

Eidam Diagnostics Corporation

CRT 2000 Thermographic System

Training Program

Segment 4: Evaluating Thermograms

Understanding Thermograms

Although the CRT provides an automated analysis of each thermogram, every practitioner must understand the basis of these evaluations, and the underlying principles of Contact Regulation Thermography.

Working with the Patient

Understanding how the Thermogram works is critical to using the CRT Analysis Report to work with a patient to improve their health.

This training will educate you on the key elements of the **Thermogram, **Reaction Profile**, and **Indices**.**

Understanding the Physiological Reaction

The basis for evaluating a Thermogram begins with understanding the different types of physiological reactions to cooling stimulus and the root causes for these reactions.

Categorizing Reactions

We classify the physiological response into four categories:

- **Normal Regulation** 0.5 – 1.0°C
- **Rigid Regulation** 0.0 – 0.2°C
- **Hypo Regulation** 0.2 – 0.5°C
- **Hyper Regulation** over 1.0°C

These temperatures are guidelines only, as the actual expected response varies from point to point.

Categorizing Reactions

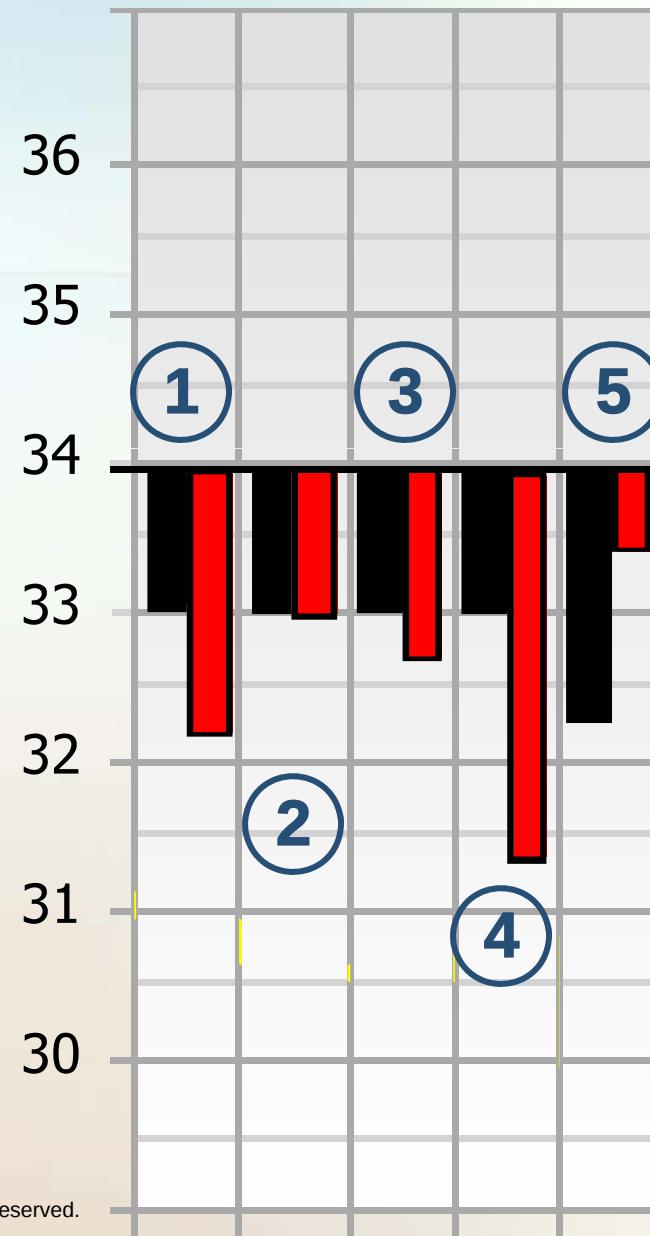
1. Normal Reaction

2. Rigid Reaction

3. Hypo Reaction

4. Hyper Reaction

5. Paradox Reaction

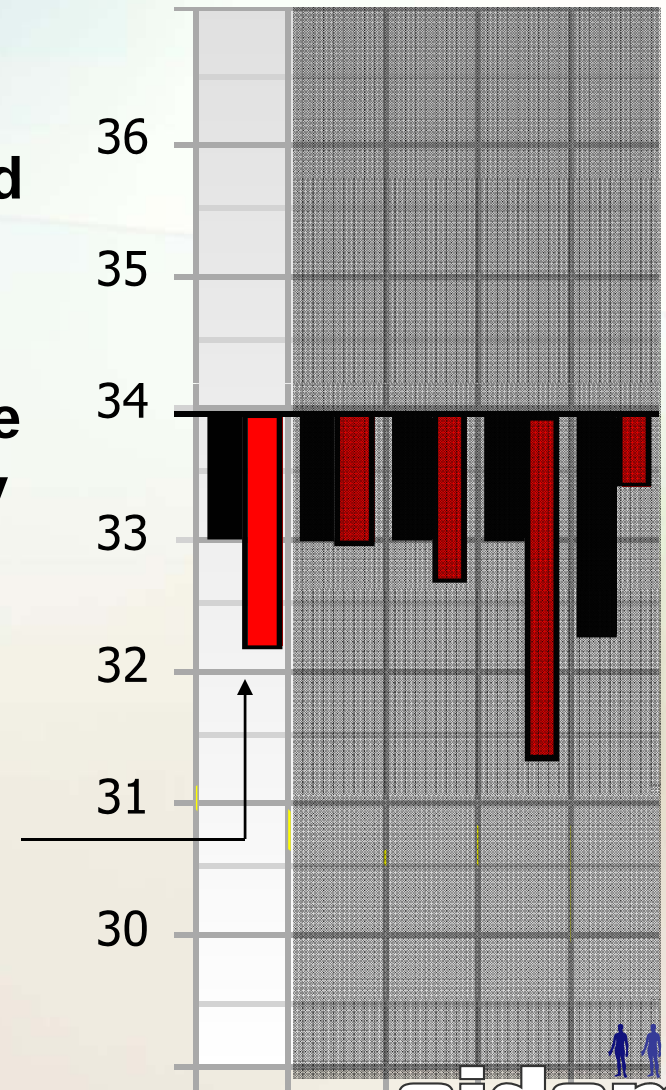


Normal Reactions

The physiological reaction for the **head, dental,** and **thyroid** regions is to first warm up, and then cool down.

The expected reaction after the cooling stimulus that we apply is a temperature **increase** of approximately 0.3°C .

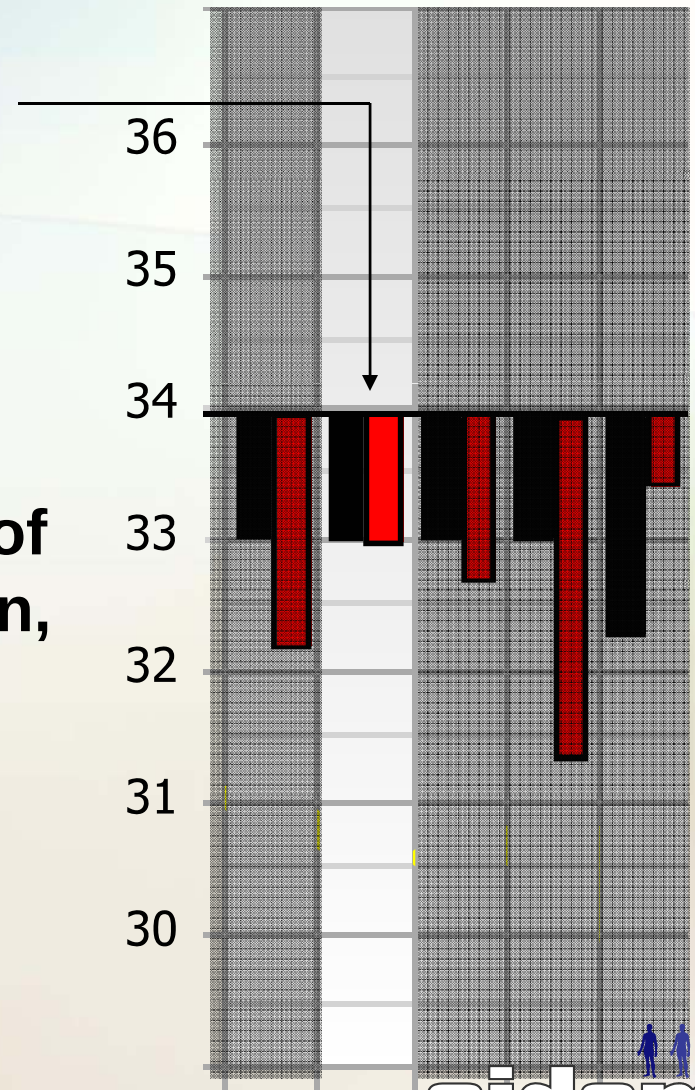
In the other regions of the body, the normal reaction is a temperature **decrease** of $0.5 - 1.0^{\circ}\text{C}$.



Rigid Reactions

A **Rigid** or Fixed Reaction occurs when the second measurement is largely unchanged from the first measurement.

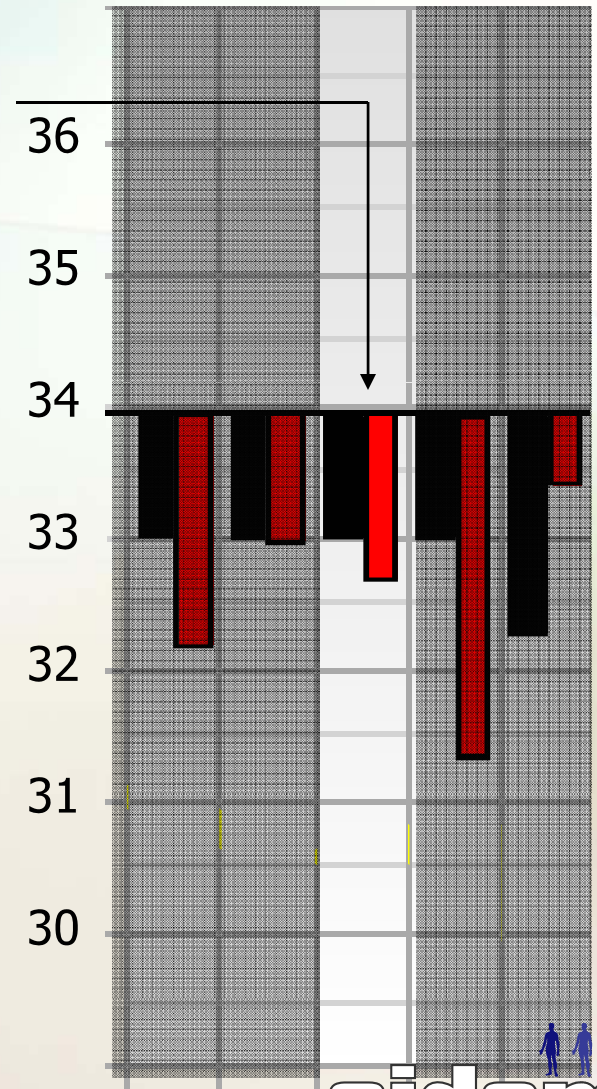
This is often an indication of a blockage, disturbed organ, or that the autonomous nervous system has no regulative influence on the reaction.



Hypo Reactions

A **Hypo** Reaction occurs when the patient's body exhibits a minimal, inadequate temperature change as a response to stimulus.

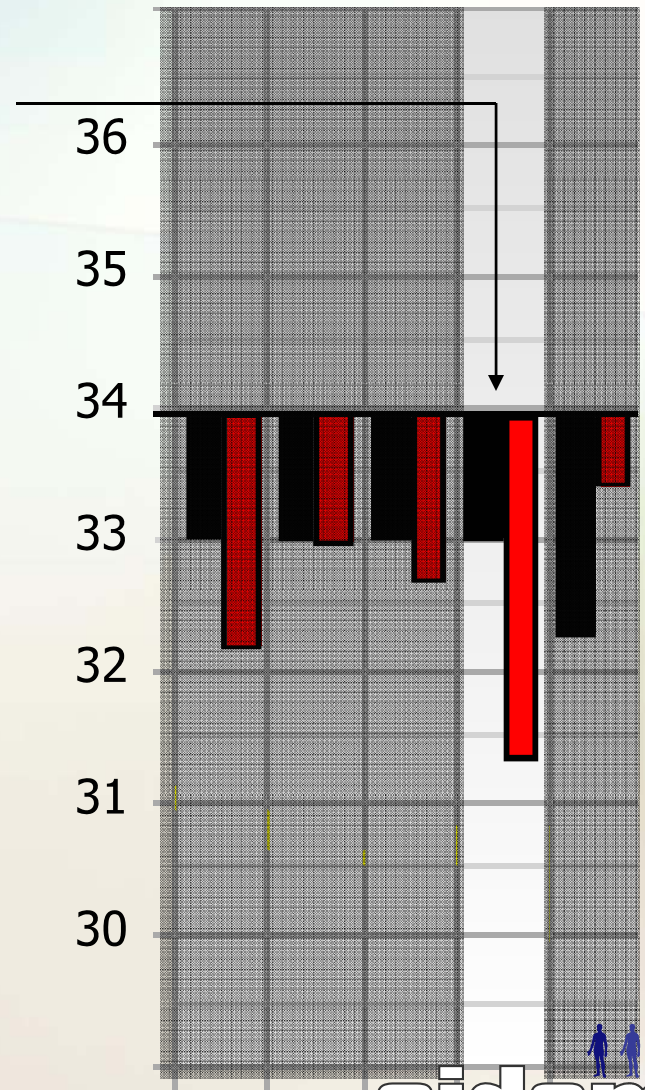
To improve the stimulus-response reaction, the patient should consider increasing exercise levels, and therapies such as acupuncture and homeopathy.



Hyper Reactions

A **Hyper** Reaction occurs when the patient overreacts to stimulus. This is typical of patients with allergies or autoimmune syndromes.

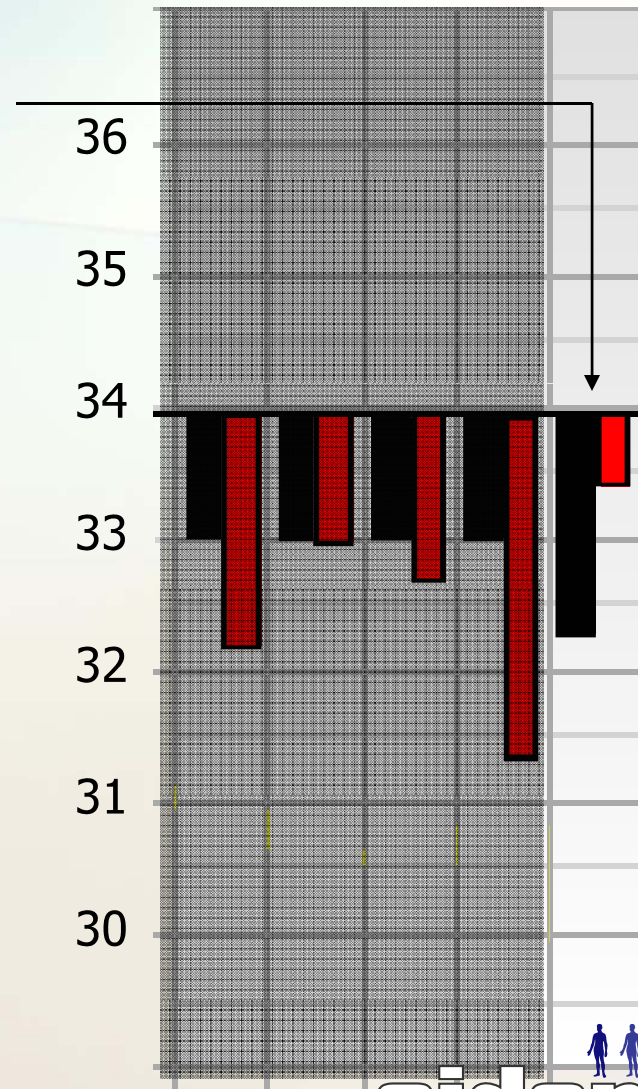
To balance the stimulus-response reaction, therapies such as: phytotherapy, homeopathy, enzyme therapy, orthomolecular treatments, or stress management.



Paradox Reactions

A **Paradox** Reaction occurs when the measurement of a point after cooling is the opposite of what is expected.

Paradox Reactions usually indicate a disturbed areas, disease processes, inflammation, or a cancer terrain.



The Elements of the Reaction Profile

The Reaction Profile gives summary information and the reaction categories of each region of the body measured.

It identifies for each region whether the response is normal, reduced, over - reactive, or chaotic.

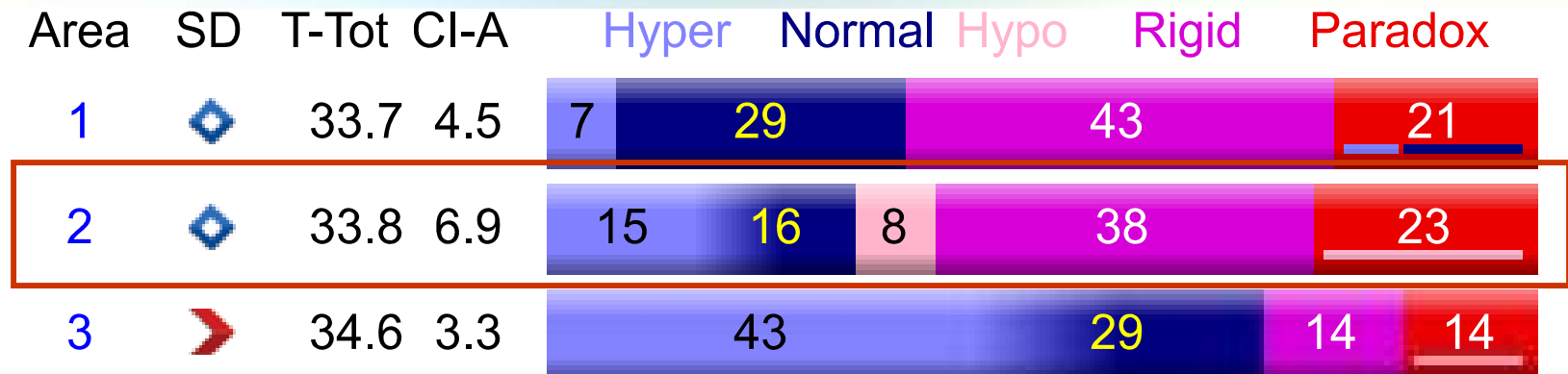
The Reaction Profile

Each region measured is represented by a row. For example, Area 2 represents the Neck Region

Body Analysis Readings 1/2													Dental/Mamma Analysis Readings 1/2												
Temperature-A				Reaction Profile (%)					Temperature-B				Temperature-A				Reaction Profile (%)					Temperature-B			
Area	SD	T-Tot	CI-A	Hyper	Normal	Hypo	Rigid	Paradox	RI	CI-B	T-Tot	SD	Area	T-L/R	CI-A	Hyper	Normal	Hypo	Rigid	Paradox	RI	CI-B	T-L/R		
1	◆	33.7	4.5	7	29		43	21	3.0	6.6	33.7	◆	7	32.4	3.6	38	24		38		4.1	0.5	33.0		
2	◆	33.8	6.9	15	16	8	38	23	3.2	0.8	33.6	➤	8	31.8	3.4	38		12	38	12	4.1	1.0	32.3		
3	➤	34.6	3.3	43			29	14	14	2.1	8.0	33.8	➤	9	33.0	2.4	25	50		25	3.8	0.7	33.4		
4	➤	33.4	4.0	29	14	43			14	2.6	3.4	32.7	➤	10	32.2	0.3	50	25	25	4.5	0.4	32.7			
5	◆	34.2	2.0	45			28	9	18	1.6	1.7	33.3	➤	7-10	32.3	2.4	38	28	31	3	4.1	0.7	32.8		
6	◆	33.8	2.2	50			50			1.5	1.3	32.9	◆	11	34.8	4.9	8	77		15	2.8	5.0	34.1		
1-6	◆	33.9	5.9	28	24	12	23	13	2.5	5.2	33.4	◆	12	33.5	0.9	62			30	8	1.2	2.9	32.0		
CF	➤	34.6	4.6	50			50			1.5	2.3	33.4	➤	11-12	34.1	2.9	35	53		12	2.0	3.9	33.0		

The Reaction Profile has 12 rows, representing each of the measurement regions, 3 summary regions, and a special region representing the CF measurement region.

The Reaction Profile



For this example, in the neck region (area 2), of the measurements, 16% are Normal, 15% are Hyper, 8% are Hypo, 38% are Rigid, and 23% are Paradox.

If the **sum of the Paradox and Rigid percentages** exceed 35%, this is a **significant blocked region**, and should be noted and further investigated.

Summary Regions

1-6  33.9 5.9 28 24 12 23 13 2.5 5.2 33.4

In addition to the measurement areas, there are three summary areas in each Reaction profile, that represent the following:

- **1-6** Head, Neck, Back, Chest, and Abdomen
- **7-10** Dental Areas
- **11-12** Breasts

Reaction Profile

Body Analysis Readings 1/2

Temperature-A				Reaction Profile (%)					Temperature-B			
Area	SD	T-Tot	CI-A	Hyper	Normal	Hypo	Rigid	Paradox	RI	CI-B	T-Tot	SD
1	◆	33.7	4.5	7	29		43	21	3.0	6.6	33.7	◆
2	◆	33.8	6.9	15	16	8	38	23	3.2	0.8	33.6	➤
3	➤	34.6	3.3	43		29	14	14	2.1	8.0	33.8	➤

For each Area and Summary Area, the following additional information is provided:

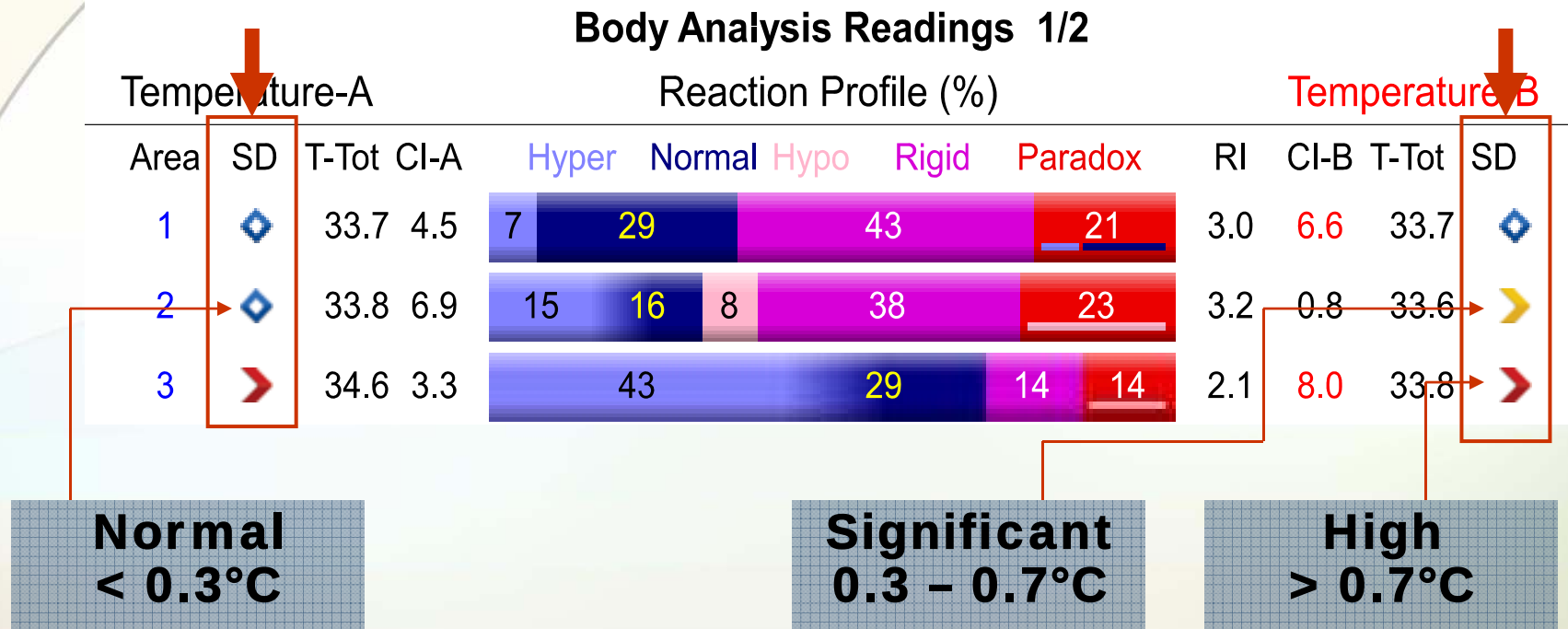
- **SD** Temperature Side Difference
- **T-Tot** Average (Mean) of Measurements
- **CI** Chaos Index
- **RI** Reaction Index

Side Difference

Physiologically, we expect the temperatures of the body to be **symmetrical** – that is, the left and right sides should be identical.

Temperature **Side Differences** of both the first and second reading are marked on the Thermogram by columns of **color coded symbols**.

Side Difference



The direction of the arrow points to the side (left or right) with a higher temperature. This is the side that should be further evaluated.

If there is a temperature difference in A, but not a temperature difference in B, the region is of decreased concern because **compensation** has taken place.

CRT Fundamentals: Reaction Profile Indices

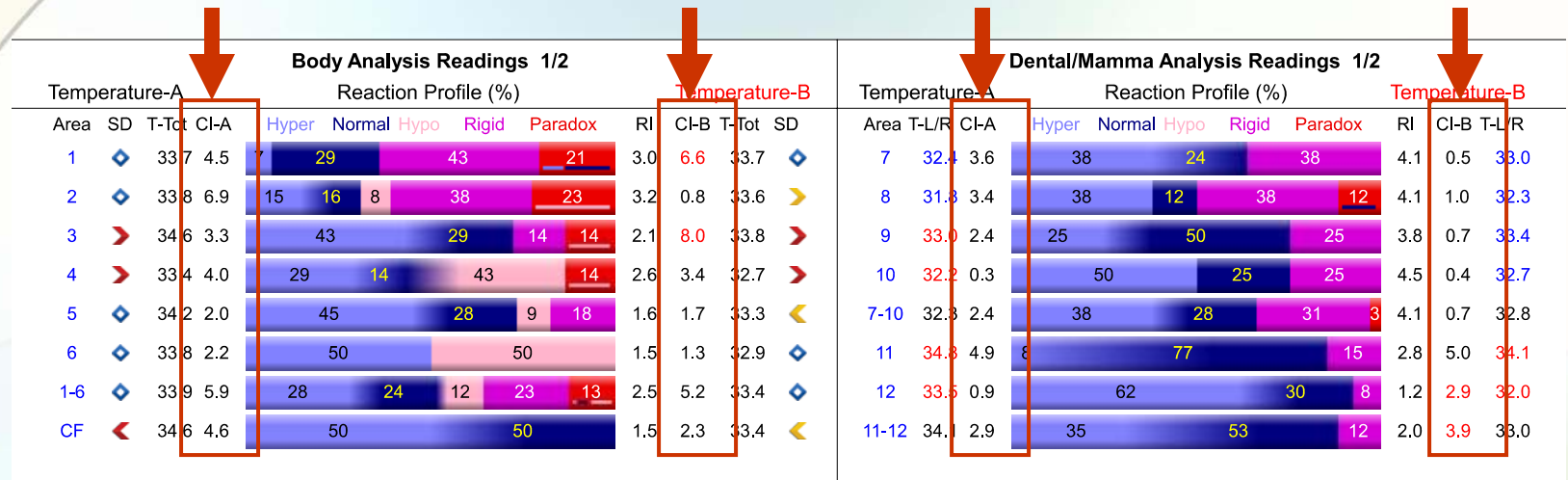
The calculated values, or **Indices** of the Reaction Profile, are key to understanding a Thermogram.

The Chaos Index

A **Chaotic Reaction**, indicated by a high Chaos Index, represents an extreme mixture of all reaction types.

The **Chaos index** is a marker indicating how well the functional system can compensate for stress.

The Chaos Index



- **CI-A** Chaos Index for the System at Rest
- **CI-B** Chaos Index for the System following stress

The Chaos Index is the most important therapeutic index used to compare a patient at rest and after stress.

If CI-B exceeds CI-A by 5 or more in any region, that region is an area of concern that requires further investigation.

Chaos Index Values

The Chaos Index can be a strong indicator of a disease process in a region:

0 – 2	Healthy
2 – 4	Borderline
4 +	Unhealthy

When CI in A or B is greater than 5, additional screening diagnosis should be strongly considered.

Chaos at Rest and after Stress

The relationship between the chaos index at rest and after stress is very important. Take **CI-A** and **subtract CI-B**. If this number is:

- **Greater than 0.3** **Normal**

This indicates that a region is reacting to cooling in a physiologically normal way.

- **Between 0 and 0.3** **Unable to compensate**

The region did not react properly to a cooling stimulus, and indicates a disturbed field.

- **Less than 0** **Decompensation**

The region reacted in a negative way to cooling stimulus. This area of the body shows no resilience and is an indicator of an underlying functional disorder.

The Chaos Index

In addition to the Reaction Profile, the Thermogram contains two additional **Aggregate Chaos Indices**, that give an indication of the patient's general health:

CI-Head Head, Dental, T-L4

CI-Body Neck, Chest, Upper abdomen,
Lower Abdomen, back

The Chaos Index - Head

The CI-Head Index includes the following measurement points:

- **All Head points (region 1)**
- **Dental Areas (region 7, 8, 9 10)**
- **Partial Neck Area T1, T2, and L1-L4**

If CI-Head increases after stress, determine which area is the cause of the problem. In the majority of high CI-B (Head) readings, the root cause will be the one of the dental areas.

The Reaction Index

Temperature-A				Body Analysis Readings 1/2					Temperature-B			
				Reaction Profile (%)								
Area	SD	T-Tot	CI-A	Hyper	Normal	Hypo	Rigid	Paradox	RI	CI-B	T-Tot	SD
1	◆	33.7	4.5	7	29		43	21	3.0	6.6	33.7	◆
2	◆	33.8	6.9	15	16	8	38	23	3.2	0.8	33.6	➤
3	➤	34.6	3.3	43		29	14	14	2.1	8.0	33.8	➤

The **Reaction Index** indicates the degree of stress response, or **activation**, in an area.

RI > 3.5 Indicator for higher activity of metabolism and **Inflammation**

RI < 1.5 Indicator for chronic lower activity of metabolism, toxic stress, and **Degeneration**

CRT Fundamentals: Thermogram Indices

In addition to the Indices in the Reaction Profile, the CRT produces seven other useful indices.

Patient Health Indices

Body Mass Index

BMI

Waist-Hip Ratio

WHR

Vitality Index

VI

Enteropathy Index

ENI

Lymphatic Index

LI

Therapy Index

THI

Dental Focus Index

DFI

Dental Index

DI

Body Mass Index

The Body Mass Index (**BMI**) broadly categorizes populations for statistical purposes. Its accuracy in relation to actual levels of body fat can be distorted by factors such as fitness level, muscle mass, bone structure, gender, and ethnicity.

BMI Guidelines

• Less than 15	Starvation/Cachexia
• 15 – 18	Underweight
• 18.5 – 25	Ideal
• 25 – 30	Overweight
• 30 – 40	Obese
• Over 40	Extremely Obese

Waist Hip Ratio

The Waist-Hip Ratio (**WHR**) is the ratio of the circumference of the waist to that of the hip. It measures the proportion by which fat is distributed around the torso.

Waist Hip Ratio Guidelines

**A WHR of 0.7 for women and 0.9
Women within the 0.7 range have
optimal levels of estrogen and are
less susceptible to major diseases
such as diabetes, cardiovascular
disorders, and ovarian cancers.**

**Men with WHRs within the 0.9 range,
similarly, have been shown to be
more healthy, with a lower incidence
of prostate and testicular cancer.**

Vitality Index

The Vitality Index (**VI**) is an indicator for the patient's metabolic activity with respect to their age group.

> 3.8 Excessively high metabolic activity

2.5–3.8 Normal Metabolic Activity

2.0–2.5 Low metabolic activity

< 2.0 Very low metabolic activity

Low Vitality Index

A **low Vitality Index** is commonly found in patients with the following conditions:

- Depression
- Chronic disease
- Auto-Immune diseases
- Hypothyroidism
- Viral Infections
- Low metabolic activity
- Elderly
- Pre-aged patients

High Vitality Index

An **excessively high Vitality Index** is commonly found in patients with the following conditions:

- **Physically Active**
- **Younger Patients**
- **Hyperthyroidism**
- **High Metabolic Activity**
- **Hormonal Disorders**
- **Progressive Cancer**

Vitality Index in Cancer Patients

A **high Vitality Index** in cancer patients is usually a poor sign in the progression of cancer as it indicates a high metabolic activity.

Vitality Indices above 4 frequently can be seen in highly metastasized cancer patients. Prognostically, a low Vitality Index in a cancer patient is ideal, and indicative of slow progression, or even remission.

Enteropathy Index

The Enteropathy Index (**ENI**) is a quantitative description of the stress level of the intestine.

0 – 2	Normal Eubiosis
2 – 4	Borderline Dysbiosis
4 – 6	Dysbiosis

Lymphatic Index

The Lymphatic Index (**LI**) is a marker for the lymphatic system, and indicates the correlation of the lymph measurement areas and the immune system.

0 – 2

Normal reaction and high level of immune function

2 – 4

Reduced immune function and borderline lymphatic congestion

4 – 6

Blocked immune response and high lymphatic congestion

Evaluating the Lymphatic Index

- When the lymph system is dysfunctional, **excess fluid** and **particles** accumulate within the intercellular spaces, resulting in **inflammation**.
- Toxins, large protein molecules, and undigested food accumulate within the intercellular spaces and provide an environment favorable to diseases, including cancer.

Therapy Index

The Therapy Index (**THI**) indicates what types of therapies are appropriate for the patient.

7 – 11

Normal levels

12 – 16

**Take caution with
invasive therapies**

17 – 21

**Invasive Therapies
generally inadvisable**

Therapy Index

- A patient with a **low** THI is better able to tolerate **invasive therapies**, such as surgery or tooth extraction.
- A patient with a **moderately high** THI must be prepared for surgery prior to the actual procedure, and extra caution should be exercised.
- If the patient's THI is **very high**, any invasive therapy or surgical procedure should be carefully considered, and with time taken to properly stabilize the patient.