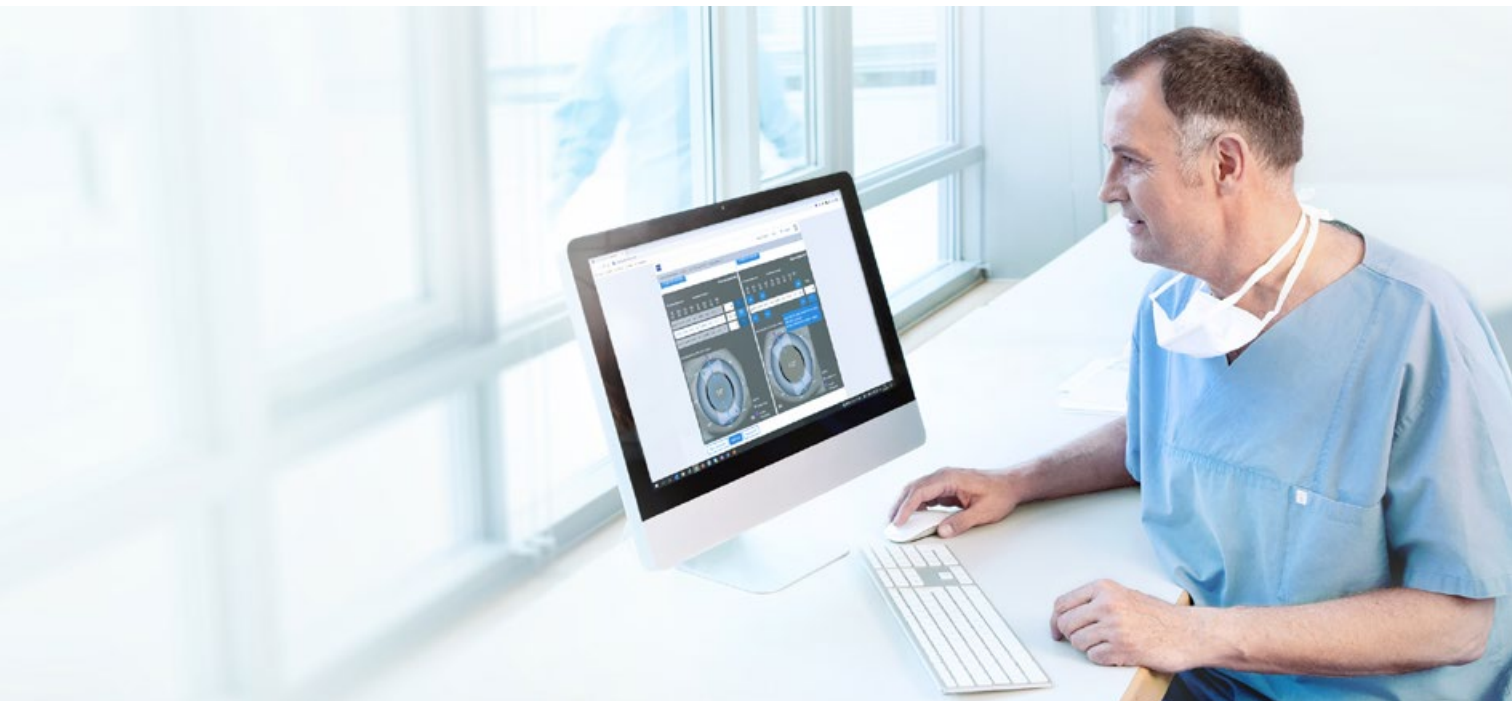


## Z CALC 2.3 Quick Guide

Toric & non-toric IOL calculation and ordering with Z CALC®



Seeing beyond

**Z CALC:**

Z CALC® from ZEISS is a software intended to support a user in selecting ZEISS IOLs by calculation of intraocular lens power and predicted residual refraction. Z CALC can also be used for IOL power calculations for patients with previous LASIK, LASEK and PRK treatments.

**The new Z CALC is compatible with the following browsers:**

Apple Safari mobile for iOS (Version 15 or higher)

Apple Safari Version for MacOS (Version 15 or higher)

Google Chrome for Windows 10 (Version 102 or higher)

Google Chrome mobile for Android (Version 102 or higher)

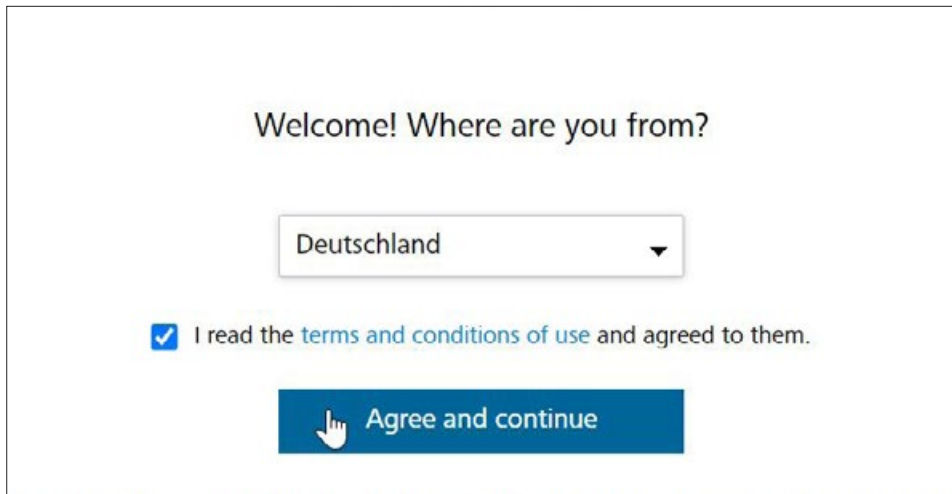
Microsoft Edge for Windows 10 (Version 102 or higher)

**Preconditions for use:**

Please ensure that your pop-up blocker is deactivated.

For detailed instructions on how to deactivate the pop-up blockers, please review [Pop-Up Blockers and how to deactivate](#). Before using the product, please consult the instructions for use.

## 1. Region Selection / Terms & Condition / Data Protection



Welcome! Where are you from?

Deutschland ▼

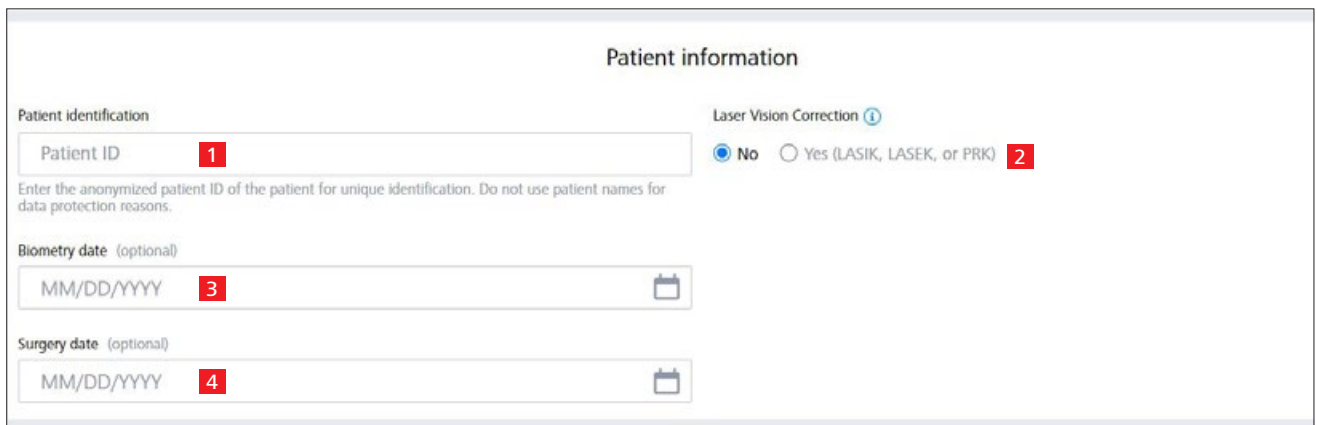
I read the [terms and conditions of use](#) and agreed to them.

Agree and continue

- Select region.
- Please read "Terms and Conditions of Use". Click the checkbox.
- Click "Agree and continue".
- Additionally you can find the "Data protection guidelines".

---

## 2. Patient Information



Patient information

Patient identification Laser Vision Correction ⓘ

Patient ID **1**  No  Yes (LASIK, LASEK, or PRK) **2**

Enter the anonymized patient ID of the patient for unique identification. Do not use patient names for data protection reasons.

Biometry date (optional) **3**

MM/DD/YYYY

Surgery date (optional) **4**

MM/DD/YYYY

- 1** Enter patient ID (Please do not enter the patient's name!).
- 2** Select whether or not patient has undergone a previous laser vision correction treatment (LASIK, LASEK or PRK):
  - LVC status must be selected for both eyes.
  - If yes; be sure to enter whether myopic or hyperopic treatment has occurred.
- 3** Enter biometry examination date (optional).
- 4** Enter surgery date (optional).

### 3. Calculation Screen

The Calculation Screen contains the following fields and options:

- 5** AL: 23.85 (15.00 - 40.00 mm)
- 6** ACD: 3.26 (1.50 - 6.00 mm)
- 7** Keratometry (K) / Total Keratometry (TK) selection
- 8** R1 (flat): 7.82 (5.00 - 10.00 mm / 35.00 - 65.00 D)
- 9** Flat axis: 125 (0 - 180°)
- 8** R2 (steep): 7.53 (5.00 - 10.00 mm / 35.00 - 65.00 D)
- 8** Steep axis: 35
- 10** Keratometric index: 1.3375
- 10** Ast. K: 1.66
- 11** Z CALC Nomogram: No
- 12** Target refract. SE: 0.00 (-5.00 - 5.00 D, optional)
- 12** Incision position: 0 (0 - 360°, optional)
- 12** SIA: 0.00 (0.00 - 1.00 D, optional)
- 13** Toric / Non-toric selection
- 14** AT LARA® toric 929

Buttons: "Accept and calculate"

Disclaimer: Ensure that the data entered is correct. ZEISS does not send or save any patient identification information. By clicking on the "Accept and calculate" button, you agree to the terms and conditions of use. Open the terms and conditions of use.

- 5 Enter axial length from the patient's record. Select IOLMaster for measurements with an optical biometry device or immersion ultrasound. Select applanation for measurements with applanation ultrasound.
  - 6 Enter the ACD from the patient's record and indicate if it has been measured from the epithelium or endothelium.
  - 7 Please choose if you want to enter standard (K) Keratometry values or "Total Keratometry (TK)" values, if you want to use the TK values incorporating the posterior corneal curvature measurements from the IOLMaster 700.
  - 8 Enter the K- or TK-readings either in D or radii in mm.
  - 9 Enter "Flat axis".
  - 10 Select the "Keratometric index" from the drop down menu.
  - 11 Select Z CALC Nomogram\*, if desired.
  - 12 Insert target refraction, incision position and SIA for personalized calculation (optional).
  - 13 Choose between toric or non-toric IOL calculation.
  - 14 Select the desired IOL from the drop-down menu.
- Click "Accept and calculate".

### 4. Result Screen

#### Standard Mode

**A** Show expanded mode

IOL refractive power				Predicted outcome			
SE [D]	Sph [D]	Cyl [D]	Axis [°]	SE [D]	Sph [D]	Cyl [D]	Axis [°]
+19.50	+18.50	+2.00	35	-0.56	-0.49	-0.13	125
+19.00	+18.00	+2.00	35	-0.18	-0.12	-0.13	125
+18.50	+17.50	+2.00	35	+0.19	+0.26	-0.14	125

Visualization of the IOL value: MP: MICS, preloaded

#### Expanded Mode

Hide expanded mode

IOL refractive power				Predicted outcome				ELP [mm]
SE [D]	Sph [D]	Cyl [D]	Axis [°]	SE [D]	Sph [D]	Cyl [D]	Axis [°]	ELP [mm]
+19.00	+18.00	+2.00	35	-0.18	-0.12	-0.13	125	4.28

Visualization of the IOL value: MP: MICS, preloaded

- A** You may switch between "Standard Mode" or "Expanded Mode" by clicking the desired mode (top right corner).
- Standard Mode: Z CALC presents three calculations from which you may choose the most appropriate based on your requirements.
  - Expanded Mode: You may vary Spherical Equivalent (SE) and cylinder powers (toric IOLs only) to review associated residual refraction and Effective Lens position (ELP).

\* Mathematical compensation for the posterior corneal astigmatism (first implemented with v2.0).

## 5. IOL product model selection

IOL refractive power				Predicted outcome			
SE [D]	Sph [D]	Cyl [D]	Axis [°]	SE [D]	Sph [D]	Cyl [D]	Axis [°]
+19.50	+18.50	+2.00	35	-0.56	-0.49	-0.13	125
+19.00	+18.00	+2.00	35	-0.18	-0.12	-0.13	125
+18.50	+17.50	+2.00	35	+0.19	+0.26	-0.14	125

Select the product model using the drop-down menu:  
Visualization of the IOL value: MP: MICS, preloaded

**15** Choose between different product models (depending on the availability) from the drop-down menu from the generated readings.

**16** Click on the "Add to wish list" button adjacent to the drop-down menu to transfer the result to the wish list.

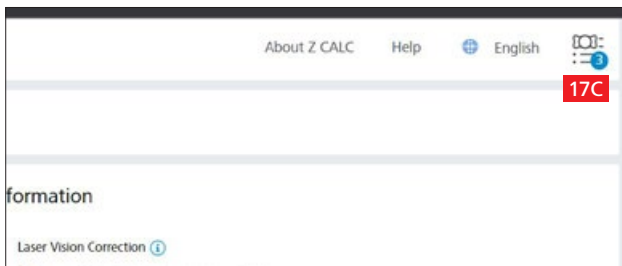
- M** MICS (Micro Incision Cataract Surgery), suitable for 1.8mm incision size
- MP** MICS (Micro Incision Cataract Surgery), suitable for 1.8mm incision size & Preloaded
- MV** MICS (Micro Incision Cataract Surgery), suitable for 1.8mm incision size & Violet and blue filtering (yellow)
- P** Fully Preloaded in injector
- PY** Fully Preloaded in injector & Yellow blue-light filtering
- "-"** No variant

## 6. Navigate to the Wishlist/PDF-Printouts



**17A** Click on Save as PDF button to save the selected results as PDF directly from the calculation screen.

**17B** Click on wish list button at the bottom. This will lead you to the second screen, where you can select lenses for ordering or PDF-print-outs.



OR

**17C** Click on the wish list symbol in the right upper corner, which will lead you to the same screen as the wish list button at the bottom of the page.

## 7. Create PDF printouts for selected IOLs or order via e-mail

IOL refractive power				Predicted outcome				ELP [mm]	Quantity
SE [D]	Sph [D]	Cyl [D]	Axis [°]	SE [D]	Sph [D]	Cyl [D]	Axis [°]	ELP [mm]	
+19.00	+18.00	+2.00	35	-0.18	-0.12	-0.13	125	4.28	1

Order by e-mail (19A) Save as PDF (19B) Delete wish list

**18** Select the desired quantity for the IOL.

**19A** Click "Order by E-Mail" (to directly send your order to the local ZEISS sales representative).

OR

**19B** Click "Save as PDF" to create a PDF with the calculation results and ordering information of the selected IOLs in the wish list.

## 8. Order by e-mail or create PDF printouts

**Send order e-mail**

Select which PDF form(s) you want to create and enter your information.

IOL Order Form  
 IOL plan  
 IOL order form and IOL plan

Your e-mail address

E-mail address of ZEISS IOL representative

Clinic name

Department (optional)

Street and number

Additional address information (optional)

City

Zip code

State (optional)

Country

Telephone number (optional)

Fill out all mandatory fields: name and address of the clinic, e-mail address of ZEISS IOL representative.

Check your entries

**Save PDF form**

Select which PDF form(s) you want to create and enter your information.

IOL Order Form  
 IOL plan  
 IOL order form and IOL plan

Your e-mail address (optional)

Clinic name (optional)

Department (optional)

Street and number (optional)

Additional address information (optional)

City (optional)

Zip code (optional)

State (optional)

Country (optional)

Telephone number (optional)

Check your entries

For Printing

For Ordering

### For Ordering:

- Enter all the relevant details including clinic name, department, address, phone number and email address (your local ZEISS partner's email address is filled in automatically based on your country selection).
- By hitting the "Send" button, an email with your order is sent out to the local ZEISS business partner (automatically filled based on your country selection).

### For Printing and/or manually faxing

- For saving as PDF, you don't need to enter your data (data entry is only required for direct ordering).
- Please just scroll down and click "Save", the PDFs will be created and open in a new tab window in your browser.

**Note: Please ensure the pop-up blocker is deactivated in your browser. Otherwise please follow the instruction in the addendum: [Pop-Up Blockers and how to deactivate](#).**

**IOL PLAN**  
Patient ID: TEST ID

Test Clinic  
Department: Max-Dohn-Strasse 8-10  
Building C  
10589 Berlin State  
Germany  
Telephone number: test@clinic.com

**OD right**      **EYE STATUS**      **left OS**

LS Phakic      LVC untreated      LS Phakic      LVC LASSKLAUSE/PBK  
LVC mode: untreated      LVC mode: Hyperopic  
Target ref: 0.00 D      SIA 0.00 D Inc: 0°      Target ref: 0.00 D      SIA 0.00 D Inc: 0°

**BIOMETRY VALUES**

Date of measurement: —      n: 1.3375      Date of measurement: —      n: 1.3375

AL	23.85 mm	AL	21.00 mm
ACD	3.26 mm	ACD	3.00 mm

Ast. K: -1.66 D @ 125°      Avg. R: 7.68 mm @ 125°  
R1: 7.82 mm @ 125°      R2: 7.53 mm @ 35°

Ast. TK: -1.21 D @ 100°      Avg. TR: 8.00 mm @ 100°  
TR1: 8.11 mm @ 100°      TR2: 7.88 mm @ 100°

**IOL CALCULATION**

**ZEISS AT LARA® toric 929 MP**      **ZEISS AT LARA® toric 929 MP**

Z CALC | Keratometry      Z CALC | Total Keratometry

IOL [D]				Predicted outcome [D]				IOL [D]				Predicted outcome [D]			
SE	Sph	Cyl	Ax	SE	Sph	Cyl	Ax	SE	Sph	Cyl	Ax	SE	Sph	Cyl	Ax
+20.00	+19.00	+2.00	35°	-0.94	-0.87	-0.13	125°	+32.50	+31.75	+1.50	10°	-0.67	-0.66	-0.02	100°
+19.50	+18.50	+2.00	35°	-0.56	-0.49	-0.13	125°	+32.00	+31.75	+1.50	10°	-0.28	-0.27	-0.02	100°
<b>+19.00</b>	<b>+18.00</b>	<b>+2.00</b>	<b>35°</b>	<b>-0.18</b>	<b>-0.12</b>	<b>-0.13</b>	<b>125°</b>	<b>+21.50</b>	<b>+20.75</b>	<b>+1.50</b>	<b>10°</b>	<b>+0.11</b>	<b>+0.12</b>	<b>-0.03</b>	<b>100°</b>
+18.50	+17.50	+2.00	35°	+0.19	+0.26	-0.14	125°	+31.00	+30.25	+1.50	10°	+0.49	+0.50	-0.03	100°
+18.00	+17.00	+2.00	35°	+0.56	+0.63	-0.14	125°	+30.50	+29.75	+1.50	10°	+0.87	+0.88	-0.03	100°

ELP: 4.28 mm      ELP: 3.91 mm

Incision orientation: 0°      Implant axis: 35°      Incision orientation: 0°      Implant axis: 10°

Comment: \_\_\_\_\_      Signature: \_\_\_\_\_      ZEISS

ZEISS Calculation Worksheet - Version: 1.7.0-1000      Created on: 2024-01-24 13:58 (UTC) by test, test      Page 1 of 1

- A** Clinic-specific information (Optional).
- B** Name and type of the lens.
- C** Formula and type of measurement (Keratometry or Total Keratometry).
- D** Labeled values on the product package of the calculated lenses are highlighted with bold font and not labeled ones greyed out.
- E** Selected lenses from the wishlist for OD and OS.
- F** Eye schematic with main incision position and implant axis for toric IOLs.
- G** Anatomical position.

**IOL ORDER FORM**  
Patient ID: TEST ID

Test Clinic  
Department: Max-Dohn-Strasse 8-10  
Building C  
10589 Berlin State  
Germany  
Telephone number: test@clinic.com

**OD**      **OS**

ZEISS AT LARA® toric 929 MP      ZEISS AT LARA® toric 929 MP

IOL (SE / Sph / Cyl / Axis)      **+19.00 D / - / +2.00 D / 35°**      **+19.50 D / - / +1.50 D / 10°**

Order quantity: 1      1

Surgery date: \_\_\_\_\_

Target refraction (SE): 0.00 D      0.00 D

Axial length: 23.85 mm      21.00 mm

Anterior chamber depth: (from Epithelium) 3.26 mm      (from Epithelium) 3.00 mm

Keratometric index: 1.3375      1.3375

R1: 7.82 mm @ 125°      — @ —

R2: 7.53 mm @ 35°      — @ —

Ast. K: -1.66 D @ 125°      — @ —

TR1: — @ —      8.11 mm @ 100°

TR2: — @ —      7.88 mm @ 10°

Ast. TK: — @ —      -1.21 D @ 100°

Incision orientation: 0°      0°

SIA: 0.00 D      0.00 D

ELP: 4.28 mm      3.91 mm

Predicted outcome (SE / Sph / Cyl / Axis): -0.18 D / -0.12 D / -0.13 D / 125°      +0.11 D / +0.12 D / -0.03 D / 100°

Order reusable STACY:

Disclaimer:  
The order request is based on a non-binding recommendation. I have accepted the Terms and Conditions of use of the ZEISS product that generated this order request. The recommendation is merely an approximate value on the basis of general experience and a calculation algorithm and I have verified it on the basis of my specialized expertise. The order request and a resulting order are based on the General Terms and Conditions of Carl Zeiss Meditec AG that I was able to access online at <https://www.zeiss.com/meditec/us/en/products/implants/conditions>.

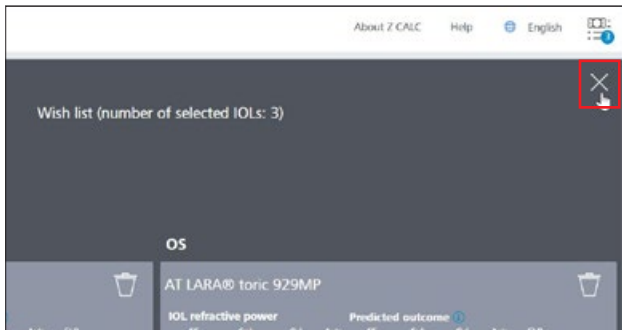
Comment: \_\_\_\_\_      Signature: \_\_\_\_\_      ZEISS

ZEISS Calculation Worksheet - Version: 1.7.0-1000      Created on: 2024-01-24 13:58 (UTC) by test, test      Page 1 of 1

- A** Based on the labeling of the selected lens, ordering relevant values are displayed bold.

- OD:** Oculus Dexter (right eye)
- OS:** Oculus Sinister (left eye)
- OU:** Oculus Uterque (both eyes)
- LS:** Lens state
- Target ref.:** Target refraction
- LVC:** Laser vision correction
- SIA:** Surgical induced astigmatism
- Inc:** Incision direction
- n:** Keratometric index
- AL:** Axial length
- ACD:** Anterior chamber depth
- Ast. K/ Ast. TK:** Astigmatism K/ TK
- Avg. R/ Avg. TR:** Average R/ TR
- K1 & K2:** Keratometry values
- TK1 & TK2:** Total Keratometry values
- SE:** Spherical equivalent
- Sph:** Sphere
- Cyl:** Cylinder
- Ax:** Axis
- ELP:** Effective lens position

## 9. Start new calculation



- Close the wish list window by clicking the cross on the top right of the screen.
- Start a new calculation by clicking on the “New calculation” button. Please note, that all input data and the calculation results including the wish list, **will be deleted** when you click this button. If you only want to add another calculation to add to your wish list, do not click “New Calculation”.



## 10. Addendum

### Pop-Up Blockers and how to deactivate

To download the IOL calculations/ IOL order forms, pop-ups must be allowed for the Z CALC page.

Please ensure to deactivate browser-based pop-up blockers, in case the pop-ups are blocked (PDF creation is suppressed).

This option can be found within the settings of the browser you are using.

In some browsers you see the blocking as a warning message and you can enable the option directly by clicking on the message.

It may then be necessary to start downloading the documents again.

**Further information can be found on the respective homepages of the browser providers**







Z CALC 2.3



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Germany

<https://zcalc.meditec.zeiss.com>

[www.zeiss.com/med/contacts](http://www.zeiss.com/med/contacts)

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