

# DIACEPH® SLIDE CHART PROCESSOR

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TEMPLATE ONE

Actual Dimensions: 4" x 9"

## Step 1. Positional Value Key:

## Instructions:

	<u>Supine</u>	<u>Upright</u>		Positional Value
1.	N ↓ NC ↑	N ↓ NC ↑	=	-
2.	N ↓ NC ↑	N ↓ NC ↑	=	-
3.	N ↓ NC ↑	N ↓ NC ↑	=	+
4.	N ↓ NC ↑	N ↓ NC ↑	=	+
5.	N ↓ NC ↑	N ↓ NC ↑	=	± N
6.	N ↓ NC ↑	N ↓ NC ↑	=	N (normal)

1. Match the results of the Positional Test to the Key Column at left. Circle the corresponding Positional Value. Record this on Work Page. Go to Step 2.

2. In Window (A), set Cognitive Score at Headache Score. Read ICP Value in Window B, C, D, or E by matching Positional Value to Nausea Score. Record. Results get plotted on Day-Chart. Go to Step 3.

## Step 2. Determining ICP Value:

Headache (HA)	N	1	2	3	Window
Cognitive	-3	-2	-1	N	<b>(A)</b>
Nausea	3	2	1	N	
Positional Value = +	+2	(ICP)	+1	N	<b>(B)</b>
Nausea	3	2	1	N	
Positional Value = ± N	+2	(ICP)	±1 →	N	<b>(C)</b>
Nausea	3	2	1	N	
Positional Value = N	+2	(ICP)	+1	N	<b>(D)</b>
Nausea	3	2	1	N	
Positional Value = -	-2	(ICP)	-1	N	<b>(E)</b>

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TEMPLATE TWO

**Steps 3,4,5. Shunt System Analysis:**

Proximal (And In-Line)

-2 -1 N +1 +2

**Window (F)**

Distal (And Refill)

▲ -2	▲ -1	N	▲ +1	▲ +2
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**Instructions:**

3. In Window F, set Distal Score at Proximal Score. Go to Step 4.

4. In Window G, and without moving the slide, select the malfunction(s) letter group that corresponds with the patient's Refill Score, shaded in the Orange Box. Record it. For In-Line Reservoir types, Record the malfunction(s) that appear next to In-Line (Orange Box). Go to Step 5.

5. Set Window H to the malfunction(s) group identified in Step 4, and read the Shunt System Analysis result in Window I next to Shunt Tract finding (Orange Box). Record. Go to Step 6.

**Reservoir Analysis**

Refill Value
+2
+1
N
-1
-2
In-Line

HI
HIJK
FHJK
AIJK
AJ
...

**Window (G)**

**Shunt System Analysis**

Reservoir Malfunctions Group

AIJK

**Window (H)**

Shunt Tract
No Pain/No Swelling
Proximal Pain/Swelling
Proximal Pain/No Swelling
Proximal Swelling/No Pain
Distal Pain/Swelling
Distal Pain/No Swelling
Distal Swelling/No Pain

IK
AI
AI
I
JK
JK
K

**Window (I)**

**Shunt Malfunctions by Type (Letter Key):**

- A. Proximal Catheter/Valve Obstruction
- B. Proximal Obstruction w/ Collapsed Vent.
- C. Proximal Disconnect of Components
- D. Infection w/ Proximal/Valve Obstruction
- E. NORMAL System Function
- F. NORMAL Function w/ CSF Underdrainage
- G. Shunt Overdrainage/Hypotension (incl. ASDs)

- H. ASD Shunt Overfunction w/ Underdrainage
- I. Distal Catheter/Valve Obstruction
- J. Mal-Positioned Distal Catheter
- K. Distal Disconnect of Components
- L. Infection w/ Distal Obstruction
- M. Other Pathology/Seizure Activity

**Steps 6,7,8,9. Patient/Shunt System Diagnosis:**

**Instructions:**

6. In Window J, set slide to Shunt System Analysis result obtained in Step 5. Now Go to Step 7.

7. In Window K, and without moving the slide, select the malfunction(s) letter group that corresponds to the ICP Value (from Step 2) shaded in the Orange Box, and Record it. This Code(s) represents the diagnosis in the Standard DiaCeph Test. To continue with Interventions, Go to Step 8.

8. In Window L, set slide to the Diagnosis obtained in Step 7. Without moving the slide, Read the Interventions in order of priority in Window M. Record these. Go to Step 9.

9. Do one Intervention at a time. Record the Status. Go to Step 10.

**Interventions (No. Key):**

1. Lay Down and Rest
2. Lay Down in Trendelenburg
3. Exercise Activities/Strain
4. Pinch Off Valve Occluder
5. Close Off ASD/SCD Mechanism
6. Assume Upright Posture

7. Flush Shunt Distally/Purge
8. Lift Up Overlying Scalp
9. Flush Shunt Proximally
10. Manipulate Abdomen/Shunt Tract

**Shunt System Analysis + Groups**

A	B	C	D→	M	..	ABC→	JK	AIJK
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**Window (J)**

DiaCeph Diagnosis

ICP Value	
+3	AIJ
+2	AIJ
+1	AIJK
N	JK
-1	...
-2	...
-3	...

**Window (K)**

\* Red Letters Denote Most Probable

**DiaCeph Diagnosis**

A	B	C	D→	M	..	ABC	AIJK→
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**(L)**

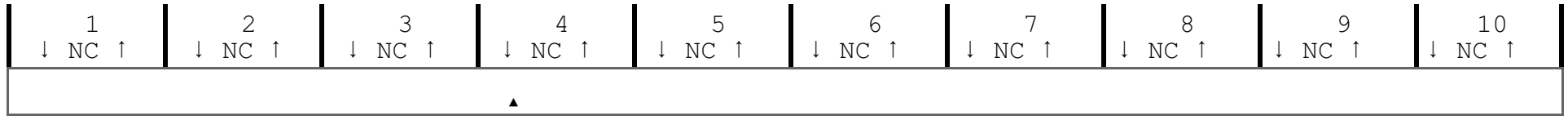
Interventions	
First Priority	4, AIJK
Second Priority	8, H
Third Priority	7, IJK
Fourth Priority	10, JK
Fifth Priority	.....
<b>Not Recommended</b>	All OK

**(M)**

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TEMPLATE FOUR

**Interventions**



**Window (N)**

**Steps 10 and 11. Using Interventions:**

**Shunt Malfunctions**

- A. Proximal Catheter/Valve Obstruction
- B. Proximal Obstruction w/ Collapsed Vent.
- C. Proximal Disconnect of Components
- D. Infection w/ Proximal/Valve Obstruction
- E. NORMAL System Function
- F. NORMAL Function w/ CSF Underdrainage
- G. Shunt Overdrainage/Hypotension (incl. ASD)
- H. ASD Shunt Overfunction w/ Underdrainage
- I. Distal Catheter/Valve Obstruction
- J. Mal-Positioned Distal Catheter
- K. Distal Disconnect of Components
- L. Infection w/ Distal Obstruction
- M. Other Pathology/Seizure Activity

**nr: denotes Not Recommended**

- %
- %
- nr
- nr
- nr
- F
- 
- H
- I
- J
- K
- L
- 

**Window (O)**

**Instructions:**

10. In Window N, set slide indicator arrow at ↓, NC, or ↑, for Status result of the Intervention being performed. Go to Step 11.

11. In Window O, and without moving the slide, read the Malfunction Code that appears in the Window on the same line(s) as the Malfunction(s) being investigated. Record on Work Page. Go back to Step 9 and perform the remaining interventions, to r/o other Diagnosis(s).

**Interventions (No. Key):**

- 1. Lay Down and Rest
- 2. Lay Down in Trendelenburg
- 3. Exercise Activities/Strain
- 4. Pinch Off Valve Occluder
- 5. Close Off ASD/SCD Mechanism
- 6. Assume Upright Posture
- 7. Flush Shunt Distally/Purge
- 8. Lift Up Overlying Scalp
- 9. Flush Shunt Proximally
- 10. Manipulate Abdomen/Shunt Tract

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TEMPLATE i

slowly or briskly.

## Work Page Instructions.

**Step 1.** Maintain the patient in the posture associated with their complaints until you have completed the Positional Test in Step 5. Write the time of day of the sample on the Work Page. Fill in Activity/medical event associated with the sample. Identify the level of Nausea and/or Vomiting by circling a respective score.

**Scoring:** 3 = worst case, severe vomiting and nausea; 2 = moderate nausea with some vomiting; 1 = nausea only, may warrant medication.

**Step 2.** Identify Headache (HA) level. Circle HA score.

**Scoring:** N = normal, no HA; 1 = moderate HA, but tolerable, may or may not medicate; 2 = moderately severe HA, requires medication, often stopping an activity, may include nausea/vomiting; 3 = severe HA, requires heavy medication, rest, likely nausea/vomiting.

**Step 3.** Evaluate Shunt System. Check Shunt Tract for signs of fluid accumulation and focal pain. Run fingers along shunt tract.

**Scoring:** No Pain/No Swelling, Proximal Pain/Swelling, Proximal Pain, Proximal Swelling, Distal Pain/Swelling, Distal Pain, or Distal Swelling.

Reservoir testing should be done in same posture as Nausea, Headache, and Cognitive measurements. Results change slightly with posture.

Type 1 Shunt: valve with central reservoir, directional occluders. Two Finger Palpating Technique: Proximal check: Face patient with fingers over shunt valve, thumb pointing downstream, index finger over distal side occluder, middle finger over reservoir dome. Press down on occluder with index finger and hold while depressing and releasing reservoir. Repeat and note firmness and refill.

Type 1 Distal check: Place index finger over reservoir dome. Press down on proximal occluder with middle finger and hold. Depress and release reservoir. Repeat and note firmness and refill.

Type 2 (In-Line reservoir): Same hand position. Depress down on reservoir with index or middle finger. Repeat. Note firmness and refill.

**Scoring (Type 1 and 2):** -2 = very soft, feels empty, may not refill properly; -1 = softer than normal, very fluid, may depress and refill properly; N = normal function and feel; +1 = rather firm, more so than normal, may refill slowly to briskly; +2 = very firm, may not be able to depress down, refills

**Scoring (rate of Refill):** -2 = very slow to no refill; -1 = slow to refill; N = normal; +1 = refills briskly, fuller, faster than normal; +2 = refills very quickly, reservoir very firm.

**Step 4.** Run Cognitive Test. Circle number describing cognitive level.

**Scoring:** -3 = most severe, unable to talk or express ideas, exudes a stare, unable to do tests; -2 = moderately severe, quiet, unable to find words, events, exudes a stare; -1 = mild deficit, some speaking and memory difficulties, patient may believe is OK; N = normal (for patient). Typical Scoring for Ages 10 and Over (channels, objects, Words): 5/5 = N; 4/5 = N; 3/5 = -1; 2/5 = -1 to -2; 1/5 = -2; and 0/5 = -3.

**Step 5.** Run Positional Test. Patient should be in set posture for five minutes. HA is most common complaint barometer for test. Some may exhibit nausea, vomiting, or cognitive change more readily than headache. If the patient experiences any intolerable worsening of his/her complaints, abandon the posture. To start, place patient in opposite posture 1 to 3 minutes. Circle change in complaints under that posture.

Next, place patient in opposite posture 1 to 3 minutes. Circle changes in complaints under that posture column.

**Scoring:** N = No Complaints (patient feeling OK), ↓ = Worsening Complaints, NC = No Change, Indeterminate, ↑ = Improving.

If an NC score occurs, try up to ten minutes in the measured posture; or use Trendelenburg position (30-degree head downward) in place of Supine position. Opposite postures include: lying flat to sitting or standing, standing to lying at 30-degree upright angle, and a 30-degree upright angle or laying flat to the Trendelenburg position.