



SAMPLE BURN & TRAUMA WOUND CARE SOAP NOTE

4% TBSA FLAME BURN TO HAND — POST-BURN DAY 12

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1 PATIENT INFORMATION

1 PATIENT DETAILS

NAME

Teodoro L. Banaszak

DOB

05/30/1997

AGE / SEX

29 yrs / Male

MRN / PATIENT ID

1174623

DATE OF SERVICE

08/05/2026

PROVIDER

Imani Rutherford, MD

CREDENTIALS

MD, FACS — burn surgery

REFERRAL SOURCE

Emergency department, Northgate General —
07/24/2026

VISIT TYPE

Burn Clinic Follow-Up — post-burn day 12, procedure visit

CARE SETTING

Outpatient Burn Clinic, verified burn center

PRIMARY CARE PROVIDER

Sandra Whitlock, PA-C

SURGEON / TRAUMA PROVIDER

This service; hand therapy co-managing

CC CHIEF COMPLAINT

2 PRIMARY BURN OR TRAUMA WOUND CONCERN

"The back of my hand is still raw and the skin feels like it's shrinking — I can't make a full fist any more and it's getting tighter each day. The cut on my palm from where I landed is oozing and there's still grit in it. I'm a bricklayer and I need this hand back."

S SUBJECTIVE

3 PATIENT-REPORTED INJURY HISTORY, WOUND SYMPTOMS & FUNCTIONAL IMPACT

3a INDICATION, MECHANISM & CIRCUMSTANCES

Reason for Burn / Trauma Wound Evaluation

Burn clinic follow-up at post-burn day 12 for a 4% total body surface area flame burn of the right hand and forearm

sustained in a propane grill flashback, combined with a contaminated palmar laceration sustained in the same event. Visit purpose: reassessment of burn depth conversion on the dorsal hand, evaluation of early extension contracture and loss of composite fist, management of a retained foreign body and delayed healing in the palmar laceration, decision on the need for excision and grafting, and coordination of the hand therapy and return-to-work plan.

Mechanism of Injury

Thermal flame burn from a propane grill flashback. He opened a grill lid after the burner had failed to ignite, allowing gas accumulation, and the delayed ignition produced a brief flame front to the dorsum of his right hand and distal forearm. He instinctively withdrew and fell backwards onto a gravel driveway, landing on an outstretched right hand and sustaining a separate contaminated palmar laceration. Two distinct mechanisms in a single event — one thermal, one blunt-penetrating with contamination.

Date and Circumstances of Injury

07/24/2026 at approximately 18:30, at his own home during a family barbecue. He was wearing a short-sleeved cotton shirt and no gloves. First aid consisted of running cool tap water over the hand for roughly 10 minutes, which was appropriate. No ice was applied. He presented to the emergency department the same evening at 20:05, approximately 95 minutes after injury. Not a work-related injury, though it directly affects his employment.

Wound Onset and Course

The dorsal hand burn initially appeared to be a mixed superficial and deep partial-thickness injury and was managed non-operatively. Over the last 5 days it has **converted deeper** in the central zone over the second and third metacarpals — the tissue has become drier, paler, and less sensate, and the surrounding epithelialization has stalled. The forearm burn is healing well and is largely re-epithelialized. The palmar laceration was irrigated and closed with five 4-0 nylon sutures in the emergency department; it has failed to heal cleanly, with persistent serous drainage, and he can feel grit within it. Overall: two of the three wounds are deteriorating or static and one is healing.

3b INJURY CHARACTERISTICS & SYMPTOMS

Burn Characteristics

Propane flame flashback with an estimated exposure of under 2 seconds. Affected areas are the entire dorsum of the right hand including all four finger dorsa to the proximal interphalangeal joints, and the distal volar-radial forearm. Estimated total body surface area 4% by the rule of nines with palm-based refinement — the hand at approximately 2.5% and the forearm at approximately 1.5%. Depth mixed: deep partial-thickness centrally over the dorsal metacarpals, superficial partial-thickness peripherally and on the forearm. Extensive blistering was present initially. **Not circumferential** at any level. No facial burn, no singed nasal hair, no carbonaceous sputum, and no enclosed-space exposure — inhalation injury was excluded in the emergency department and has never been a concern.

Trauma Wound Characteristics

Irregular 4.5 cm transverse laceration across the right thenar eminence and mid-palm sustained on gravel. Visible embedded grit and asphalt debris at presentation, incompletely removed on emergency department irrigation. No tendon or nerve injury identified on examination then or now. No open fracture. Radiographs of the hand on 07/24 showed no fracture and no radio-opaque foreign body, though gravel is frequently radiolucent. Closed primarily with five 4-0 nylon interrupted sutures — a decision now open to question, given the contamination.

Pain and Sensory Symptoms

Burn pain has improved overall from 8 of 10 to 4 of 10 at rest, but remains 7 of 10 during dressing changes and therapy. **The central dorsal zone is now notably less painful and reduced to pinprick** — a finding he interprets as improvement but which in fact indicates deeper injury. Peripheral burn areas remain hypersensitive with intermittent burning dysesthesia. Palmar laceration pain 5 of 10, throbbing, worse at night and worse on grip. No numbness in any digit, no median or ulnar distribution deficit. No paraesthesia distal to the wounds.

Drainage / Exudate History

Dorsal hand burn: moderate serous exudate, straw-coloured, no odour, saturating the dressing at about 24 hours. Forearm: minimal. Palmar laceration: **persistent seropurulent drainage**, increasing over the last 4 days, now with a faint odour, requiring a dressing change twice daily and with visible drainage tracking between two of the sutures.

Infection Symptoms

No fever, chills, rigors, or malaise. He reports increased palmar pain over the last 4 days with surrounding redness and warmth that he first noticed on 08/01, plus the change in drainage character described above. No streaking up the forearm, no axillary tenderness. The dorsal burn has no erythema beyond the expected burn margin, no odour, and no purulence. Prior localized infection at the palmar site is suspected but there has never been systemic illness.

3c TREATMENT HISTORY, FUNCTION & HEALING BARRIERS

Prior Evaluation and Treatment

Emergency department 07/24: cool water first aid continued, analgesia, tetanus booster administered, hand radiographs, saline irrigation of the palmar laceration with attempted debris removal, primary closure with five 4-0 nylon sutures, silver sulfadiazine to the burn, and a bulky dressing. Discharged with next-day burn clinic follow-up. Burn clinic 07/25, 07/29, and 08/01. Silver sulfadiazine changed to a silver-impregnated foam on 07/29 for exudate control. Blister debridement performed 07/25. Hand therapy commenced 07/29 with a resting extension splint issued. No grafting, flap, negative pressure therapy, or surgical debridement to date. Oral cephalexin was **not** prescribed at any point.

Dressing and Home Care Adherence

Silver foam to the dorsal hand changed daily by his partner, and dry gauze to the palm changed twice daily. He reports good adherence to dressing changes and supplies are adequate. **Splint adherence is the gap** — the resting extension splint was prescribed for night-time and rest periods, and he estimates he has worn it three nights out of the last seven, describing it as uncomfortable and hot. He has been showering with the hand in a plastic bag, correctly. No home health involvement; his partner is capable and engaged.

Functional Impact

Right-hand dominant. **Composite fist is markedly limited** — he cannot bring the fingertips to the distal palmar crease, with a gap he estimates at three finger-breadths. Unable to grip a trowel, hold a brick, or make a full fist. Unable to work as a bricklayer and currently on unpaid leave with real financial pressure, which he raised twice during the visit. Sleep disturbed by pain and by the splint. Independent in most activities of daily living but requires help with buttons, shoelaces, and cutting food. Cannot drive a manual vehicle. He identifies return to full hand function, not cosmesis, as his overriding goal.

Risk Factors for Poor Healing

Current smoker at approximately 12 cigarettes daily for 10 years, a 6 pack-year history — a significant and modifiable impediment to burn wound healing and graft take. Wound contamination with retained gravel in the palm. Delayed and incomplete foreign body removal. Suboptimal splint adherence with an established contracture trajectory. Financial pressure creating an incentive to return to manual work prematurely. No diabetes, no vascular disease, no neuropathy, no immunosuppression, no steroid use, no renal disease, and no malnutrition — he is otherwise a young, healthy, well-perfused patient, which is strongly in his favour.

Tetanus / Immunization Status

Tetanus-diphtheria booster administered in the emergency department on 07/24/2026. His last prior booster was more than 10 years earlier and the wound was contaminated, so the booster was correctly indicated. Tetanus immunoglobulin was not given and was not indicated given a documented primary series in childhood. No further tetanus prophylaxis required.

Pertinent Negatives

No fever, chills, or systemic illness. No rapidly spreading erythema, lymphangitic streaking, crepitus, or bullae to suggest necrotizing infection. No circumferential burn and no symptoms of compartment syndrome — no disproportionate pain on passive stretch, no tense swelling, no pallor, and no pulselessness. No numbness, weakness, or loss of tendon function in any digit. No hoarseness, cough, dyspnea, or soot exposure. No uncontrolled bleeding. No exposed bone or tendon at any wound.

ROS BURN / TRAUMA WOUND REVIEW OF SYSTEMS

4 PERTINENT POSITIVES & NEGATIVES

Wound pain, tenderness, swelling, bleeding, drainage, odor, or itching	Positive — burn 4/10 rest and 7/10 with care; palmar laceration 5/10 with seropurulent drainage and faint odour. Intermittent itching at healing forearm.
Redness, warmth, blistering, eschar, necrosis, or delayed healing	Positive — palmar periwound erythema and warmth since 08/01; dorsal burn converted deeper centrally with a dry pale zone and stalled epithelialization.
Fever, chills, fatigue, malaise, or systemic infection symptoms	Negative — afebrile, no systemic features.
Numbness, tingling, weakness, reduced sensation, or impaired movement	Positive — reduced pinprick over the central dorsal burn (a depth marker, not improvement); peripheral burn hypersensitivity. No digital nerve deficit and no motor weakness.
Shortness of breath, cough, hoarseness, soot exposure, or inhalation symptoms	Negative throughout — open-air flash, inhalation injury excluded on 07/24.
Difficulty walking, using the affected limb, performing ADLs, working, or sleeping	Positive — cannot make a composite fist or grip; unable to work as a bricklayer; sleep disturbed; needs help with buttons and laces.
Dressing adherence issues, supply barriers, or home care concerns	Dressings adherent and supplies adequate. Splint worn only 3 of the last 7 nights.
Hyperglycemia, poor appetite, smoking, or other healing barriers	Positive — current smoker, 12 cigarettes daily. No diabetes, appetite normal, nutrition adequate.

O

OBJECTIVE

5 OBSERVED FINDINGS

V VITALS

TEMPERATURE

36.9 °C

BLOOD PRESSURE

128/72 mmHg

HEART RATE

82 bpm

RESPIRATORY RATE

16 /min

OXYGEN SATURATION

99% on room air

WEIGHT

86.5 kg

BMI

26.4 kg/m²

PAIN SCORE

4/10 at rest; 7/10 during dressing change and therapy

5a GENERAL, VASCULAR & PULMONARY

General Appearance

Well-built young man in no systemic distress, visibly anxious about hand function and about work. Well hydrated and well nourished. Guards the right hand and holds it in a protective intrinsic-minus posture with the metacarpophalangeal joints extended — the classic position of deformity and precisely the posture the splint is meant to prevent. Fully able to participate in wound care and therapy.

Cardiovascular / Vascular

Right radial and ulnar pulses 2+ and equal to the left. Capillary refill under 2 seconds in all five digits. Hand warm throughout with no temperature gradient. Allen test intact. Moderate dorsal hand edema, soft and pitting, without tenseness. **No compartment concern** — no pain on passive digital extension, no tense swelling, no pallor. Perfusion to all digits is excellent, which is a favourable factor for both healing and any future graft.

Pulmonary

Clear to auscultation bilaterally with no wheeze or stridor. Voice normal with no hoarseness. No cough, no carbonaceous sputum, no facial or nasal singeing. No oxygen requirement. Inhalation injury is confidently excluded.

5b NEUROLOGIC, MUSCULOSKELETAL & SKIN

Neurologic

Median, ulnar, and radial sensory distributions intact distally with two-point discrimination at 4 mm in all digital pulps. **Pinprick reduced within the central dorsal burn zone over the second and third metacarpals**, consistent with deep partial-thickness injury rather than with recovery. Peripheral burn margins hyperalgesic. Motor examination: flexor digitorum profundus and superficialis intact to all digits, extensor pollicis longus intact, interossei and abductor pollicis brevis 5/5. No tendon deficit. Neurovascular status distal to both wounds is intact.

Musculoskeletal / Functional

Composite fist markedly limited — fingertip to distal palmar crease distance 3.5 cm for the index, 3.8 cm for the middle, 3.2 cm for the ring, and 2.6 cm for the little finger (all were under 1.0 cm at the 07/29 baseline). Metacarpophalangeal flexion limited to 45–55 degrees against a normal 90. Proximal interphalangeal flexion 70–80 degrees. Full passive and active extension preserved. Thumb opposition to the little finger incomplete. Wrist range of motion full. **Early dorsal extension contracture is established and is progressing**. Resting extension splint present at the visit and correctly fitted, but with wear marks inconsistent with the prescribed schedule. Grip strength 12 kg on the right against 48 kg on the left.

Skin / Soft Tissue

Dorsal hand and forearm burns as detailed below. Moderate dorsal edema. No cellulitis extending beyond the burn margin on the dorsum. Palmar periwound erythema extending 1.5–2 cm around the laceration, warm and blanching, without induration or fluctuance. Sutures intact and not cutting through. No hematoma. Early hypertrophic change at the healed forearm margin with mild raised pink scar. No graft or flap in situ. Left hand and all other skin surfaces normal.

WA BURN / TRAUMA WOUND ASSESSMENT

6 WOUND 1 — RIGHT DORSAL HAND FLAME BURN

WOUND NUMBER	LOCATION AND LATERALITY
1 of 3	Right dorsal hand, second through fifth metacarpals and finger dorsa to the PIP joints
INJURY TYPE AND SUSPECTED ETIOLOGY	DATE FIRST ASSESSED
Thermal flame burn — propane grill flashback	07/24/2026 (emergency department); by this service 07/25/2026
DIMENSIONS	BURN DEPTH
Total burn area approximately 11 cm × 9 cm; central non-healing zone 5.5 cm × 4.0 cm	Deep partial-thickness centrally with conversion since day 7; superficial partial-thickness peripherally
ESTIMATED TOTAL BODY SURFACE AREA	EXUDATE
2.5% for the hand (4% total with the forearm)	Moderate, serous, straw-coloured, no odour
WOUND PHOTOGRAPHS OBTAINED	COMPARISON TO PRIOR

Yes — 5 images with scale, filed to the chart; serial series from 07/25

Deteriorated — central zone converted deeper, epithelialization stalled since day 7

Wound bed tissue type

Central zone: dry, waxy, pale pink-white dermis with sluggish capillary refill and reduced pinprick — the hallmark of deep partial-thickness conversion. Peripheral zone: moist, pink, brisk-bleeding dermis with active epithelial islands, approximately 60% re-epithelialized. No slough or eschar requiring debridement today. **No exposed tendon, bone, joint, or hardware** — extensor tendons are covered by intact paratenon throughout, which is critical for the reconstructive options.

Undermining and tunneling

None. Burn wounds are planar with no undermining, tunneling, or sinus tract.

Wound edges and periwound condition

Edges irregular, characteristic of a flash burn, with an advancing epithelial margin peripherally and a static margin centrally. Periwound skin is edematous but intact, without maceration, erythema beyond the burn margin, or induration.

Blistering, eschar, char, foreign material, contamination

Initial blisters debrided on 07/25. No residual blister, no eschar, no char, no foreign material, and no contamination in this wound.

Bleeding, friability, signs of infection, ischemia, or compartment concern

Peripheral bed bleeds briskly; the central zone bleeds sluggishly and only on firm contact — a depth indicator. No purulence, no odour, no erythema beyond the margin, and no systemic features: **this burn is not infected**. No ischemia and no compartment concern.

Pain and range of motion limitation

7 of 10 with dressing change peripherally; the central zone is notably less painful with reduced pinprick. **Range of motion limitation is severe and is the dominant functional problem** — dorsal skin tightness directly restricts metacarpophalangeal and interphalangeal flexion, producing the extension contracture documented above.

6b WOUND 2 — RIGHT PALMAR LACERATION

WOUND NUMBER

2 of 3

LOCATION AND LATERALITY

Right palm, transverse across the thenar eminence into the mid-palm

INJURY TYPE AND SUSPECTED ETIOLOGY

Contaminated traumatic laceration — fall onto gravel

DATE FIRST ASSESSED

07/24/2026

DIMENSIONS

4.5 cm long; wound edges gaping 3–4 mm between the second and third sutures, depth to subcutaneous fat

BURN DEPTH

Not applicable — traumatic wound

ESTIMATED TOTAL BODY SURFACE AREA

Not applicable

EXUDATE

Moderate, seropurulent, faint odour, increasing over 4 days

WOUND PHOTOGRAPHS OBTAINED

Yes — 3 images with scale

COMPARISON TO PRIOR

Deteriorated — drainage increased and changed character, periwound erythema new since 08/01

Wound bed, foreign material and contamination

Visible embedded grey-black gravel and asphalt particles at the wound base, most concentrated at the thenar end, at least four discrete fragments identifiable on loupe inspection. Surrounding bed with fibrinous exudate and early unhealthy

granulation. No exposed tendon, nerve, bone, or joint. This wound was closed primarily over retained contamination, which is the direct explanation for its failure to heal.

Wound edges, periwound and infection

Sutures intact but the wound is dehiscing between the second and third sutures with drainage tracking through the gap. Periwound erythema 1.5–2 cm, warm, blanching, non-indurated, without fluctuance or crepitus. Findings are consistent with a localized wound infection secondary to retained foreign body, without cellulitic spread or systemic involvement.

Pain and function

5 of 10 at rest, 8 of 10 on grip and on palpation over the thenar eminence. Directly limits grip and is a second independent contributor to his functional loss.

6c WOUND 3 — RIGHT DISTAL FOREARM BURN

WOUND NUMBER

3 of 3

INJURY TYPE AND ETIOLOGY

Thermal flame burn, same event

DIMENSIONS

Approximately 7 cm × 5 cm, now over 90% re-epithelialized

COMPARISON TO PRIOR

Healing well — near-complete epithelialization, no infection

LOCATION AND LATERALITY

Right distal volar-radial forearm

BURN DEPTH

Superficial partial-thickness

EXUDATE

Minimal, serous

NOTES

Early hypertrophic change at the margin; scar management indicated

CL BURN / TRAUMA CLASSIFICATION

7 CLASSIFICATION

BURN TYPE

Thermal — flame (propane flashback), open-air

BURN DEPTH

Mixed: deep partial-thickness central dorsal hand with conversion; superficial partial-thickness periphery and forearm

CIRCUMFERENTIAL BURN STATUS

Not circumferential at hand, digit, or forearm level

ELECTRICAL INJURY CONCERN

None

TRAUMA WOUND TYPE

Contaminated laceration with retained foreign body, closed primarily

CONTAMINATED OR DIRTY WOUND STATUS

Yes — gravel and asphalt contamination, incompletely

TOTAL BODY SURFACE AREA INVOLVED

4% — hand 2.5%, forearm 1.5%

INHALATION INJURY CONCERN

None — open-air flash, excluded 07/24, no interval symptoms

CHEMICAL EXPOSURE DETAILS

None — no chemical involvement, no decontamination required

SCAR OR CONTRACTURE RISK

High — deep partial-thickness burn over the dorsal

removed, now infected

hand and joints in a manual worker with suboptimal splint adherence

Involvement of face, hands, feet, genitalia, perineum, major joints, or airway risk areas

Yes — the hand is involved, including the dorsum over the metacarpophalangeal and proximal interphalangeal joints. Hand involvement is an American Burn Association burn center referral criterion in its own right, independent of total body surface area, and this patient is correctly being managed at a verified burn center. No facial, foot, genital, perineal, or airway involvement.

Exposed tendon, bone, joint, capsule, hardware, or graft material

None at any of the three wounds. Extensor paratenon is intact throughout the dorsal burn — this is the finding that keeps split-thickness skin grafting a viable option and avoids the need for flap coverage.

Need for burn center, trauma surgery, plastic surgery, hand surgery, or orthopedic evaluation

Already under verified burn center care. **Hand surgery input is now indicated** for the combined problem of a converted dorsal burn requiring probable excision and grafting, and a contaminated palmar wound requiring exploration and foreign body removal. No orthopedic or trauma surgery need — no fracture and no deep structural injury.

PR PROCEDURES PERFORMED

8 PROCEDURES THIS VISIT

PROCEDURE NAME

(1) Suture removal and wound exploration with foreign body removal, right palm; (2) high-volume irrigation with deep tissue culture; (3) selective debridement, right dorsal hand burn; (4) forearm-based resting splint refabrication

INDICATION

Infected palmar wound with retained foreign body; non-viable burn tissue limiting assessment; progressive extension contracture

WOUND LOCATION AND LATERALITY

Right palm (thenar and mid-palm); right dorsal hand

CONSENT OBTAINED

Verbal consent obtained and documented, including the possibility of operative debridement

ANESTHESIA, IF USED

Median and ulnar wrist block with 8 mL of 1% lidocaine without epinephrine for the palmar procedure; no anesthesia required for the dorsal burn

INSTRUMENTS USED

Suture scissors, fine forceps, loupe magnification, curette, 35 mL syringe with 19 G splash guard, #15 blade

TISSUE REMOVED

Four discrete gravel and asphalt fragments (largest 3 mm), fibrinous exudate, and non-viable wound margin tissue from the palm; loose non-viable epidermis from the dorsal burn periphery

IRRIGATION / CLEANSING PERFORMED

1,000 mL of normal saline pulsed lavage to the palmar wound at low pressure; saline cleansing of the dorsal burn

FOREIGN MATERIAL REMOVED

Yes — four gravel/asphalt fragments retrieved and sent with the culture specimen

BLEEDING / HEMOSTASIS

Brisk bleeding from healthy palmar margins, hemostasis with 3 minutes of direct pressure; punctate ooze from the dorsal burn

POST-PROCEDURE MEASUREMENTS

Palmar wound 4.8 cm × 0.9 cm × 0.6 cm after debridement, now left open; dorsal burn unchanged at 11 cm × 9 cm

DRESSING APPLIED

Palm: saline-moistened gauze packed loosely, foam cover, changed twice daily. Dorsum: silver-impregnated foam. New splint applied

Technique

Palmar wound: all five nylon sutures removed. The wound was explored under loupe magnification following a median and ulnar wrist block. Four discrete gravel and asphalt fragments were identified and retrieved with fine forceps, the largest measuring 3 mm at the thenar end. The wound was then irrigated with 1,000 mL of normal saline by low-pressure pulsed lavage. Non-viable margin tissue and fibrinous exudate were sharply excised. Deep tissue culture was taken by the Levine technique after irrigation. **The wound was deliberately left open to heal by secondary intention** — re-closing a contaminated wound that has already failed primary closure and become infected would repeat the original error. Flexor tendons and the recurrent motor branch of the median nerve were visualised as intact and uninvolved. **Dorsal burn:** loose non-viable epidermis was debrided selectively from the periphery only. The central converted zone was deliberately left undisturbed pending the grafting decision, since excision of that zone belongs in the operating room and not in clinic. **Splint:** a forearm-based resting splint was refabricated in the intrinsic-plus safe position — metacarpophalangeal joints at 70–90 degrees of flexion, interphalangeal joints in extension, wrist at 20 degrees of extension, thumb abducted — with a softer padded interface at the two points he identified as uncomfortable.

Patient tolerance and complications

Tolerated well under regional block with no pain during the palmar procedure. No excessive bleeding. No vasovagal event. No neurovascular compromise after the block resolved, confirmed before discharge. No complications. He was able to demonstrate correct application and removal of the new splint before leaving.

L

LABORATORY AND DIAGNOSTIC RESULTS

9 RESULTS REVIEWED OR ORDERED

Laboratory Studies — 08/05/2026

White cells 10.8 K/ μ L with 74% neutrophils (from 8.2 on 07/29). CRP 32 mg/L (from 14 on 07/29), ESR 30 mm/hr. Hemoglobin 14.6 g/dL, platelets 268. CMP normal with a creatinine of 0.94. Glucose 92 mg/dL, HbA1c 5.3% — no occult diabetes. Albumin 4.2 g/dL, prealbumin 29 mg/dL — nutrition is not a barrier. CK not indicated — no crush or electrical component.

Microbiology

Deep tissue culture from the palmar wound obtained today after irrigation, together with the retrieved foreign body fragments, both pending. A superficial swab on 08/01 grew *Staphylococcus aureus*, methicillin-sensitive, and light mixed skin flora; it was not treated at that visit. No dorsal burn culture — that wound is not clinically infected and swabbing it would yield colonising flora only. Blood cultures not indicated: afebrile with no systemic features.

Imaging

Right hand radiographs, three views, 07/24/2026: no fracture, no dislocation, no radio-opaque foreign body, soft tissue swelling only. **Repeat hand radiograph and high-resolution ultrasound of the thenar eminence ordered today** to search for further radiolucent gravel not retrieved at exploration — ultrasound is the modality of choice for radiolucent foreign bodies and plain films cannot exclude them. No MRI or CT indicated; no clinical suspicion of osteomyelitis at 12 days with no bone exposure.

Vascular / Perfusion Studies

Not indicated. Radial and ulnar pulses 2+, capillary refill under 2 seconds in all digits, hand warm throughout, intact Allen test, and no compartment concern. Perfusion is excellent and formal testing would add nothing. Documented explicitly so that the absence of vascular studies is not later read as an omission.

Burn / Trauma Records

Emergency department record of 07/24/2026 including the triage note, burn diagram, first-aid documentation, tetanus administration record, irrigation and closure note, and discharge instructions. Burn clinic notes of 07/25, 07/29, and 08/01 with the serial photographic series and burn diagrams. No operative, graft, or flap records — none performed.

Prior Records Reviewed

All of the above, plus hand therapy assessment and treatment notes from 07/29 and 08/01 with baseline goniometry and grip dynamometry, the splint fabrication record, the pharmacy dispensing history, and primary care records confirming immunization history. Approximately 18 minutes of independent record review.

A**ASSESSMENT****10 BURN & TRAUMA WOUND CLINICAL INTERPRETATION**

- **4% TBSA flame burn of the right hand and forearm at post-burn day 12, with deep partial-thickness conversion of the central dorsal hand.** The clinical signs of conversion are unambiguous: a dry waxy pale bed, sluggish capillary refill, reduced pinprick, and epithelialization arrested since day 7. Burn depth is a moving diagnosis in the first two weeks, and this wound has declared itself.
- **A wound that has not epithelialized by post-burn day 21 should be grafted.** At day 12 with a static central zone, spontaneous healing within that window is now unlikely. Continuing conservative management past day 21 on a dorsal hand exchanges a straightforward split-thickness graft for a hypertrophic scar and a fixed contracture across the metacarpophalangeal joints.
- **Progressive dorsal extension contracture is the most consequential problem in this case.** Fingertip to distal palmar crease distance has deteriorated from under 1.0 cm to 2.6–3.8 cm across the four digits in one week, metacarpophalangeal flexion is halved, and he holds the hand in the intrinsic-minus position of deformity. In a 29-year-old right-hand-dominant bricklayer this is an occupation-threatening trajectory, and it is being driven by dorsal skin tightness and splint non-adherence together.
- **Splint adherence at three nights in seven is the single behavioural factor most responsible for the contracture,** and the reason he gives — discomfort and heat — is a fixable device problem rather than a motivational one. Refabricating the splint in the correct intrinsic-plus safe position with a better interface is more likely to work than repeating the instruction.
- **Infected palmar laceration with retained gravel — a wholly predictable consequence of primary closure over incompletely removed contamination.** Four fragments were retrieved today. Rising white cells and CRP with local erythema, warmth, and seropurulent drainage confirm localized infection, and prior culture grew MSSA. There is no cellulitic spread, no lymphangitis, no fluctuance, and no systemic involvement.
- **Leaving the palmar wound open was the correct decision** and re-closure would have repeated the original error. Healing by secondary intention in a well-perfused palm is reliable and avoids trapping any residual debris.
- **Retained foreign body cannot yet be excluded** despite retrieval of four fragments. Gravel is radiolucent and plain films are insufficient; ultrasound is required. Persistent foreign material is the commonest cause of a traumatic wound that will not close.
- **Smoking is the principal systemic barrier to healing and to graft take.** Twelve cigarettes daily produces vasoconstriction and carboxyhaemoglobinaemia that measurably reduce split-thickness graft survival. In an otherwise young, healthy, well-perfused patient with normal nutrition and no comorbidity, it is the only modifiable systemic factor — and therefore the one worth pressing hard on.
- **Everything else about this patient favours a good outcome:** age 29, excellent perfusion, intact paratenon over the extensor tendons, no diabetes or vascular disease, normal nutrition with an albumin of 4.2, intact neurovascular examination with no tendon deficit, an engaged partner performing dressings, and no inhalation, electrical, chemical, or circumferential injury.
- **The forearm burn is healing well** at over 90% epithelialized, with early hypertrophic change at the margin that warrants scar management but no other intervention.
- **Formulation:** treat the palmar infection and confirm no residual foreign body now; book tandem-site surgery within 7–10 days for excision and split-thickness grafting of the dorsal hand; escalate hand therapy and enforce splinting immediately; and treat smoking as a pre-operative intervention rather than as general advice.

11 BURN & TRAUMA WOUND MANAGEMENT BY PROBLEM

- **Dorsal hand burn — surgical planning:** hand surgery consultation arranged for 08/07/2026 with a recommendation for tangential excision and split-thickness skin grafting of the central converted zone, using a sheet graft rather than a meshed graft for the dorsal hand to optimise both function and cosmesis, with the thigh as the donor site. Target date within 7–10 days so that grafting occurs before post-burn day 21. Intact paratenon confirmed, so no flap coverage is anticipated. He was counselled in detail on the graft, the donor site, the immobilisation period, and the expected recovery timeline.
- **Interim burn dressing:** continue silver-impregnated foam to the dorsum, changed daily by his partner. Peripheral epithelializing zone to be handled atraumatically. No further clinic debridement of the central zone — that tissue belongs to the operating room.
- **Palmar wound — infection and foreign body:** oral cephalexin 500 mg four times daily for 7 days started today, covering the MSSA already cultured, to be narrowed or changed on the deep tissue culture result. Wound left open and packed with saline-moistened gauze twice daily by his partner, healing by secondary intention. **Hand radiograph and high-resolution ultrasound of the thenar eminence within 48 hours** to exclude residual radiolucent gravel; if further fragments are found, they will be removed at the time of the grafting procedure under the same anaesthetic. Escalation criteria given in writing.
- **Contracture prevention and hand therapy — escalate now, do not wait for surgery:** new forearm-based resting splint fabricated today in the intrinsic-plus safe position with a padded interface. Splint schedule prescribed explicitly as **all night plus 2 hours during the day**, and the reason given plainly — that the alternative is a permanently stiff hand. Hand therapy increased from weekly to **three times weekly** with a home programme of hourly active and passive composite flexion, tendon gliding, and blocking exercises. Goniometry and grip dynamometry to be repeated at every therapy session so that the trajectory is measured rather than estimated. Edema control with elevation and a compressive stockinette.
- **Pain management:** pre-medicate with ibuprofen 600 mg and acetaminophen 1 g 45 minutes before every dressing change and before therapy — inadequately controlled procedural pain is itself a cause of therapy avoidance and therefore of contracture. Oxycodone 5 mg supplied for therapy sessions only, limited quantity, with the rationale and the limit explained. Gabapentin 300 mg nightly started for the burning dysesthesia at the burn margins.
- **Smoking cessation — framed as a pre-operative intervention:** 14 minutes spent explaining specifically how smoking reduces graft take rather than offering general advice. Nicotine replacement started today with a 14 mg patch plus 2 mg lozenges, and referral to the tobacco treatment service with an expedited appointment requested. Target of complete abstinence before the grafting date, with cessation status to be documented pre-operatively.
- **Scar management:** begin on the healed forearm now — twice-daily moisturisation and scar massage, silicone gel sheeting to the hypertrophic margin, and strict sun protection for 12 months. A custom pressure garment will be fitted for the hand and forearm at 2 weeks post-graft, and the referral has been placed today so that fabrication does not delay it.
- **Tetanus and immunization:** Td booster given 07/24/2026 for a contaminated wound with a last booster over 10 years earlier. Correctly administered; no immunoglobulin indicated and no further prophylaxis required. Documented as complete.
- **Nutrition:** albumin 4.2 and prealbumin 29 — adequate and no supplementation indicated. Advised to maintain protein intake at approximately 1.5 g/kg through the peri-operative period; formal dietitian referral not required.
- **Return to work and financial support:** not fit for bricklaying and will not be for a minimum of 8–12 weeks. Written work-restriction certificate provided today. Social work referral placed to address the financial pressure he raised, since that pressure is itself a clinical risk driving premature return to manual work and re-injury of a graft. Light-duty options to be reviewed at 6 weeks post-graft.

- **Coordination:** note routed to hand surgery, hand therapy, Ms. Whitlock (primary care), the tobacco treatment service, social work, and the pressure-garment service. Photographic series shared with hand surgery ahead of the 08/07 consultation.
- **Patient education:** reviewed why the burn has deepened and what grafting involves, why splinting is not optional and what happens if it is skipped, why the palm was left open, the effect of smoking on graft survival, dressing technique with his partner present, and the specific signs requiring urgent contact. Written instructions, a splint schedule card, and a work certificate provided.

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FOLLOW-UP

12 REASSESSMENT PLAN

Follow-up timeframe and purpose

Hand surgery consultation 08/07/2026 for the grafting decision. Burn clinic in 3 days (08/08) for palmar wound reassessment, culture and antibiotic review, imaging and ultrasound results, and repeat burn depth assessment; then twice weekly until surgery. Hand therapy three times weekly with goniometry and grip measurement at each session. Ultrasound and radiograph within 48 hours. Tobacco treatment service within 1 week with cessation confirmed before surgery. Post-graft review at 5 days for the first graft check, then weekly. Pressure garment fitting at 2 weeks post-graft. Scar and contracture review at 6 weeks and 3 months, with a return-to-work assessment at 3 months. **Same-day contact or emergency presentation** instructed for fever, spreading redness or red streaking up the arm, increasing pain, purulent drainage or foul odour, new numbness or inability to move a finger, or any tightness with pallor or coldness of the hand.

TOTAL TIME SPENT

78 minutes

PROCEDURE TIME

34 minutes — palmar exploration and irrigation 22 minutes, burn debridement 6 minutes, splint fabrication 6 minutes

COUNSELING / COORDINATION OF CARE TIME

21 minutes — grafting discussion, splint adherence, smoking cessation, work restriction

RECORDS REVIEW TIME

18 minutes

HOME HEALTH / SUPPLY COORDINATION TIME

6 minutes — dressing supplies, pressure garment referral, social work

BASIS FOR BILLING

Procedure-based plus Medical Decision Making (high complexity), separately identifiable E/M

E/M LEVEL

99215 with modifier 25 — established patient, high MDM

BURN TREATMENT CODE(S)

16020 — dressings and/or debridement of partial-thickness burns, small (less than 5% TBSA)

DEBRIDEMENT CODE(S)

11042 — debridement, subcutaneous tissue, first 20 sq cm or less (palmar wound)

WOUND REPAIR / SUTURE REMOVAL CODE(S)

Suture removal integral to the exploration; not separately billed

WOUND PROCEDURE CODE(S)

20520 — removal of foreign body in muscle or tendon sheath, simple; 87070 — culture, bacterial, deep tissue

SKIN SUBSTITUTE / GRAFT CODE(S)

None this visit — STSG planned within 7–10 days

NEGATIVE PRESSURE WOUND THERAPY CODE(S)

Not applicable

SPLINT / DRESSING / COMPRESSION CODE(S)

29125 — application of short arm static splint; Q4051 — splint supplies

PRIMARY ICD-10 DIAGNOSIS CODE

T23.271A — Burn of second degree of right wrist and hand, multiple sites, initial encounter

SECONDARY ICD-10 DIAGNOSIS CODE(S)

T22.211A — Burn of second degree of right forearm, initial encounter; T31.0 — Burns involving less than 10% of body surface; S61.422A — Laceration with foreign body of right hand, initial encounter; T81.4XXA — Infection following a procedure; M24.541 — Contracture, right hand; M62.481 — Contracture of muscle, right hand; F17.210 — Nicotine dependence, cigarettes, uncomplicated; X03.0XXA — Exposure to flames in controlled fire, not in building; Z23 — Encounter for immunization (Td administered 07/24)

SO**PROVIDER SIGN-OFF****PROVIDER NAME****CREDENTIALS****SPECIALTY****DATE****TIME****Imani Rutherford, MD****MD, FACS****Burn & Trauma Wound Care
/ Burn Surgery****08/05/2026****2:52 PM**Generated by Marvix AI — www.marvix.ai — For clinical use by licensed providers only