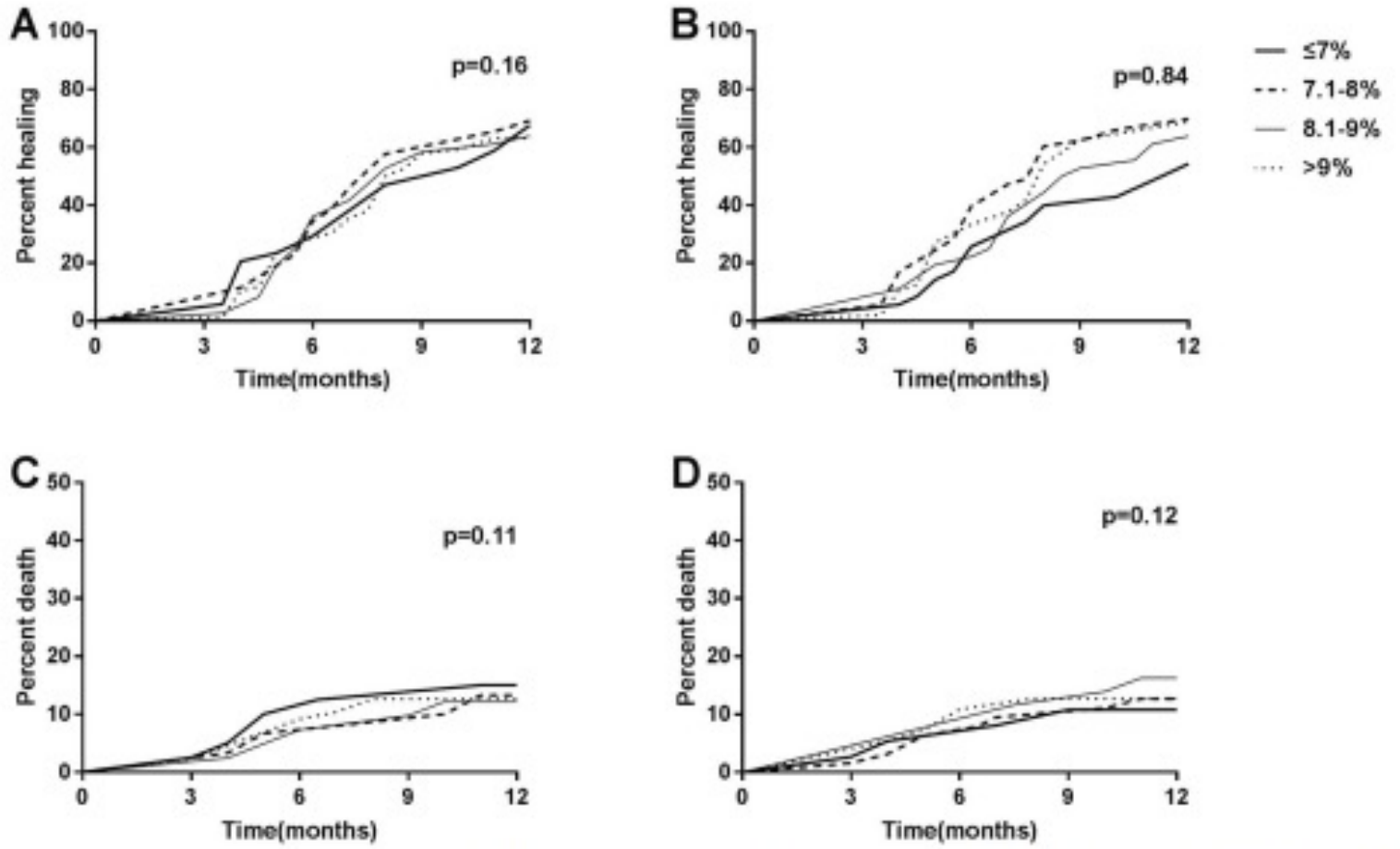



**Fig. 1** Kaplan–Meier curves of ulcer healing among different **a** baseline HbA1c groups or **b** groups stratified by mean HbA1c during treatment. Kaplan–Meier curves of death among different **c** baseline HbA1c groups or **d** groups stratified by mean HbA1c during treatment. HbA1c measurements were categorized as quartiles ($\leq$ 7.0%, 7.1–8.0%, 8.1–9.0%, > 9.0%). Thick solid line, HbA1c $\leq$ 7.0%. Dashed line, HbA1c 7.1–8.0%. Thin solid line, HbA1c 8.1–9.0%. Dotted line, HbA1c > 9.0%. Log-rank test was used to make comparisons of ulcer healing and death among different groups stratified by baseline HbA1c or mean HbA1c during treatment

Diabetes Ther (2019) 10:95–105
https://doi.org/10.1007/s13300-018-0536-8

ORIGINAL RESEARCH

**Reasonable Glycemic Control Would Help Wound Healing During the Treatment of Diabetic Foot Ulcers**

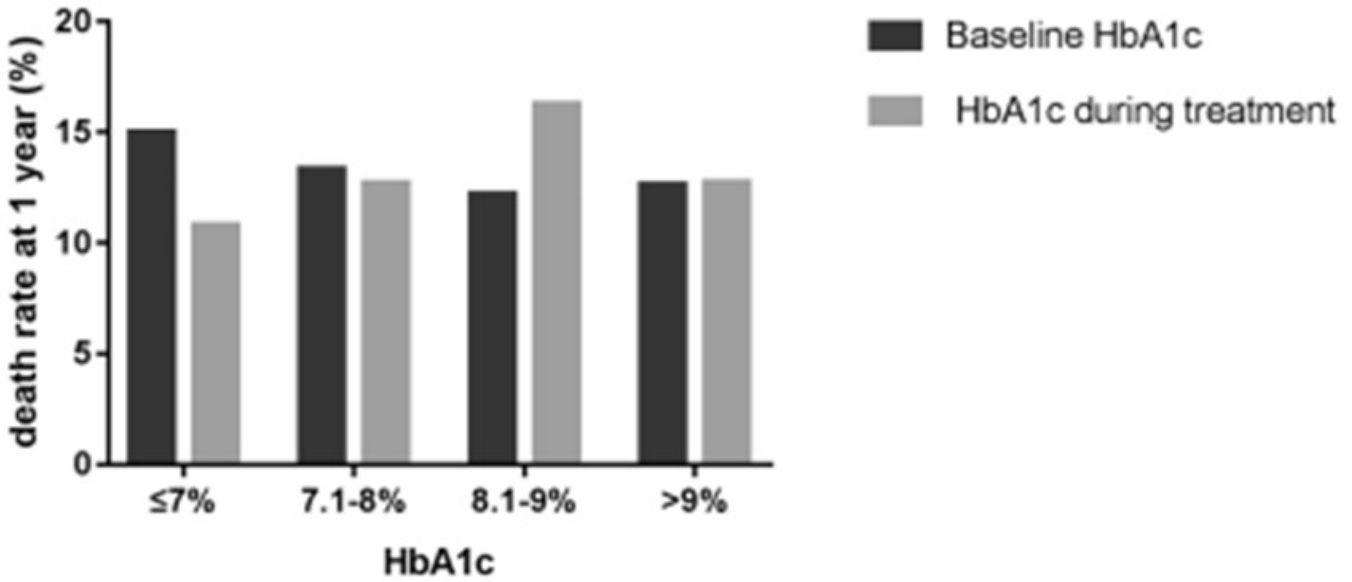



**Fig. 2** 1-year accumulated death rate of patients with DFU at different glycemic level. Dark gray, groups stratified by baseline HbA1c. Light gray, groups stratified by mean HbA1c during treatment

Diabetes Ther (2019) 10:95–105
https://doi.org/10.1007/s13300-018-0536-8

CrossMark

ORIGINAL RESEARCH

**Reasonable Glycemic Control Would Help Wound Healing During the Treatment of Diabetic Foot Ulcers**

# Association of Hemoglobin $A_{1c}$ and Wound Healing in Diabetic Foot Ulcers

*Diabetes Care 2018;41:1478–1485 | https://doi.org/10.2337/dc17-1683*

There does not appear to be a clinically meaningful association between baseline or prospective A1C and wound healing in patients with DFUs.

**Table 1—Baseline characteristics of wounds by wound outcome**

| Characteristics | One wound per participant (random) Not healed ($n$ = 68) | Healed ($n$ = 202) | All ($N$ = 270) | $P$ value* |
|---|---|---|---|---|
| Time to wound outcome, days | 98 (82) | 84 (130) | 91 (121) | 0.89 |
| Sex, % | | | | 0.22 |
| Female | 47.1 | 38.6 | 40.7 | |
| Male | 52.9 | 61.4 | 59.3 | |
| Age, years | 60.7 ± 12.4 | 57.4 ± 11.0 | 58.3 ± 11.4 | **0.04** |
| Race, %† | | | | 0.14 |
| White/Caucasian | 43.3 | 30.2 | 33.4 | |
| Black | 53.7 | 66.8 | 63.6 | |
| Other | 3.0 | 3.0 | 3.0 | |
| BMI, kg/m$^2$‡ | 29.6 (12.8) | 31.7 (10.5) | 31.1 (10.9) | 0.58 |
| Diabetes type, % | | | | 0.89 |
| Type 1 | 5.9 | 5.4 | 5.6 | |
| Type 2 | 94.4 | 94.6 | 94.4 | |
| Diabetes duration, years | 15.2 (11.5) | 16.1 (14.2) | 15.7 (12.9) | 0.81 |
| Baseline A1C, % | 7.8 (3.6) | 8.3 (3.5) | 8.1 (3.5) | 0.79 |
| Nadir A1C, % | 7.0 (2.2) | 7.1 (2.2) | 7.1 (2.2) | 0.33 |
| Mean A1C, % | 7.5 (2.8) | 7.8 (2.8) | 7.7 (2.9) | 0.35 |
| Nadir A1C change from baseline | −0.5 (2.2) | −0.5 (1.5) | −0.5 (1.7) | 0.41 |
| Mean A1C change from baseline | −0.2 (1.2) | −0.2 (1.2) | −0.2 (1.2) | 0.26 |
| Target A1C, % | | | | 0.48 |
| <7.0% | 32.3 | 37.1 | 35.9 | |
| 7.0–7.5% | 67.7 | 62.9 | 64.1 | |
| Observed-to-expected A1C per 90 days | 1.0 (0.2) | 1.0 (0.2) | 1.0 (0.2) | 0.55 |
| $N$ (%) with ≥1 prospective A1C | 60 (88.2) | 174 (86.1) | 234 (86.7) | 0.66 |
| Antihyperglycemic medications, % | | | | |
| Metformin | 25.0 | 39.6 | 35.9 | **0.03** |
| DPP-4 inhibitors | 2.9 | 5.9 | 5.2 | 0.34 |
| GLP-1 agonists | 2.9 | 1.0 | 1.5 | 0.26 |
| Thiazolidinediones | 1.5 | 0.5 | 0.7 | 0.44 |
| SGLT-2 inhibitors | 0 | 0 | 0 | — |
| Sulfonylureas, % | 14.7 | 16.3 | 15.9 | 0.75 |
| Sulfonylurea types, % | | | | 0.38 |
| Glyburide | 0 | 9.4 | 7.3 | |
| Glimepiride | 44.4 | 21.9 | 26.8 | |
| Glipizide | 55.6 | 68.8 | 65.9 | |
| Insulin, % | 75.0 | 63.9 | 66.7 | 0.09 |
| Total insulin dose (units/kg/day), % | | | | **0.01** |
| 0.00 | 23.5 | 35.3 | 32.3 | |
| 0.07–0.23 | 5.9 | 8.4 | 7.8 | |
| 0.23–0.46 | 14.7 | 21.9 | 20.1 | |
| 0.46–0.82 | 22.1 | 19.4 | 20.1 | |
| 0.82–3.28 | 33.8 | 14.9 | 19.7 | |
| Comorbidities, % | | | | |
| Coronary artery disease | 27.9 | 23.3 | 24.4 | 0.44 |
| Prior myocardial infarction | 11.8 | 12.4 | 12.2 | 0.89 |
| PVD | 42.7 | 37.6 | 38.9 | 0.46 |
| Prior amputation | 27.9 | 32.2 | 31.1 | 0.51 |
| Hypertension | 80.9 | 83.2 | 82.6 | 0.67 |
| LOPS | 94.1 | 92.6 | 93.0 | 0.67 |
| Retinopathy | 30.9 | 23.3 | 25.2 | 0.21 |
| Dialysis | 16.2 | 9.1 | 11.1 | 0.12 |
| Prior kidney transplant | 13.2 | 7.9 | 9.3 | 0.19 |
| eGFR categories, %‖ | | | | 0.66 |
| G1–2 | 31.3 | 31.8 | 31.7 | |
| G3 | 28.1 | 34.1 | 32.5 | |
| G4 | 18.8 | 18.4 | 18.5 | |
| G5 | 21.9 | 15.6 | 17.3 | |
| Current smoker, % | 64.7 | 55.5 | 57.8 | 0.18 |
| WIfI stage, %¶ | | | | **0.04** |
| 1 | 19.1 | 33.7 | 30.0 | |
| 2 | 17.7 | 15.4 | 15.9 | |
| 3 | 27.9 | 30.2 | 29.6 | |
| 4 | 35.3 | 20.8 | 24.4 | |
| Uninfected wounds at baseline ($n$ = 128) | | | | 0.95 |
| No antibiotics, $n/N$ (%) | 22/28 (78.6) | 78/100 (78.0) | 100/128 (78.1) | |
| Antibiotic use, $n/N$ (%) | 6/28 (21.4) | 22/100 (22.0) | 28/128 (21.9) | |
| Infected wounds at baseline ($n$ = 142) | | | | 0.37 |
| No antibiotics, $n/N$ (%) | 0/40 (0) | 2/102 (1.9) | 2/142 (1.4) | |
| Antibiotic use, $n/N$ (%) | 40/40 (100) | 100/102 (98.1) | 140/142 (98.6) | |
| Antibiotic use, % | 67.7 | 60.4 | 62.2 | 0.29 |
| Wound intervention, % | | | | 0.66 |
| Wound care | 44.1 | 41.1 | 41.9 | |
| Surgery | 55.9 | 58.9 | 58.2 | |

Continuous data are shown as mean ± SD or median (interquartile range) and categorical data as indicated. DPP-4, dipeptidyl peptidase 4; GLP-1, glucagon-like peptide 1; $n$, number of wounds; SGLT-2, sodium–glucose cotransporter 2. *$P$ values were calculated using the Student $t$ test for continuous variables with normal distribution and the Wilcoxon rank sum test for nonnormally distributed variables. Fisher exact test or $\chi^2$ tests were used for categorical variables. $P$ values were not reported for "All wounds" because of lack of independence of characteristics for multiple wounds per participant. Bold values indicate $P < 0.05$. †Race missing one observation in "Not healed" category. ‡BMI missing one observation in "Healed" category. ‖eGFR categories were based on Kidney Disease Improving Global Outcomes guidelines. Laboratory results were missing for 4 observations in the "Not healed" category and for 23 observations in the "Healed" category. ¶WIfI classification of the Society for Vascular Surgery.

# Diyabetik ülserler tekrarlayıcıdır

| Factors | With recurrence $n = 42$ | Without recurrence $n = 31$ | $P$ |
|---|---|---|---|
| *Demographic factors* | | | |
| Age (years) | 59·8 ± 8·9 | 62·5 ± 10·1 | NS |
| Sex: male/female | 36/9 | 25/6 | NS |
| Distance from hospital >15 km | 69·0% | 58·1% | NS |
| Diabetes-related factors | | | |
| Diabetes duration >10 years | 81% | 71% | NS |
| Diabetes treatment with insulin | 81% | 74·2% | NS |
| Poor glycaemic control (HbA1c >7·5%) | 83·3% | 54·8% | 0·079 |
| *Comorbidities* | | | |
| Overweight (BMI >27 kg/m$^3$) | 59·5% | 42·9% | NS |
| Smoking (active) | 9·5% | 12·9% | NS |
| Chronic alcohol usage | 42·9% | 48·4% | NS |
| End-stage renal disease | 11·9% | 6·5% | NS |
| *DFU-related factors* | | | |
| Peripheral arterial disease | 21·4% | 19·4% | NS |
| Osteomyelitis | 54·8% | 22·6% | 0·0124 |
| Charcot foot | 21·4% | 12·9% | NS |
| Clinical signs of DFU infection | 21·4% | 29·0% | NS |
| Elevated CRP (>5 mg/l) | 71·5% | 48·4% | 0·0454 |
| Plantar location of DFU | 61·5% | 16·1% | 0·0001 |
| Ulcer size >5 cm$^2$ | 11·9% | 12·9% | NS |
| Deep ulcer depth (subcutaneous) | 38·1% | 32·2% | NS |
| Ulcer duration >3 months | 23·8% | 32·3% | NS |
| Foot deformity | 71·4% | 67·7% | NS |
| Previous ipsilateral amputation | 9·5% | 12·9% | NS |
| Previous contralateral amputation | 7·1% | 9·7% | NS |
| Multiresistant microorganisms | 4·8% | 6·5% | NS |
| Days to complete healing | 154·4 ± 82·1 | 149·2 ± 83·9 | NS |

Risk factors for recurrence of diabetic foot ulcers: prospective follow-up analysis in the Eurodiale subgroup

International Wound Journal Volume10, Issue5 October 2013

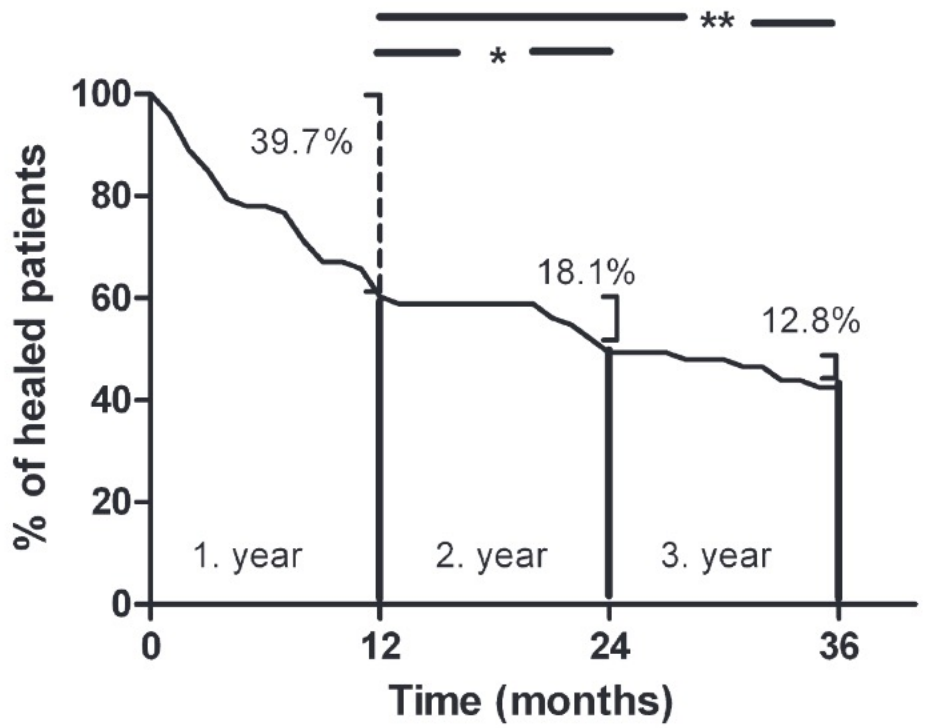



**Figure 2** Timing of recurrence of diabetic foot ulcer during 3-year follow-up after initial ulcer healing.

**Table 2** Multivariate stepwise logistic regression – independent risk factors statistically significantly associated with ulcer recurrence

| Factors | Coefficient (ln OR) | OR | 95% CI |
|---|---|---|---|
| Plantar location of the ulcer | 2·15 | 8·62 | 2·2–33·2 |
| Osteomyelitis | 1·64 | 5·17 | 1·4–18·7 |
| HbA1c >7·5% | 1·4 | 4·07 | 1·1–15·6 |
| CRP >5 mg/l | 1·45 | 4·27 | 1·2–15·7 |
| Constant | −3·0 | | |

ln – decadic logarithm.

Risk factors for recurrence of diabetic foot ulcers: prospective follow-up analysis in the Eurodiale subgroup

International Wound Journal Volume10, Issue5 October 2013

# Diyabetik ülserli hastada glisemik kontrolü ne kadar zorlamalıyız?

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 MARCH 26, 2009 VOL. 360 NO. 13

# Intensive versus Conventional Glucose Control in Critically Ill Patients

The NICE-SUGAR Study Investigators*

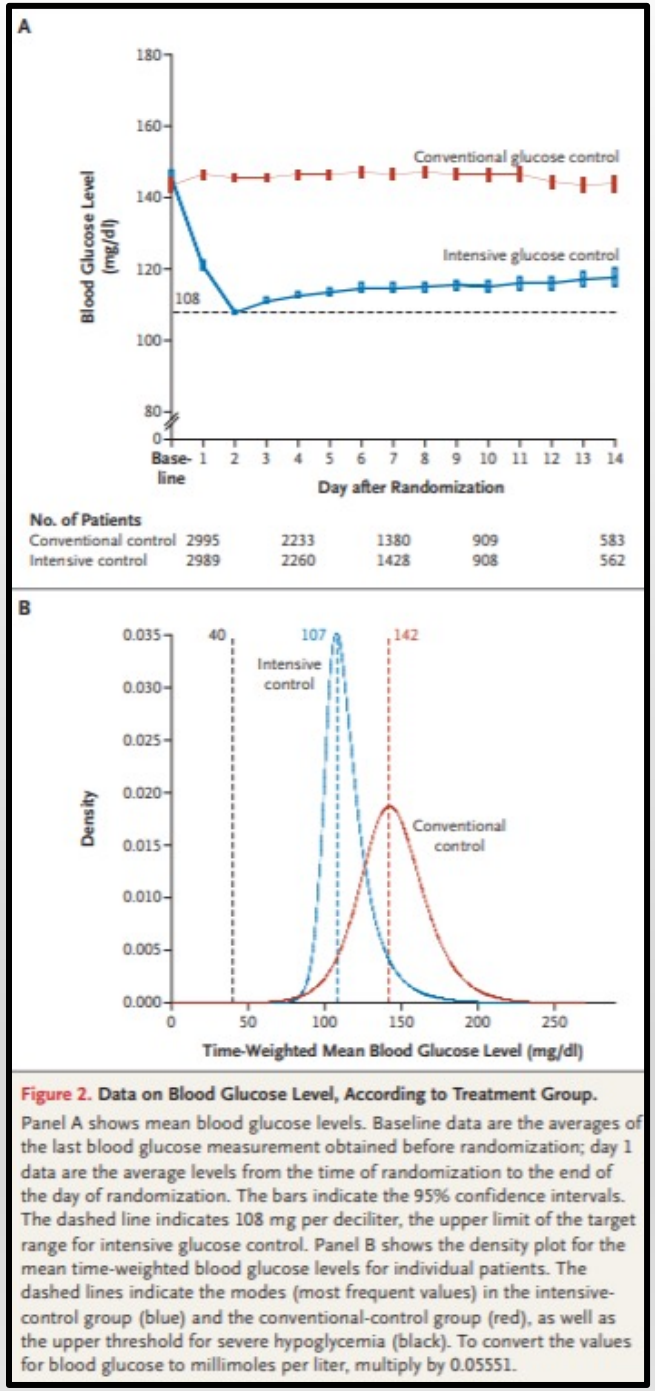
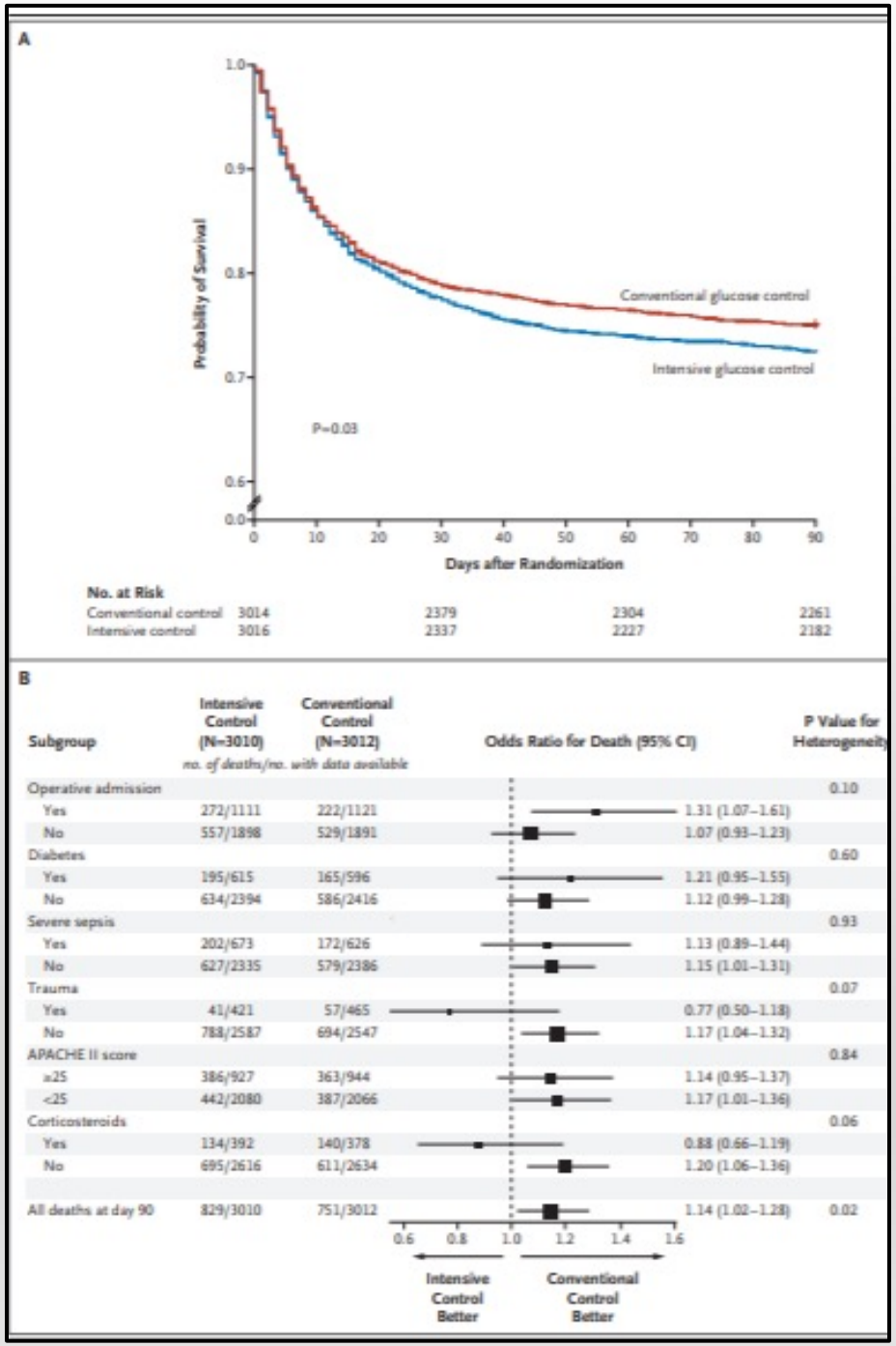



**Figure 2. Data on Blood Glucose Level, According to Treatment Group.**

Panel A shows mean blood glucose levels. Baseline data are the averages of the last blood glucose measurement obtained before randomization; day 1 data are the average levels from the time of randomization to the end of the day of randomization. The bars indicate the 95% confidence intervals. The dashed line indicates 108 mg per deciliter, the upper limit of the target range for intensive glucose control. Panel B shows the density plot for the mean time-weighted blood glucose levels for individual patients. The dashed lines indicate the modes (most frequent values) in the intensive-control group (blue) and the conventional-control group (red), as well as the upper threshold for severe hypoglycemia (black). To convert the values for blood glucose to millimoles per liter, multiply by 0.05551.



Kalfon *et al. Critical Care* (2015) 19:153
DOI 10.1186/s13054-015-0851-7

CRITICAL CARE

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# Severe and multiple hypoglycemic episodes are associated with increased risk of death in ICU patients

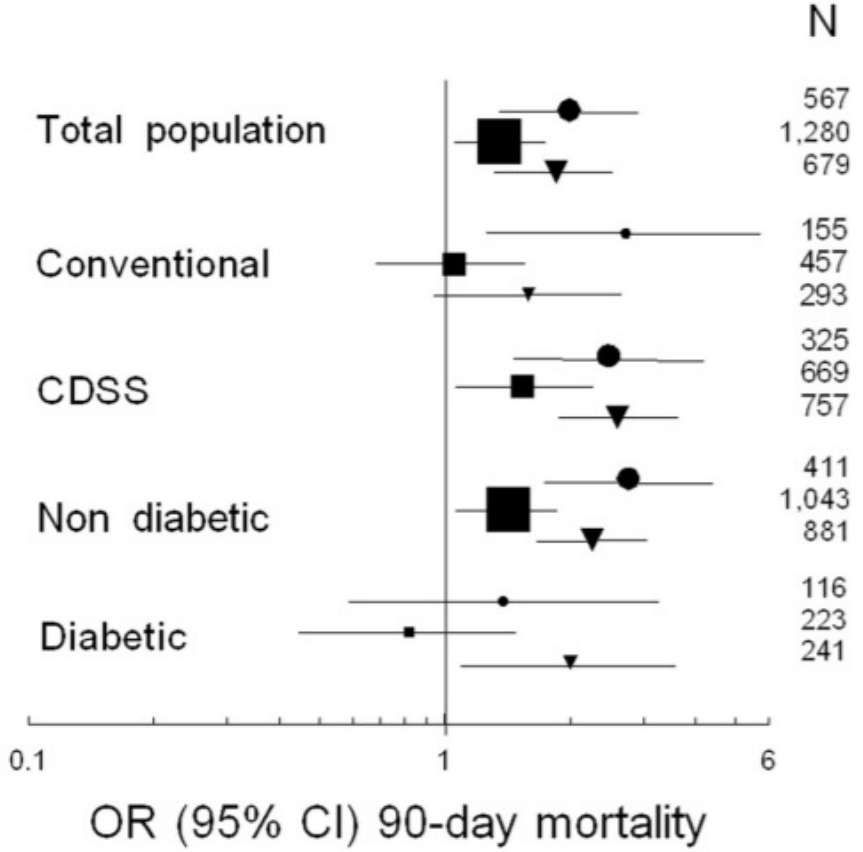
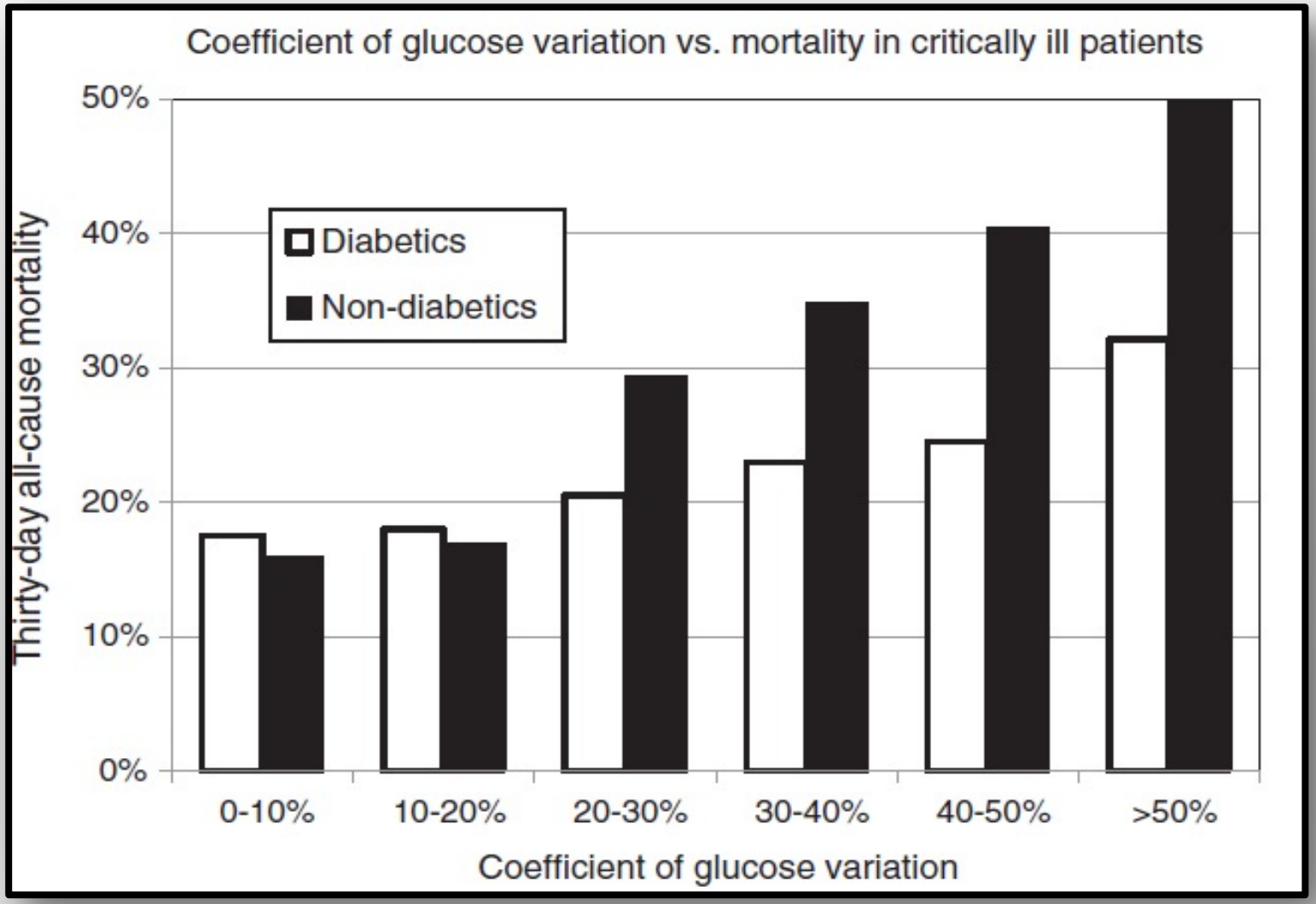



**Figure 3 Subgroup analysis.** Odds ratio (OR) and 95% confidence interval (CI) for death at 90 days associated with moderate (filled squares) or severe (filled circles) hypoglycemia or multiple (n ≥3) hypoglycemic (filled triangles) events in the total population and in matched subgroups according to treatment assignment (conventional vs. computerized decision support system (CDSS)) and diabetes status (diabetic vs. non-diabetic). Matching was performed using propensity score and a ratio of 2:1 for severe hypoglycemia and 1:1 for moderate hypoglycemia and multiple hypoglycemic events. The size of symbols is related to the number of patients (N) retained in the matching process.

# Kritik hastada glisemik değişkenlik ve mortalite

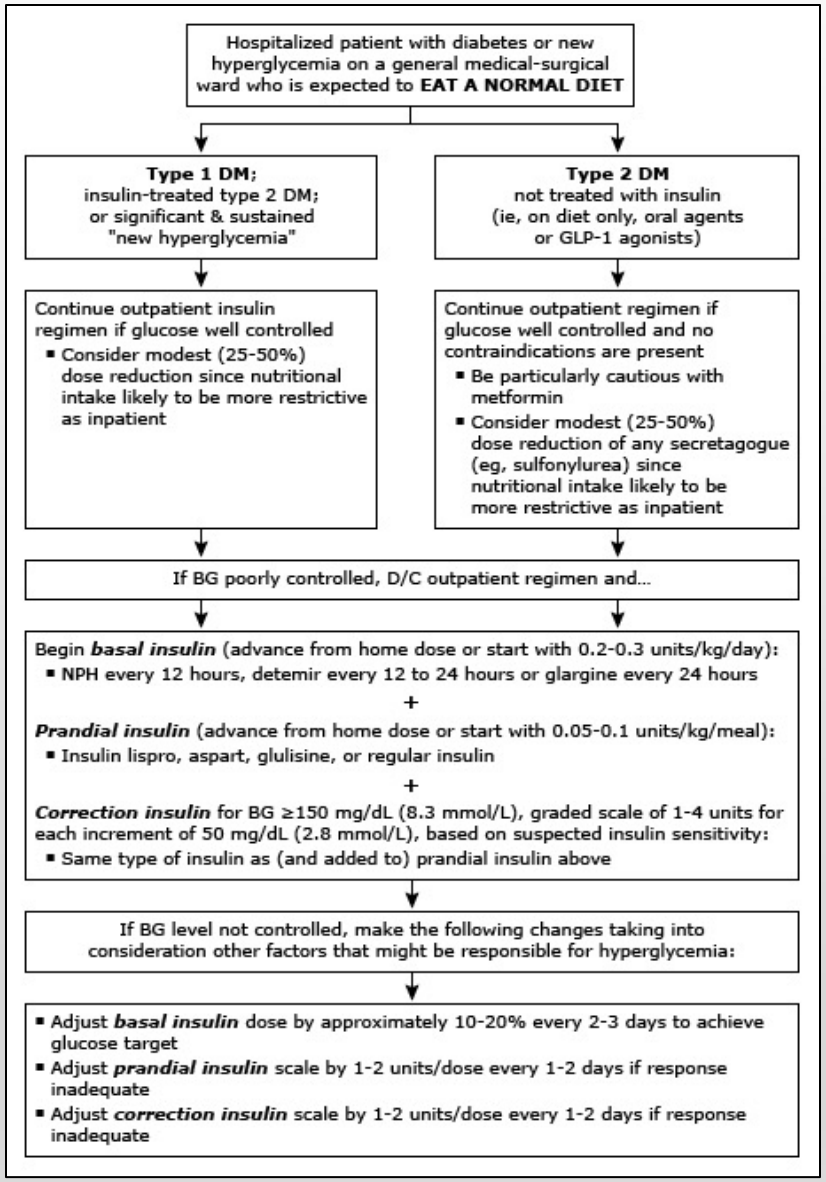


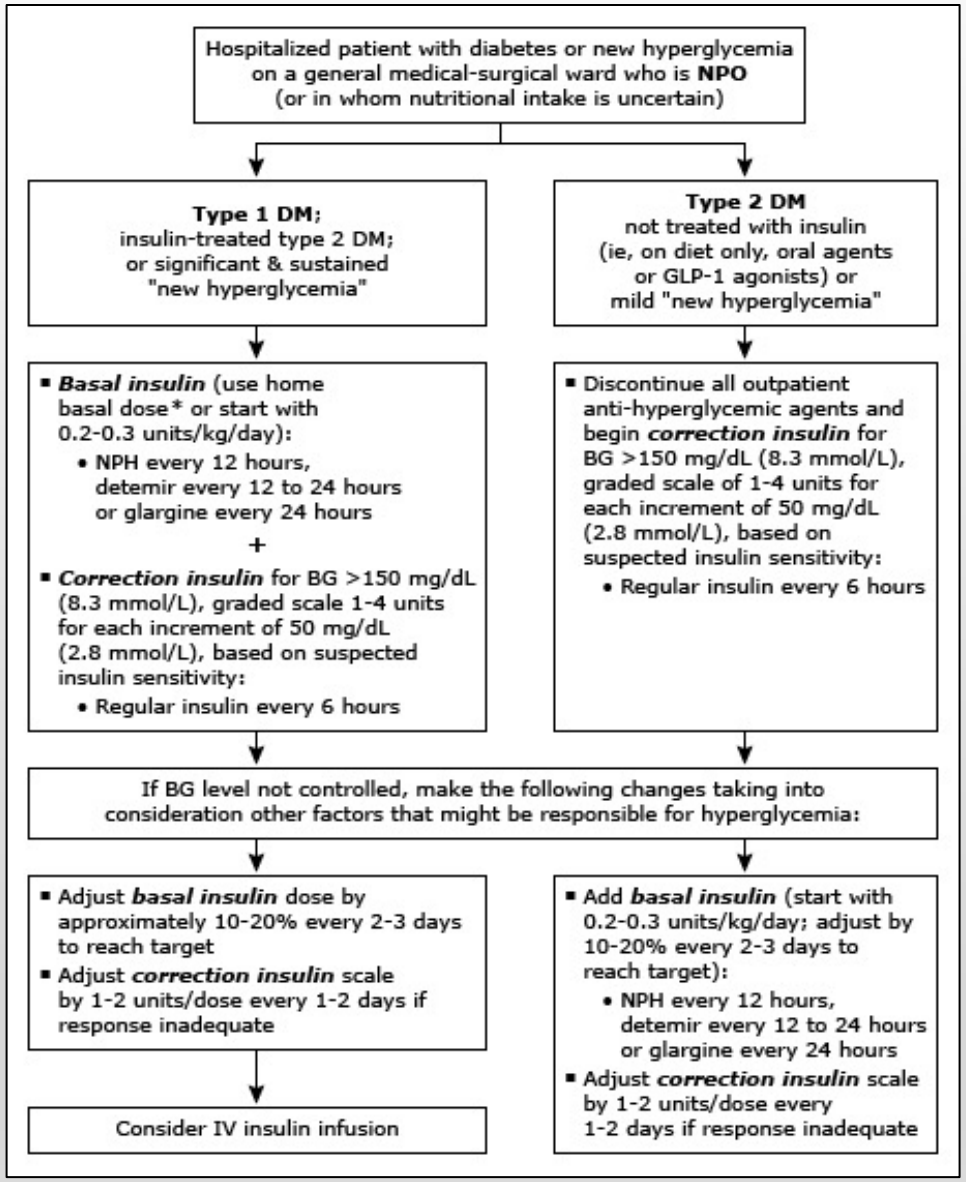

Lanspa MJ et al. Crit Care 2014; 30:18

Kan şekeri hedefi:

Preprandial <140 mg/dL , herhangi bir zamanda  <180 mg/dl

ADA ve Endocrine Society önerisi




Inzucchi SE. Diabetes facts and guidelines. Yale Diabetes Center, 2011.

# Hastanede yatan diyabetik ülserli hastada tedavi hedefleri

Hipoglisemiden ve glukoz dalgalanmalarından kaçınmak

Ciddi hiperglisemi, sıvı kaybı ve elektrolit kaybından kaçınmak

Uygun beslenmeyi sağlamak

Hastanın eğitim ve bilgi eksikliklerini tamamlamak

Taburcu olduğunda evdeki tedavisini planlamak

Yiyecek alımının azaldığı durumlarda tedaviyi de azaltmak

‘Sliding scale’ insülin tedavisinden kaçınıp hastanın özel durumlarını göz önünde bulundurmak